

EcoVault®

Designed and Manufactured by

EcoSense International

EcoVault® At a Glance

Second-generation
(Type II) baffle box

Precast stormwater
filtration system

Proven effective¹

Exceptional nutrient
removal rates:

57% Total Phosphorus

77% Fecal Coliform

79% Zinc

91% TSS

Multi-stage filtration:

Separation

Screening

Filtration

Custom-fit sizing
for every project

Hydraulically checked

Side bypasses available

About the EcoVault®

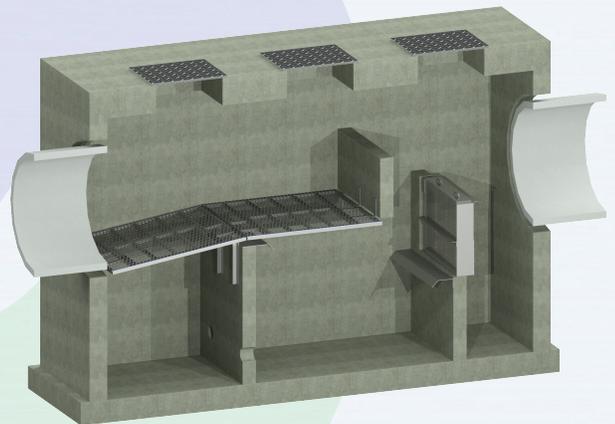
The EcoVault® is a second-generation baffle box stormwater treatment system that demonstrates exceptional nutrient removal efficiency.

A 2014 independent study demonstrated that the EcoVault® easily exceeds the Florida Department of Environmental Protection minimum load reduction standards, and outperforms competitors' Gross Pollutant Separators.¹

Multi-Stage Filtration

The EcoVault® multi-stage system provides separation, screening, and filtration. Unique design features allow for a quicker settling velocity, ensuring maximum particulate capture.

The EcoVault® will remove coarse organic materials and debris, e.g. grass clippings, leaves, litter, etc. and will trap and store them above the static water line, greatly reducing decomposition and nutrient leaching. The standard debris screen configuration spans the width of the vault, creating large storage volume. Where hydraulic conditions don't allow, the screen system may be designed in a basket configuration to reduce staging in the event of impaction. The EcoVault® will also remove sediments, heavy metals, nitrogen, phosphorous, oil, and grease.



A 3D cutaway rendering of a typical EcoVault

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Maintaining an EcoVault®

Servicing the EcoVault® is simple with unique access hatches, and requires a vacuum truck. Quarterly inspection is recommended, and servicing should be performed on an as-needed basis.

Filter maintenance for the EcoVault® is simple, as well. It is recommended that filters should be replaced either annually, or semi-annually, depending on the local conditions. The cassettes are reusable, lowering the cost of replacement.

Internal Components

The Baffle Buddy™ Cassette Filter is a high-flow filter integrated into the last baffle wall of the EcoVault®. It becomes the final internal weir.

Baffle Buddy™ Cassette Filters are replaceable, and contain ESI MZ Filter media, a patented modified aluminosilicate, which is designed to absorb cations and anions such as: mobile phosphorus, ammonia, chromate, selenite, sulfate, hydrocarbons (e.g. benzene, toluene, xylene), heavy metals (e.g. lead and cadmium), and various petroleum products from aqueous waste.



A Baffle Buddy™ Cassette Filter

Structure

Typically precast, though it may be cast in place, the EcoVault® is constructed of reinforced concrete to provide strength and durability. Its multi-piece construction minimizes shipping and lifting requirements, and features a slab top. Access hatches and an H-20 Load rating are standard features.

Internally, the EcoVault® features cast-integrated concrete baffles and full-width debris screens. Debris screens are expanded stainless steel with a heavy frame, and have hatches for full sump access. The elevation of debris screens may be adjusted in the field, and a self-adjusting system is available.

Sizing

Model Size length x width (ft x ft)	Typical Pipe Size (in)	80% TSS Removal Efficiency Flow (ft ³ /s)	Screen Storage Capacity (ft ³)	Sediment Chamber Capacity (ft ³)	Total Containment Capacity (ft ³)
5 x 11	12 - 30	15	87	150	237
6 x 12	18 - 36	24	144	201	345
8 x 14	30 - 54	32	324	321	645
8 x 16	36 - 54	40	360	369	729
10 x 16	42 - 66	45	550	465	1015
12 x 20	54 - 72	55	1000	945	1953

Sizing may vary depending on the specific site conditions and requirements

Optional Features

- VaultOx Static Stormwater Remediation modules
- Lakbotec Sensor Systems
- Side bypasses
- Material choice: Concrete or Fiberglass
- EcoView clear hatches

1. City of Casselberry, F. (2014). Baffle Box with Media Filtration Installation, Effectiveness Evaluation, and Associated Education for the Lake Jesup Watershed. Casselberry, FL: City of Casselberry.

To learn more about the EcoVault® and other EcoSense products, visit us at ecosenseint.com