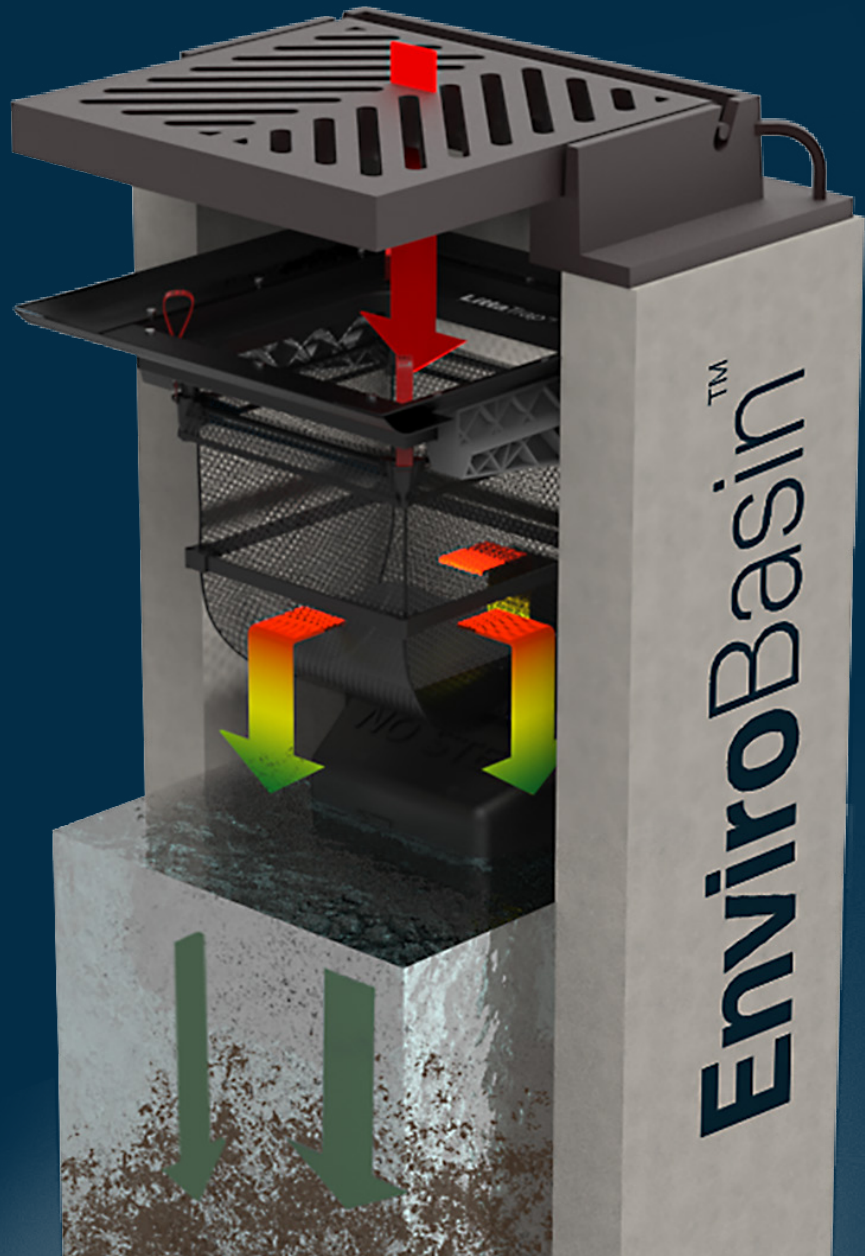


EnviroBasin™



Operations and Maintenance Guide

The EnviroBasin™

The EnviroBasin™ is an engineered water quality inlet offering two functions:

1. Conveyance of stormwater runoff from ground level into the reticulation system; and
2. Removal of pollutants and improvement of water quality.

The EnviroBasin™ consists of the Littatrap™ Catch Basin insert installed into a pre-cast catch basin to dissipate energy, promote sedimentation and provide full capture of gross solids 5 mm in diameter and greater in stormwater runoff as shown in the figure right. This is done by the Littatrap device in conjunction with an energy dissipator dish and submerged outlet baffle.

The system is easy and safe to maintain, with large storage capacity relative to its catchment area. Confined space entry is not required.



