FERGUSON WATERWORKS

WINTER ISLAND PARK
SALEM, MA

INITIAL CONCERN

The client contacted us for assistance in finding a solution for a stormwater concern at a historical recreation site. Untreated stormwater was flowing off of approximately 2.5 acres of impervious buildings and parking lots, emptying directly into Salem Harbor. The runoff led to decreased sea water quality due to sediment, bacteria, metals, oils and grease. This affected important shellfish, water fowl habitats and fisheries. Not to mention, surrounding parking lots were experiencing severe ponding.

Goal

The client desired a cost-effective system that would filter stormwater, increasing water quality and could fit into the limited footprint available.

Installation/Solution

After careful consideration, it was decided that FocalPoint Biofiltration System would be the best solution to treat the polluted runoff and slow the rate of discharge into the harbor. It was chosen because it combines next generation biofiltration media with a high performance underdrain to deliver all the advantages of a traditional bioretention system, in a footprint up to 90% smaller. This was key for the project because of the limited footprint available. A domed overflow riser with a filter insert was added to the installation to collect any floatables and mulch. Overall, the installation took less than a day.

Prior to installation

Post-installation

RESULTS

FocalPoint Biofiltration System reduced parking lot water ponding and bank erosion. It also significantly removed a number of pollutants. There have been several major storms since the system was installed, and FocalPoint has performed exactly as designed. The client was elated that the system has helped improve the harbor's water quality while maintaining the integrity of the historical site.

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ADDITIONAL DETAILS AND PHOTOS

The below photos represent some of the additional details of the FocalPoint installation.

Modular underdrain installed inside geotextile envelope along with the maintenance port.

Microgrid mesh installed, then the top and sides backfilled with peagravel.

High performance biofiltration soil installed.

Plants, mulch and rocks top off the biofiltration system.

Plant growth will continue throughout the following weeks.

System filters the same amount of water in <10% of the area required for traditional bioretention.