

PC-41 PROPRIETARY/ MANUFACTURED SYSTEMS

Reference: Vortech Inc.; Stormceptor, (Carder Concrete Products)

Photograph to come.

BMP Objectives

- Perimeter Control
- Slope Protection
- Borrow and Stockpiles
- Drainage Areas
- Sediment Trapping
- Stream Protection
- Temporary Stabilizing
- Permanent Stabilizing

Definition and Purpose

A proprietary/manufactured system consists of pre-manufactured stormwater treatment devices for circular and rectangular structures.

The devices use vortex-motion and/or particulate-setting treatment mechanisms. Popular brand names include Stormceptor, Vortechs, BaySaver, StormFilter, StormTreat, Stormvault, and the Downstream Defender.

Appropriate Applications

- This BMP is used primarily for runoff from impervious surfaces in ultra-urban settings.
- Systems are precast, and some can be retrofitted to existing sewer systems or can replace a portion of the system.
- Minimal space is required since systems are installed underground.
- Generally, stormwater and pollutants enter various chambers designed to allow oils and floatable particulates to rise to the top while sediments settle to the bottom. In a cylindrical system, runoff spirals down the perimeter of the structure where larger sediments settle out. Internal components trap oils, grease, and other floatables.
- Systems are designed to prevent re-suspension of particulates, providing removal during every storm event.
- Structures are commonly used for new developments, streets and roadways, parking lots, and industrial/commercial facilities.
- Best used at the beginning of a storm drain line for maximum treatment efficiency.

Limitations

- Structures can only treat a portion of the flow that enters the storm drain system.
- Drainage areas generally limited to a few acres or less.
- Maintenance requirements can be a significant limitation.

Design Parameters

- Vendors often provide services to build, install, and maintain systems.
- Access manholes are placed where they can be easily accessed by vacuum trucks.
- Adjacent unpaved areas should be stabilized to prevent sediment from washing into the treatment system.

Maintenance and Inspection

- Conduct inspections as required by the NPDES permit or contract specifications during construction.
- Periodic inspection and maintenance will be required based on post-construction site conditions.
- Make any repairs necessary to ensure the measure is operating properly.
- Generally, systems require cleaning annually at a minimum.
- If not maintained properly, oils, grease, sediments, and other particulates can be washed out of the system and conveyed to downstream components of the storm sewer system.