FEATURES

- High flow, dry gross solid capture.
- Enhanced nutrient removal.
- Reduced contaminant release.
- Hand maintenance of gross pollutant basket; no vactor truck or confined space entry needed.
- Enhanced energy dissipation and flow distribution.
- >50% sediment removal (Good Harbour Labs, 2017).
- Reduced resuspension.
- Large sediment sump storage volume.
- No confined space entry. Vactor truck maintenance frequency of the sump is reduced.

LOCATION AND CATCHMENT AREA

Each jurisdiction supplies guidance around the hydraulic design, location, and capture capacity of stormwater inlets. Catchment area, gradient, cross fall, configuration, dimensions, and grate all affect the inlet capacity of a catch basin and therefore, the spacing.

The maximum catchment area of the EnviroBasin™ is typically governed by the ability of the peak capture flow of the device, i.e. the inflow for a 5 or 10-year design storm.

Enviropod in conjunction with AECOM Canada have developed a performance estimating tool to determine the Total Suspended Solids (TSS) removal of the EnviroBasin Littatrap Catch Basin system for a given catchment. The performance estimating tool uses third party performance data obtained from Canadian Environmental Technology Verification Program (CETV) procedure for Laboratory Testing of Oil-Grit Separators ISO testing and historical rainfall data to estimate flow, determine surface loading rate and estimate performance for a catchment area.



Field Trials



EnviroBasin™ Components

Components and Operation

THE ENVIROBASIN™ CONSISTS OF:

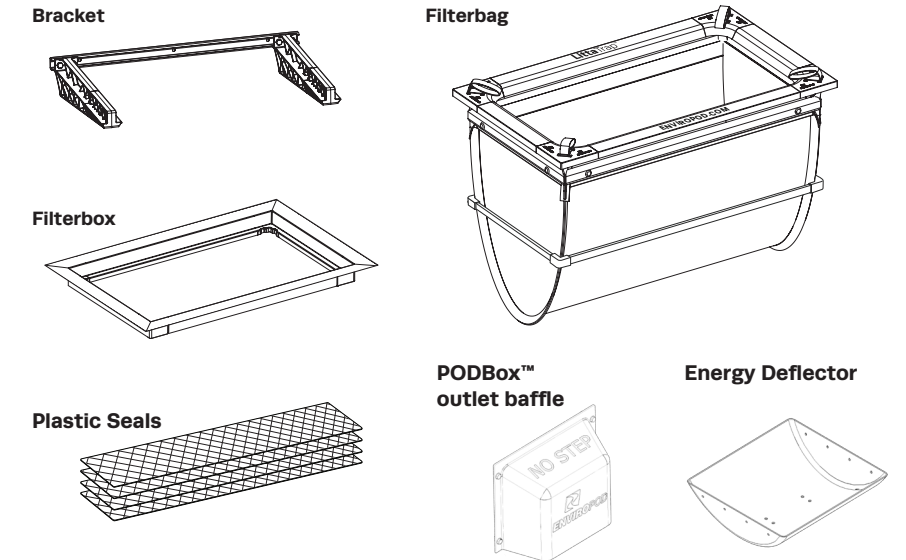
Concrete catch basin with a grate and integrated sump

- Enviropod Littatrap**
- Support bracket
 - Filter Box
 - Seals
 - Gross Pollutant Basket

Energy Deflector

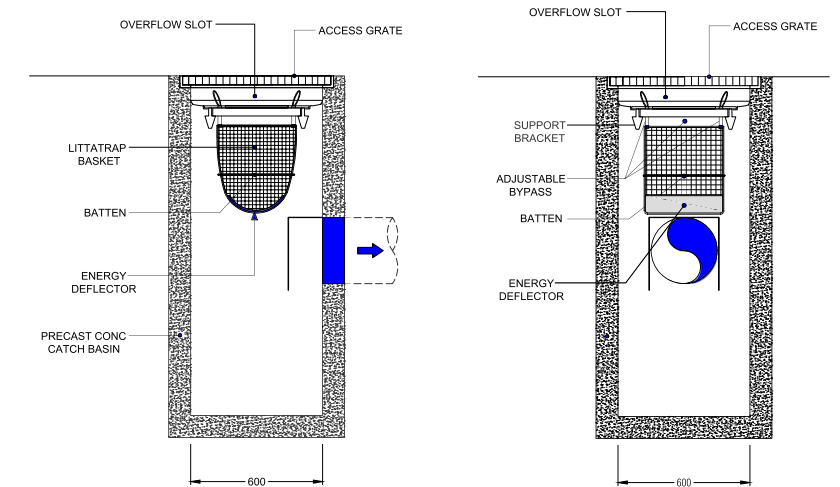
PODBox™ outlet baffle

Internal components are injection molded, high density plastic.



