



Metropolitan North Georgia Water Planning District

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Post-Construction Stormwater Technology Assessment Protocol Review Summary

Kraken Filter

March 13, 2019

Introduction

Bio Clean Environmental Services, Inc. (Bio Clean) submitted lab data for review of their Kraken Filter stormwater treatment product as well as some field data. The Metro Water District's Post-Construction 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:

“Kraken Filter is capable of exceeding 80% Total Suspended Solids (TSS) removal efficiency as well as 72% removal of Phosphorus.”

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 field tests.

Field tests were conducted by Bio Clean under the New Jersey NJCAT protocol while field data was collected to Washington TAPE protocols (similar to GA). Data was collected by an independent, 3rd party laboratory in 2015 and 2016 and a 3rd party filed test was conducted in 2017. Lab tests used a silica surrogate similar to Sil-Co-Sil 106 and showed a minimum 80% reduction in TSS per manufacturer claims. Field tests further supported those claims when d50 was less than 20 microns. This d50 is within allowances for particle size distribution for Metro Atlanta's Piedmont soils. Actual field data shows a TSS removal of 83%, this supporting the claims of 80%.

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 Kraken Filter by Bio Clean Environmental Services, Inc., 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.