

Memorandum

To: Bassett Creek Watershed Management Commission (BCWMC)
From: Barr Engineering Co. (Barr)
Subject: Item 5E – Proprietary Stormwater Treatment Devices
BCWMC April 18, 2019 Meeting Agenda
Date: April 11, 2019
Project: 23270051 2019 003

5E Proprietary Stormwater Treatment Devices

Executive Summary: The BCWMC Engineer has seen an increase in the use of proprietary stormwater treatment devices for development and redevelopment projects. The levels of treatment or pollutant removal efficiencies of these devices are not widely accepted. While most proprietary devices undergo third party testing, the third party testing varies and not all devices receive the same level of approval from third party testing organizations.

Recommendation: Direct the Technical Advisory Committee (TAC) to review standards for acceptance of proprietary stormwater treatment devices and provide guidance to the Commission for review and acceptance of these devices.

Background

The BCWMC Requirements for Improvements and Development Proposals (Requirements) document states that “in order to receive credit toward meeting the BCWMC [water quality] performance goals, [best management practices (BMPs)] must be designed in accordance with the Minnesota Stormwater Manual or as otherwise approved by the BCWMC.” The application form fee schedule indicates that projects involving review of alternative BMPs (i.e. BMPs not included in the MN Stormwater manual) require a \$1,000 add-on fee for review.

Specific Examples from Development Reviews

As part of the review process for development and redevelopment projects in the Bassett Creek Watershed, the BCWMC Engineer has reviewed proprietary stormwater treatment devices for the following projects.

Ridgedale Active Adults Apartments (BCWMC #2018-16):

The applicant submitted plans which included a Contech StormFilter Vault (see Figure 1), a Contech StormFilter Manhole, and sump manholes with SAFL baffles (see Figure 2) for water quality treatment. The manufacturer, Contech, provided the applicant with assumed pollutant removal efficiencies for the BMPs.

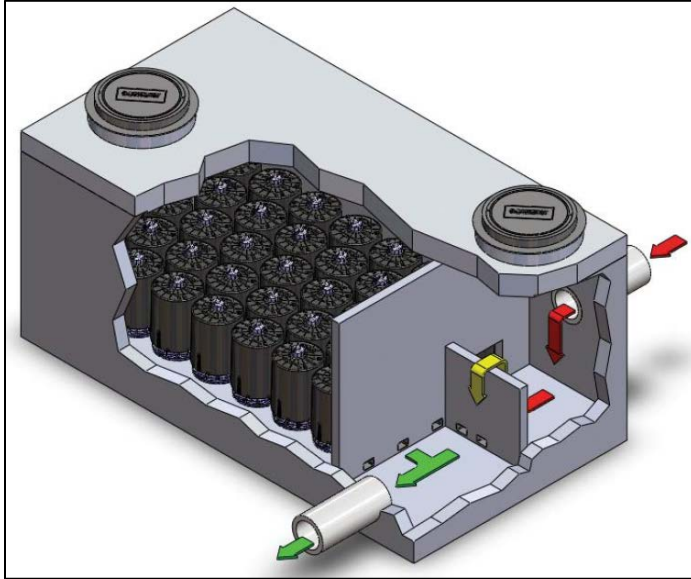


Figure 1: Contech StormFilter Vault

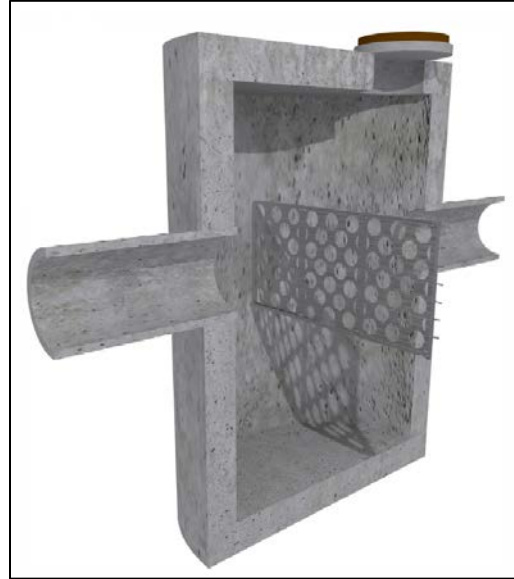


Figure 2: SAFL Baffle with Sump

Following BCWMC approval of the project, the applicant awarded the project to a contractor, who requested the use of different proprietary BMPs: a BioClean Kraken Filter (see Figure 3) and a BioClean SciClone Separator (see Figure 4) for water quality treatment.