Overland flow is diverted into the EnviroBasin™ grated inlet in the same manner as a standard stormwater inlet. Once the flow has dropped below the grate, it is diverted through the gross pollutant basket, where it is intercepted by the patented energy dissipation mechanism. This reverses the direction of flow, distributing the inflow evenly across the surface area of the sump.

This process enhances settling and reduces resuspension of sediment while retaining and storing gross solids in a dry environment.



MODEL AND SIZE SPECIFICATION

The EnviroBasin™ has 3 standard models. Table 1 below details the standard models available.

Catch basin size (mm)	Littatrap model	Bracket width (mm)	Filter box size (mm)		Seal kit size (mm)		Basket size (mm)		
			Length	Width	Length	Width	Length	Width	Depth
450x450	LT4545	435	377	377	492	492	225	225	400
600x600	LT6060	570	512	512	647	647	362	362	400
900x600	LT9060	872	812	447	947	947	650	362	400

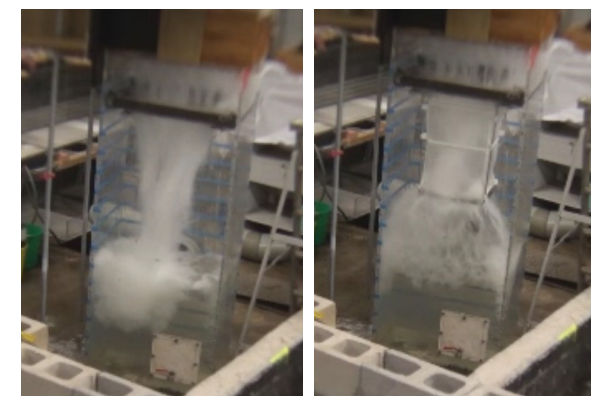


Figure 4: Turbulence in sumped stormwater inlet (left) and EnviroBasin™ (Right)

Maintenance

Routine maintenance of LittaTrap by hand or vactor truck (3–12 months dependent on site specific loading).

Periodic maintenance by Vactor truck maintenance of the EnviroBasin™ sump (2–3 years depending on site specific loading).



LittaTrap™ Basket Hand Maintenance

It is recommended the LittaTrap™ basket be emptied when 75% full (generally every 3–12 months). To empty the basket, simply “Lift, Tip, Reuse”. The following steps detail hand maintenance:

1. Establish a safe working area per typical catch basin service activity.
2. Remove grate/access cover.
3. Remove the basket with two lifting hooks or lift by hand through the loops on the top of the basket. Excess debris should be scooped out first if the basket is over half full.
4. Pour contents of the basket into a disposal container.
5. Replace grate.



EnviroBasin™ Sump Vactor Maintenance

Steps for vactor maintenance are as detailed below:

1. Establish a safe working area per typical catch pit service activity.
2. Remove grate/access cover.
3. Vacuum accumulated debris from the basket.
4. Vactor the contents from the sump of the catch basin (if required).
5. Inspect the LittaTrap™ and EnviroBasin™ for any damage. Reinstall the LittaTrap basket.
6. Replace grate/access cover.



FREE DESIGN AND SIZING SERVICE

EnviroPod offers a free design service where the cumulative performance of several EnviroBasin's can be modelled for a specific project based on local rainfall and treatment needs. This service allows stormwater consultants to optimize the number and the location of EnviroBasin's for their projects.

ABOUT ENVIPOD

EnviroPod is the world's leading catch basin insert technology provider. The company has over 50,000 installations worldwide, including catchment wide retrofits. The EnviroBasin™ is a result of 26 years' of research, implementation and operation of source treatment solutions.

For further information please see www.enviropod.com

International patent numbers for : CA – 2,810,974 ; USA – 9,642,658 ; AU – 2011302712 ; NZ – 588049 . Other patents pending.



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