
July 25, 2019

Tennessee Department of Environment and Conservation (TDEC)
Attn: Vojin Jancic
William R. Snodgrass Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, TN 37243
Email Submission

RE: Public Comments on Proposed New Rule 0400-40-10.04

Mr. Jancic,

Contech Engineered Solutions LLC (Contech) appreciates the opportunity to provide public comment on this very important water quality issue presently under review by TDEC. As a total site solutions provider, including a portfolio of stormwater treatment solutions, and with a corporate presence in Tennessee, we are very interested in the outcome of this rule making process and seek to have a sound, scientifically defensible regulation established upon its conclusion. We believe that water quality can be protected while still accomplishing statewide environmental and economic development goals.

While we understand the origins of this amendment process are rooted in litigation that may have limited participation, we are still disappointed that the Department excluded several major stormwater stakeholders, including the municipal separate storm sewer systems (MS4) community and manufacturers of stormwater treatment solutions, from the development of these proposed rules. Had an inclusive process been coordinated, we feel a number of our concerns discussed herein could have been addressed earlier. The end result would have been a fully collaborative process that more strongly protects water quality and builds greater public trust in the proposed rules. We believe these regulations should not be implemented until a fully inclusive stakeholder process has been initiated.

With this rule, it appears TDEC is attempting to accomplish nutrient reductions, in addition to the stated 80% total suspended sediment (TSS) reduction requirements, through the use of green infrastructure (GI). Implementing GI can be an effective program strategy, but these practices have design limitations, such as high groundwater, contaminated or poorly infiltrating underlying soils, and utility and space constraints, that can affect their overall performance. The stormwater control measure treatment type table found in Sec. 10-04 (2) (c) is organized in a manner intended to incentivize GI practices at the expense of other treatment SCMs. It also penalizes many effective TSS treatment practices unjustly, ignores the complicated nature of urban stormwater management, and discourages innovation. All of this leads to increased stormwater management costs for the end user. While we recognize that GI practices can be a highly effective means of managing stormwater runoff, these practices represent only a small percentage of the tools available. Sound and defensible regulations should include all the tools that can help meet water quality and quantity goals, as well as provide a pathway for new, potentially more effective treatment, technologies.

Specific to the proposed language found in Chapter 0400-40-10.04, we offer the following comments and concerns:

- 1) The term “new development” is defined as “*a new or redevelopment project that disturbs one or more acres of land, or less than one acre if part of a larger common plan of development, and discharges into a MS4*. Clarify if a “new development” project that does not discharge into MS4 infrastructure, but is located within the boundary of a MS4, is subject to the Permanent Stormwater Management section of the proposed new rule.

- 2) The language under Permanent Performance Standards in 2(a) should clearly and specifically define what constitutes the achievement of maximum extent practicable (MEP). We recommend specifically identifying 80% TSS removal as meeting the maximum extent practicable standard.
- 3) The language under Permanent Performance Standards in 2(b) states that, "*For design purposes, TSS may be used as the indicator of pollutants (such as sediment, nutrients, and pathogens).*" The use of the term "may" is subjective and could lead to inconsistent implementation amongst the regulated MS4 communities. Furthermore, utilizing TSS as a surrogate for other pollutants, particularly nutrients, is potentially damaging to water quality. TDEC should set specific nutrient reduction performance targets utilizing the best available science and sound engineering principles if the Agency wants specific nutrient reductions achieved.
- 4) The statewide design storm is identified as the 1-year, 24-hour storm in 2(b). This should be refined to include a reference to a specific standard, such as NOAA Atlas 14.
- 5) The SCM Treatment Type table found in 2(c) contains confusing language that could lead to inconsistent implementation, including:
 - a. This section states, "*SCMs must (emphasis added) be designed, at a minimum, to achieve an overall treatment efficiency of 80% TSS removal from the WQTV.*" However, TDEC has publicly insisted MEP requires greater removal through use of the treatment table. We respectfully ask TDEC to clarify their position on whether 80% TSS removal meets MEP.
 - b. We support the use of GI practices where possible. In instances when site conditions make GI implementation infeasible, other solutions, such as proprietary filters and biofilters, should be allowed for compliance purposes without being penalized by being sized larger than necessary to treat an equivalent level of runoff. The same treatment standards should apply to all SCMs.
 - c. Specific to bioretention practices, which remain the most commonly deployed and studied GI practice available, the International BMP Database shows that these systems commonly export nutrients, specifically phosphorus. Statistical analysis published in 2017 shows bioretention to be a net exporter of total phosphorus, which has been identified by TDEC, the Tennessee Clean Water Network, and others to be a major pollutant of concern within Tennessee.
(<http://www.bmpdatabase.org/Docs/03-SW-1COh%20BMP%20Database%202016%20Summary%20Stats.pdf>)
 - d. SCM design differences can affect pollutant removal performance. We recommend adding a reference to a minimum design standard or manual (i.e. Tennessee Permanent Stormwater and Design Guidance Manual) to ensure consistent implementation of this rule.
 - e. Some locations in Tennessee have a 1-year, 24-hour storm less than 2.5". In those jurisdictions, the required treatment volume within the table will exceed the design storm.
 - f. It is unclear how treatment trains are to be utilized under the treatment type table. Treatment trains are an effective compliance tool and should be considered.
 - g. Biologically active filtration is not clearly defined and the terminology is inconsistent with existing state and local technical guidance. Please define.
 - h. The list of SCM treatment types is not all inclusive and it is unclear how other existing or innovative SCMs would be incorporated over time. These include SCMs such as green roofs, permeable pavements, open space preservation, filter technologies, perforated detention systems, and underground plastic chamber systems. Additionally, several of the prescribed SCMs can fall into multiple categories without clear indication as to how they would be deployed or what percentage of the WQTV they would be required to treat.