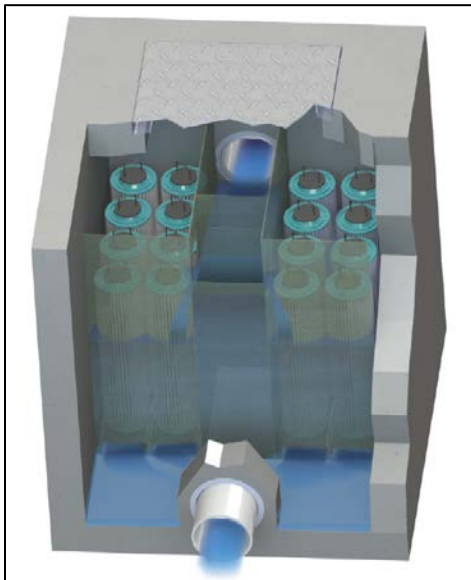


Figure 3: BioClean Kraken Filter

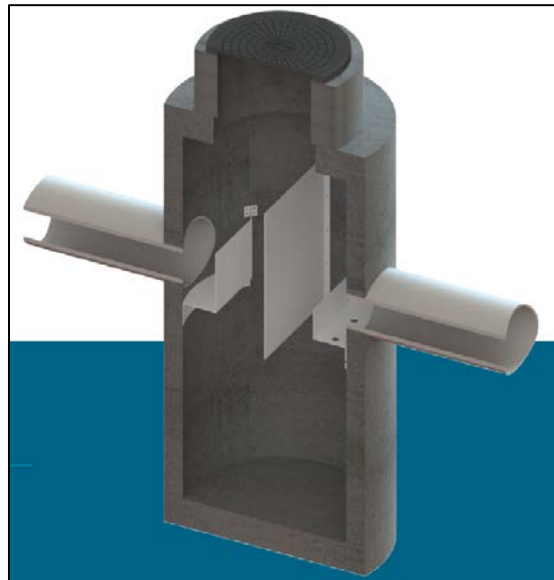


Figure 4: BioClean SciClone Separator

Ridgedale Executive Apartments (BCWMC #2018-28)

The applicant submitted plans which included multiple BioClean Kraken Filters (see Figure 3) and BioClean SciClone Separators (See Figure 4) for water quality treatment. The manufacturer, BioClean, provided the applicant with assumed pollutant removal efficiencies for the BMPs.

Marsh Run Apartments (BCWMC #2019-06)

The applicant submitted plans which included multiple Contech Jellyfish Filters (see Figure 5) for water quality treatment. The manufacturer, Contech, provided the applicant with assumed pollutant removal efficiencies for the BMPs.



Figure 5: Contech Jellyfish Filter

Third Party Testing

Manufacturers of proprietary stormwater treatment devices often subject their devices to third party testing to verify their claims for treatment and pollutant removal efficiency. Numerous entities perform third party testing of proprietary stormwater treatment devices and each entity provides varying levels of approval, including:

- State of Washington Department of Ecology: Technology Assessment Protocol – Ecology (TAPE)
 - Pilot Use Level Designation (PULD)
 - Conditional Use Level Designation (CULD)
 - General Use Level Designation (GULD)
- New Jersey Corporation for Advanced Technology (NJCAT)
 - Laboratory Verification
 - Field Verification
- State of New Jersey Department of Environmental Protection (NJDEP)
 - Certification
- Canadian Environmental Technology Verification (ETV) Program
 - Verification

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Conclusion

The BCWMC Engineer has found that proprietary devices receive varying levels of third party certification, verification, and/or testing. Therefore, it is unclear what level of third party certification, verification, and/or testing is acceptable/should be required when reviewing and approving proposals for improvements and developments in the Bassett Creek watershed. Given the recent uptick in use of proprietary stormwater treatment devices, the BCWMC Engineer requests additional direction from the Commission and TAC regarding review and acceptance of proprietary stormwater treatment devices.