Metropolitan North Georgia Water Planning District
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Post-Construction Stormwater Technology Assessment Protocol Review Summary

Stormwater Management StormFilter

February 4, 2019

Introduction

Contech Engineered Systems, LLC submitted field data for review of their Stormwater Management StormFilter product. The Metro Water District's Post-Constructions Stormwater Technology Assessment Protocol (PCSTAP) review committee reviewed all data and documentation submitted for adherence to the Metro Water District's protocol. This review is not an approval or detailed verification of the device, technology, or real-world performance itself. Rather, this review provides concurrence to local jurisdictions and other as to the completeness of data and document submitted with regards to making local determinations. Local jurisdictions are free to allow or not any device, technology, performance claim, load reduction, etc. as needed to accommodate local geography, policy, or review of the manufacturer's claims.

Performance Claim

The manufacturer provided the following performance claim:

> "A StormFilter designed to treat stormwater at a rate of 7.5 gpm per 18" tall by 18" diameter filter (a loading rate of 1 gpm per square foot of filter surface area), using perlite media, will achieve a TSS removal efficiency of 88.6% to 90.4% for an influent particle size range of 1.5 to 500 microns with inflow concentrations ranging from 10 to 98mg/l."

The review committee did not evaluate additional claims for additional pollutant removal efficiencies, only TSS as pursuant to our protocol and existing stormwater quality requirements. However, jurisdictions are encouraged to contact the Metro Water District for the full engineering report for review if other pollutants are of local concern.

Summary of Review

The PCSTAP reviewed data submitted for 1) lab tests and 2) field tests.

1) Lab Tests - Under controlled conditions, 7 runoff simulations (sims) were performed using influent TSS with a silt texture (20% sand, 80% silt, 0% clay), variable event mean concentrations (EMCs) between 0 and 300 mg/L, and a filtration rate of 28 L/min (7.5 gpm) (100% design, per cartridge, operating rate for this configuration). The mean TSS (silt) removal efficiency for this StormFilter cartridge configuration was determined using regression statistics and found to be 87% (P=0.05: L1=85%, L2=88%) over the range of

influent EMCs tested.

2) Field Tests – Field tests were conducted in Mooresville, NC using Perlite media. The tests resulted in a TSS removal efficiency of 88.6% to 90.4% will be achieved for influent particle size ranges of 1.5 to 500 microns with inflow concentrations ranging from 10 to 98 mg/l.

Conclusion

After reviewing all data and documentation submitted, the committee believes there is enough information per the PCSTAP for local jurisdictions to make determinations on allowing the StormFilter by Contech Engineered Solutions, LLC, for use in post-construction stormwater controls per the manufacturer claims. As stated above, jurisdictions may use the information in this summary for their determinations or the full submission will be made available upon request if a jurisdiction chooses to conduct their own review.