

CASE STUDY

EcoStream® BioFilters Treat Intersection's Surface Runoff

Culver City, CA

OWNER

City of Culver City, CA

INSTALLATION DATE

September 2025

ENGINEER

Willdan Engineering, Anaheim, CA

PRODUCTS

1 6' x 4' (1.8 x 1.2 m) EcoStream BioFilter Vault
1 8' x 4' (2.4 x 1.2 m) EcoStream BioFilter Vault
40' (12 m) of 18" (450 mm) HP Storm
2 FlexStorm® Connector Pipe Screens (CPS)

CONTRACTOR

Toro Enterprises, Inc., Oxnard, CA

CHALLENGE

Culver City needed to improve pedestrian and bicyclist safety at the intersection of Washington Boulevard and Robertson Boulevard, prompting construction of a widened sidewalk and pedestrian area to accommodate a dedicated bike lane.

The project involved infrastructure upgrades that disturbed existing impervious surfaces. As a result, stormwater quality treatment measures were required to be installed within the project area to meet current regulations.



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SOLUTION

Advanced Drainage Systems (ADS) provided an effective stormwater quality solution with EcoStream BioFilter vaults, designed to treat runoff while able to connect into the existing municipal stormwater system using HP Storm polypropylene pipe.

Two EcoStream BioFilter models were selected for the project. The 4' x 6' (1.2 x 1.8 m) vault was installed with a tree and offers a sediment mass capture capacity of 407 pounds (185 kg). The 4' x 8' (1.2 x 2.4 m) vault utilized a solid cover and provides a sediment mass capture capacity of 542 pounds (246 kg).

The EcoStream vaults were engineered to treat surface runoff from the southern portion of Robertson Boulevard to its intersection with Washington Boulevard. For enhanced trash and debris capture, FlexStorm Connector Pipe Screen (CPS) units were installed inside the EcoStream curb inlets. Once treated, stormwater was conveyed into Culver City's stormwater system using 18" (450 mm) HP Storm, which is manufactured from polypropylene.

PRODUCT DESCRIPTION

EcoStream BioFilter is designed to capture and retain a variety of pollutants, including sediment, nutrients, heavy metals and hydrocarbons, while helping to meet green infrastructure objectives. The biofilter is installed in a compact footprint without sacrificing treatment capacity and utilizes regional plant life. EcoStream BioFilters come in a multiple configurations to meet specific requirements and are available in curb inlet or piped inlet options. The biofilters are available in a vault or a lined system.

FlexStorm Connector Pipe Screen (CPS) units are installed inside a catch basin, where the screen captures large volumes of trash and sediment, which can be removed by a vacuum truck. The Connector Pipe Screen is constructed from 14GA perforated stainless steel and reinforced with 12GA U-channels around the screen's perimeter. CPS units can be utilized on new applications or can be retrofit and come in multiple shapes to fit the catch basin for quick and easy installation.

HP Storm polypropylene pipe provides superior pipe stiffness, longer bells and spigots and a premium joint performance. ADS offers a watertight and air-testable joint. Longer stick length reduces the number of joints in a conveyance line, therefore extending service of life. In this case, HP Storm was utilized in a shallow burial depth, but it can be installed up to 40' (12 m) deep in certain diameters due to its pipe stiffness. The smooth interior wall offers a high flow capacity. HP Storm pipe meets or exceeds the standards specified in ASTM F2881 and AASHTO M330 and the extended bell and spigot meets ASTM D3212.



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