

# Tennessee's Guide to Stormwater Manufactured Treatment Devices A *Collaborative Story in Motion*

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# Tennessee Stormwater Association

- Mission
  - Assist members with their local efforts to comply with State and Federal clean water laws.
- Goal
  - Protect and improve the quality of the waters of Tennessee through the exchange of information and knowledge regarding design, construction, maintenance, administration and operation of stormwater facilities.



# TNSA's Manufactured BMP Evaluation Committee

- Goal
  - Provide education on MTDs
  - Develop toolkits to assist Municipal Stormwater Staff
  - Build awareness of National Protocols





# Assistance for Tennessee MS4s

- Time is Valuable
  - Plans review turn-around times are limited
  - Meeting overload
  - Limited time for education
- Lots of information on MTDs
  - Where can I find resources?
  - Who should I listen to?
- No national standards
  - Field vs. Lab monitoring???
  - Are all products the same?

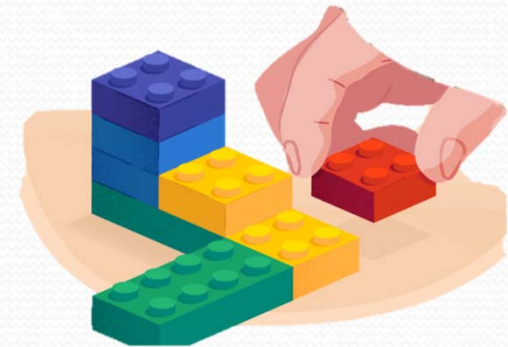


# Why do the Manufacturers care?

- Need for understanding/clarity
  - How do we provide a platform for private engineering/municipal groups to easily evaluate a Manufactured Treatment Device (MTD)?
- Need for transparency
  - How do we provide information regarding a range of MTDs in a manner that will provide performance information and testing results in an easy to digest and consistently vetted manner?
- Need for consistent review and implementation among groups

# The Collaborative Process

- Guidance Document Development
  - A determination was made that the optimal output could be provided by a representative group. This group was made up of:
    - Municipal Groups
    - Private Engineering
    - MTD Manufacturers
  - Brainstorming to determine what output was desired; what is the outcome we'd like to see?
  - Determination of goals and delineation of duties.





# Lessons Learned

- It was essential that the group define a desired outcome as the process began. This was likely the most difficult part of the process.
- A letting go of personal agenda:
  - The individual parties and groups each have differing wants/needs. A document that served the group had to be at the top of the goal list.
- Flexibility:
  - It was determined early on that a document that could be adaptable as times and regulations may change was imperative. There's no need to reinvent the wheel.



# A Toolkit for Others

- The express purpose of the document was to be a reference, rather than a mandate, for the end users.
- A document of this sort is intended to exist within the parameters of the local jurisdiction, while aiding those who must either select or approve the device for use without the need to be an “expert” in MTDs.

## Table of Contents

Statement of Purpose	3
Introduction	4
Laboratory Testing Protocols	12
Summary of the New Jersey Department of Environmental Protection (NJDEP) Manufactured Treatment Device (MTD) Certification Protocol	12
Field Testing Protocols	16
Summary of Washington State TAPE Certification Program	16
Conclusion	19
References	20
Appendices	22
Appendix A - MTD Submittal Form and Checklist for MS4 Plan Review Staff	23
Appendix B - Web Resources	24



