



# RAIN GUARDIAN

**PRETREATMENT FOR  
BIORETENTION SYSTEMS**

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## EXTEND THE LIFE OF YOUR BIORETENTION/RAIN GARDEN/VEGETATED BMP SYSTEM BY KEEPING SEDIMENT, TRASH, LEAVES AND OTHER DEBRIS OUT

Rain Guardians provide effective pretreatment for stormwater/bioretenion/rain garden/vegetated BMP systems and are available in various configurations to meet both commercial and residential needs. The grate, filter and chamber combination captures sediment, leaves, trash and other debris with overflow points preventing inlet debris from causing bypass before the bioretention system reaches capacity. These pretreatment devices are often used in urban curblined applications that lack the space for typical sediment forebays.

Maintenance is simple with Rain Guardian pretreatment devices, as sediment and debris can be easily removed from the chamber with a shovel and the drop-in filter can be cleaned with a broom or hose.



### BENEFITS

- Maximizes capacity and extends the life of bioretention systems
- Maintenance is simple and only requires a shovel and broom or hose
- Installation (placement and securing) takes minutes
- Helps eliminate bypass and sediment build-up, protecting surrounding vegetation
- Works well with new construction, retrofits and tight urban spaces
- Simplifies visual inspections of accumulated sediment depth

# MODELS AVAILABLE

All functional elements apply to all chambers



Concrete chamber for residential & urban sites

## TURRET

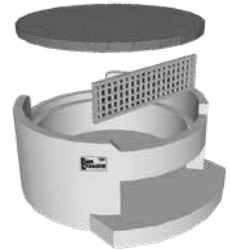
**Top grate:** Captures leaf litter and coarse debris

**Chamber base combination:** Serves as settling chamber for heavier particles

**Filter wall:** Allows chamber to dry between rain events

**Debris walls:** Restrict floatable debris from entering or exiting garden

**Configurations:** Available in 90, 135 and 180 degree turn configurations



Routing runoff under paths and boulevards

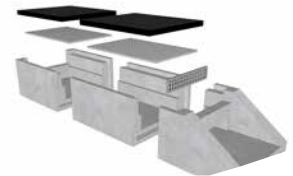
## FOXHOLE

**High-strength composite lid:**

- Easily supports pedestrian and bike passage (lid rated for 3,540 lbs/sf uniform load)
- Lightweight design - 52 lbs/lid
- Easily maintained

**Modular design:**

- Suitable for any length inlet - 3' increments
- Units are easily connected
- Adaptable to sidewalk widths



Highly urbanized bioretention

## FORTRESS

**Compact:**

- Install in constrained right-of-way spaces
- Small footprint fits into dense urban settings
- Flush curb-face configuration
- 48" x 17.9"

**Durable:**

- Reinforced concrete
- Metal face plates
- Optional H-20 rated lid

**Removable grates for easy inspection and maintenance**



To learn more about this product, contact your local Ferguson Stormwater/Geo Specialist.



Residential & small-scale bioretention

## BUNKER

### Metal grate:

- Captures leaf litter and coarse debris
- Lightweight design
- Easily maintained

### Anodized aluminum filter:

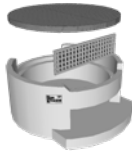
Corrosion resistant

### Pre-assembled recycled plastic chamber:

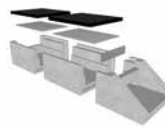
Ultra-resistant to rotting



## TURRET



## FOXHOLE



## FORTRESS



## BUNKER



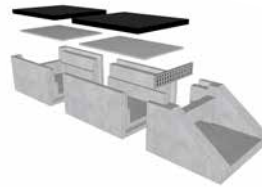
	TURRET	FOXHOLE	FORTRESS	BUNKER
<b>Material:</b>	Monolithic concrete chamber and base	Concrete chamber sections	Concrete with metal inlet and outlet plates	Recycled plastic lumber
<b>Ponding Depth:</b>	12"	9"	9"	9" or 12"
<b>Footprint:</b>	46" x 50"	Site-specific	17.9" x 48"	20" x 51.25"
<b>Weight:</b>	1,100 lbs	Site-specific	Standard - 702 lbs H-20 - 780 lbs	100 lbs
<b>Grate/Lid Loading Rating:</b>	1,760 lb concentrated load	3,540 lb/sf uniform load	361 lb concentrated load or H-20 rated	316 lb concentrated load
<b>Inlet Capacity:</b>	1.82 cfs	2.00 cfs	Standard - 3.96 cfs H-20 - 2.28 cfs	3.07 cfs
<b>Outlet Capacity:</b>	3.45 cfs	4.39 cfs	Standard - 7.44 cfs H-20 - 5.97 cfs	6.12 cfs
<b>Storage Capacity:</b>	4.02 cf	Inlet/outlet - 1.73 cf Middle - 2.20 cf	1.34 cf	2.85 cf

# RAIN GUARDIAN PRETREATMENT CHAMBER

## PRODUCT SELECTION GUIDE

○ Is runoff routed under a walkway, trail or boulevard?

YES → FOXHOLE



NO

○ Is installation flush with the curb face required?

YES → FORTRESS

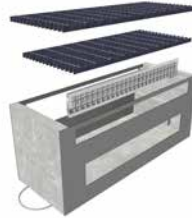
STANDARD

NO

YES

Is H-20 load rating required?

OPTIONAL  
H-20  
RATED LID



NO

○ Is a concrete chamber desired?

YES → TURRET



NO

BUNKER



SPECIFICATIONS

MODEL TYPE

MATERIAL PROPERTY	TURRET	FOXHOLE	FORTRESS
Weight of steel reinforced, cold joint secured monolithic concrete structure	1,030 lbs	2,570 lbs total (inlet, middle, outlet)	516 lbs
Concrete minimum compressive strength	4,500 psi at 28 days	4,500 psi at 28 days	4,500 psi at 28 days
Concrete air entrained	4-8% by volume	4-8% by volume	4-8% by volume
Manufacturing & design standard	ASTM C858	ASTM C858	ASTM C858
Standard exterior dimensions	46" x 50" base, 19.5" total height	2' - 11" x varies based on sidewalk width, 19" total height	48" x 17.9" base, 19" total height

PROPERTY OF RECYCLED PLASTIC LUMBER	BUNKER
Plastic lumber shall be manufactured with recycled HDPE, post-industrial and post-consumer	95%+
Flexural Strength	ASTM D6109, 1,350 psi
Flexural modulus secant @ 1% strain	ASTM D6109, 79,000 psi
Thermal expansion	ASTM D6341, 0.000058 in/in/*F
Lb/ft of recycled plastic lumber	1.5 lbs
Dry filter box total weight	54 lbs
Standard exterior dimensions of dry filter box	(51.25" L) x (20" W) x (16" H)

MEASUREMENT	TURRET	FOXHOLE	FORTRESS	BUNKER
Typical drop from edge of pavement grade to outlet into bioretention	10.5"	7.5"	7.5"	10.5" and 7.5" options

