

Dr. Greg Williams  
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May 29, 2026

Re: STEPP Verification of TrashTrap Trash Capture Device

Dr. Williams,

StormTrap LLC conducted testing to evaluate the performance of their **TrashTrap** device. The applicable protocols are ASTM (American Society for Testing and Materials) Standard E3332, *Standard Test Method for Determining Trash and/or Debris Capture Performance of Stormwater Control Measures*, dated December 21, 2022; and the Stormwater Testing and Evaluation of Products and Practices (STEPP) document titled *STEPP Trash Capture Verification Procedural Clarifications*, dated January 2, 2026. These documents are applicable to trash capture devices designed to capture trash and/or debris greater than 5 mm in at least two dimensions.

Testing was conducted on a TrashTrap device in an end-of-pipe configuration at a temporary laboratory facility located in Morris, Illinois, September 5 to October 18, 2023. Testing was conducted by StormTrap staff and observed by a STEPP-approved third party. Testing was conducted in accordance with ASTM-E3332-23 Procedures 9.1 (Head Loss testing), 9.2 (Percent Restriction test), 9.3 (Mass Load Testing for Trash), and 9.5 (Scour Test), as amended by the STEPP trash capture clarification document. Two net lengths (2 and 4 feet) and three net hole opening sizes (5 millimeters (mm), 0.5 inches, and 1 inch) were tested with Procedures 9.1, 9.2, 9.3, and 9.5. Testing was conducted with and without a grate for Procedure 9.3 (mass capacity).

The review and evaluation process included a public comment period and review by three independent reviewers. STEPP review and evaluation indicates that the requirements of the aforementioned protocols have been met.

**STEPP verifies the StormTrap TrashTrap trash capture device as a **Type 1** trash capture device, as summarized in Table 1. STEPP verifies the performance claims described in Appendix A and use of the StormTrap TrashTrap trash capture device under the conditions described in this document when designed, operated and maintained in accordance with the information provided in the Lab Testing Evaluation Report (LTER) submitted by StormTrap and in accordance with the following conditions:**

1. The device conforms with an end-of-pipe device
2. Off-line devices should be sized for a flow velocity of  $\leq 5$  ft/s at the net opening
3. In-line devices should be sized for a flow velocity of  $\leq 4.89$  ft/s at the net opening
4. To maintain performance, nets should be emptied at 75% capacity or less

5. Commercially available net lengths are 4, 6, and 8 foot in length. Commercially available frame openings for these three lengths are, respectively, 24, 30, and 36 inches. For larger frames, the scaling equation shown in Performance Claim 5 (Appendix A) should be applied.
6. TrashTrap devices should be inspected and maintained following the recommendations and guidelines included in the TrashTrap Manufacturer’s Instruction Manual available at: <https://stormtrap.com/products/trashtrap/>.

**Table 1 - Summary of ASTM E3332 procedures completed during testing and corresponding STEPP Verification Type**

<b>E3332-22 Tests</b>	<b>Type 1</b>	<b>Type 2</b>	<b>Type 3</b>	<b>Type 4</b>
Hydraulic evaluation (ASTM E3332 Procedure 9.1)	✓	✓	✓	✓
Percent restriction versus flow (ASTM E3332 Procedure 9.2)	✓	✓	✓	✓
Mass loading for trash (ASTM E3332 Procedure 9.3)	✓	✓	✓	✓
Scour testing (ASTM E3332 Procedure 9.4)	✓	✓	✓	✓
Mass loading test for trash and debris (ASTM E3332 Procedure 9.5)		✓		✓
Bead test (ASTM E3332 Procedure 9.6)			✓	✓

This review, subsequent determinations and public dissemination of information does not constitute an approval process nor does the result of this evaluation reflect a certification, approval or endorsement of any product by the STEPP program. Local governments and other entities are free to use this information as part of their processes to evaluate the suitability of this product for use within their jurisdiction. Local governments and other entities may also allow removal efficiencies that differ from manufacturer claims based on local geography, policies, or other conditions.

**Available documents (see <https://stormwatertesting.org/> for more information)**

1. Laboratory Technical Evaluation Report (LTER) – Final Version (May 2026)
2. Appendices to the LTER (March 2025)
3. Quality Assurance Project Plan (September 2024)
4. [TrashTrap Specifications](#)

Sincerely,



Seth P. Brown, PE, PhD  
Executive Director, National Municipal Stormwater Alliance

## **Appendix A – Summary Information for StormTrap TrashTrap Trash Capture Device**

The following performance claims are made by StormTrap in their LTER.

1. Hydraulic testing (Procedure 9.1): The impact of the device on upstream water elevation, in which the downstream elevation = 0, is given by Equation 1.

$$Eq(1) \quad v_h = 1.40 (v^2 / 2g)$$

where

- $v_h$  = velocity head (ft)
- $v$  = velocity (ft/s), d
- $g$  = gravitational constant, 32.2 (ft/s<sup>2</sup>)

2. Restriction testing (Procedure 9.2): The percent restriction at bypass was >+ 75% for all configurations tested. StormTrap recommends that all nets, regardless of net length, be emptied when they are ≤ 75% full.
3. Mass capture (Procedure 9.3): Removal was 100% up to the point of bypass for all the nets tested. The dry mass capacity of a net is given by Equation 2.

$$Eq(2) \quad \text{Dry mass capacity} = (\text{net volume} * \text{NDMC} * 1.024 * (\text{net length} - (2/12)))$$

where

- NDMC = normalized dry mass capacity (lbs/ft<sup>3</sup>)
- 1.024 is the stretch factor (ft<sup>-1</sup>)
- net length is in feet
- 2/12 is frame depth correction factor converted to feet

Values for NDMC for the tested nets are given in Tables 2 and 3.

4. TrashTrap nets do not scour any previously captured material at an average flow rate of 9.77 ft/s. This makes it suitable for off-line installation at flow velocities up to the StormTrap recommended limit of 5 ft/s and for on-line installation for velocities up to 4.89 ft/s.
5. The mass capacity of any device larger than the test device is equal to the volume of the larger device divided by the volume of the test device, as given in Equation 3.

$$Eq(3) \quad \text{Mass capacity}_2 = \text{mass}_1 X (\text{Volume}_2 / \text{Volume}_1)$$

where device 1 is the tested device and device 2 is the larger device being calculated.

**Table 2 – Normalized Dry Mass Capacity (NDMC) – Net + Grate**

Opening Size	2-foot NDMC (lb/ft <sup>3</sup> )	4-foot NDMC (lb/ft <sup>3</sup> )
5 mm	1.13	1.30
0.5 inches	1.52	1.63
1 inch	1.53	1.69

**Table 3 – Normalized Dry Mass Capacity (NDMC) – Net Only**

Opening Size	2-foot Net Mass Capacity (lb/ft <sup>3</sup> )	4-foot Net Mass Capacity (lb/ft <sup>3</sup> )
5 mm	1.05	1.24
0.5 inches	1.33	1.67
1 inch	1.44	1.53