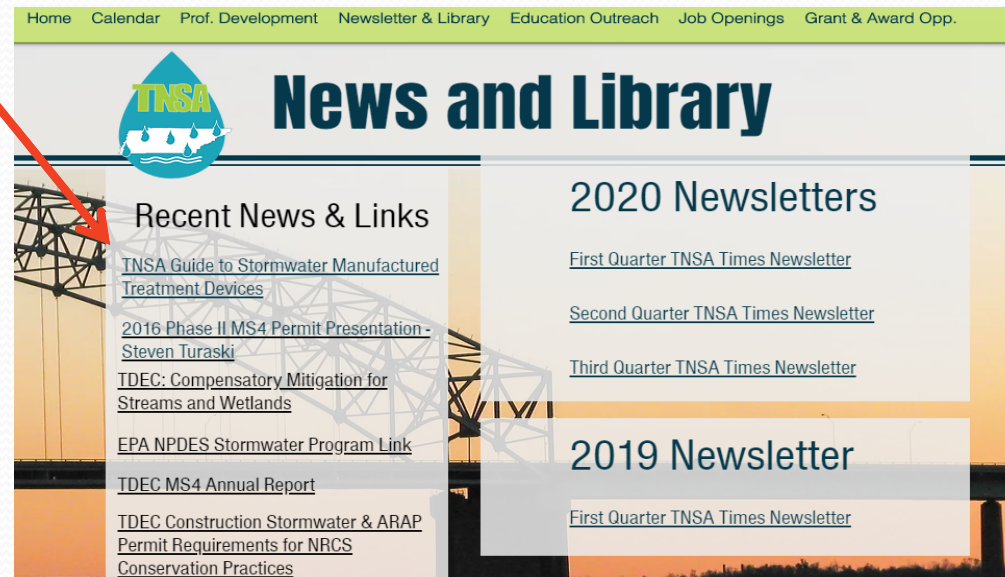
# A Toolkit for Others

MTD Submittal Form and Checklist

Manufacturer Information			
Name			
Address/Location			
Web Page			
Contact Name			
Telephone Number			
Fax Number			
Contact Email Address			
MTD Information			
Submittal Type		HDS <input type="checkbox"/>	Filter <input type="checkbox"/>
Specific MTD Name and Model Number			
Required Treatment Flow Rate (CFS)			
If Inline, Peak Flow Capacity (CFS)			
Designed Site Specific Peak Flow Rate (CFS)			
Designed Site Specific Treatment Flow Rate (CFS)			
Written description of Manufacturer's Quality Control Program provided?		Yes <input type="checkbox"/>	No <input type="checkbox"/>
Instructions on proper assembly and maintenance of the MTD provided?		Yes <input type="checkbox"/>	No <input type="checkbox"/>
Certification that the MTD performs to the minimum performance standards under the specific conditions stated in the MTD specification?		Yes <input type="checkbox"/>	No <input type="checkbox"/>
Detail drawing for each MTD submitted signed by registered PE?		Yes <input type="checkbox"/>	No <input type="checkbox"/>
Performance Evaluation Testing			
Protocol Certification	NJEDP <input type="checkbox"/>	TAPE <input type="checkbox"/>	Other <input type="checkbox"/> (specify below in grey)
Approved Treatment Rate (CFS)			
Desired Treatment Rate (CFS)			
Approved Removal Efficiency (%)			
Independent 3 <sup>rd</sup> Party Testing Evaluator			
Test Facility Name			
Test ID			
Test Date		Report Date	
Signature of 3 <sup>rd</sup> party evaluator included on report?		Yes <input type="checkbox"/>	No <input type="checkbox"/>
Max Flow Rate at which 80% removal efficiency is achieved			
Testing Hydraulic Loading Rate			
Particle Size Distribution (PSD) used			
Concentration of PDS (mg/L)			
Total Suspended Solids (TSS) removal efficiency (%)			

# A Toolkit for Others

- Document available in TNSA's library at <https://www.tnstormwater.org/newsletter-library>



# Thanks to the Committee Members

- Jason Bates, Advanced Drainage Systems (Committee Chair)
- Crystal Bishop (TNSA Board Rep)
- Jacob Dorman, Contech Engineered Solutions
- Mark Miller, Aqua Shield
- Louan Tillman, Integrated Technologies
- Joshua Frerichs, City of Knoxville
- Chris Granju, Knox County/TNSA
- Barrett Fisher, Hamilton County
- Jason Mann, GEO Services
- Steve Casey, Civil and Environmental Consultants
- Robert Haley, City of Murfreesboro
- David Edwards, City of Kingsport





# Thank you

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