



BaySaver Technologies, LLC
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November 1, 2017

ATTENTION: Daniel Figola, General Manager

REFERENCE: Third Party Review of Testing Procedures for Barracuda™ Separator at the Mid Atlantic Storm Water Research Center, 1207 Park Ridge Drive, Mount Airy, MD 21771

SUMMARY

Boggs Environmental Consultants, Inc. (BEC) was hired by Advanced Drainage Systems (ADS) in August of 2017, to serve as independent third-party oversight of the BaySaver Barracuda S4 Separator test unit for removal of sediment with equivalent particle size distribution to the industry standard OK-110. The BaySaver Barracuda S4 is a storm water treatment device with a Maximum Treatment Flow Rate (MTFR) of approximately 1.08 cubic feet per second (cfs) that removes suspended solids from storm water runoff, with an average removal efficiency of 80% at the MTFR and a feed concentration of 300 mg/L. The device is an insert that can be installed in either Polypropylene plastic pipe or concrete vault, and consists of a cone (vortex separator) and baffles (“teeth”).

SCALED RESULTS

Testing flow rates ranged from 0.31 to 1.61 cfs, with a feed OK-110 concentration of 300 mg/L. Based upon New Jersey scaling methodology, the table below represents treatment and device information for the S4, S6, and S8 units.

Table 1: MTFR's and Sizing for BaySaver Barracuda Models

Model ¹	Man-hole Diameter ¹ (ft)	OK110 80% TSS Maximum Treatment Flow Rate (cfs)	Treatment Area (ft ²)	Hydraulic Loading rate (gpm/ft ²)	Chamber Depth (ft)	Wet Volume (ft ³)	50% Maximum Sediment Storage ² (ft ³)
Barracuda S4	4	1.08	12.57	38.6	6.83	75.4	10.47
Barracuda S6	6	2.43	28.27	38.6	6.83	169.7	23.56
Barracuda S8	8	4.32	50.27	38.6	11.03	512.7	41.89

Notes:

1. In some areas, Barracuda units are available in additional diameters. Units not listed here are sized not to exceed 38.6 gpm/ft² of effective treatment during the peak water quality flow.
2. 50% Sediment Storage Capacity is equal to manhole diameter x 10 inches of sediment depth. Each Barracuda unit has a 20 inches deep sediment sump.

Should you have any questions, contact our office at your earliest convenience.

Sincerely,

BOGGS ENVIRONMENTAL CONSULTANTS, INC.

William R. Warfel

Principal Environmental Scientist

Robin J. Maliszewskyj

Chemical Engineer