- 6) Specific to flow-through manufactured treatment devices referenced in the SCM Treatment Type table found in 2(c):
 - a. Critical sizing and implementation guidance is lacking and should be considered to ensure program and permit consistency. Simply stating “maximum flowrate of the design storm” is not sufficient to ensure water quality is protected. Suggested minimum criteria includes:
 - i. Clarify how the WQTV is calculated
 - ii. A specific method to convert a water quality volume to a water quality flow rate. We recommend the Modified Curve Number Method.
 - b. TDEC makes reference to hydrodynamic separators (HDS) in the clarifications section of the table. TDEC should be aware that HDS devices are only one subset of MTDs. Filtration and Biofiltration MTDs are in use throughout Tennessee and should be included in the clarifications column within the table. To ensure consistent evaluation and implementation of MTDs across the state, TDEC should specify a specific protocol, such as the New Jersey Department of Environmental Protection (NJDEP) Certification for laboratory testing or Washington State’s Technology Assessment Protocol- Ecology (TAPE) for field testing, be followed as referencing these protocols will bring credibility to the program and provide performance certainty to the regulated communities. These prescriptive protocols are rigorous in nature and allow MTDs to be evaluated on a level playing field.
 - c. NJDEP’s laboratory certification is the regulatory standard in NJ. NJDEP only provides certification letters for verification reports that are in full compliance with the protocol and process, whereas NJCAT will issue verification reports for MTDs that have been tested against other standards that do not meet NJDEP’s requirements. Any references to the New Jersey Corporation for Advanced Technologies (NJCAT) verification should be replaced in this rule with either NJDEP Certification or TAPE General Use Level Designation (GULD) for Basic (TSS) treatment.
 - d. Both of the recognized testing protocols will be the basis for a national evaluation protocol for manufactured treatment devices. This initiative, known as the National Stormwater Testing and Evaluation of Products and Practices (STEPP) is presently underway and led by the Water Environment Federation (WEF) and American Society for Testing and Materials (ASTM). The Tennessee Stormwater Association (TNSA) MTD Committee is also currently developing guidance for the use of MTDs within the State.
- 7) 4(c) allows for infiltration SCMs to be installed within the required water quality buffer. Given the maintenance intensive nature of infiltration SCMs, allowing them in flood prone areas with often limited site access is impractical.
- 8) 6(c) requires “*Verification that SCMs have been installed per design specifications within 90 days of installation.*” Certain SCMs may be installed during construction of project and activated once the site is completely stable. In these instances, a 90-day verification from installation requirement is overly restrictive. TDEC should consider allowing the permittee flexibility to establish local processes and policies that consider construction sequencing and as-built and inspection scheduling.
- 9) Maintaining full functionality of SCMs is required in 7(a). With the emphasis placed on GI practices known to have more frequent inspection and maintenance intervals than other practices, has TDEC considered the additional burden this may put on private property owners and the MS4 community? More frequent inspection and maintenance requirements will lead to increased costs.

We generally applaud TDEC’s effort to establish a rule that is inclusive of many stormwater compliance tools, but strongly believe that the proposed language as presented needs significant refinement in order to fully protect water quality.

Stormwater management is dynamic and each site presents unique challenges and varying pollutant loads. A diverse toolbox is necessary to mitigate those issues and there is an established need for underground stormwater infrastructure in urbanized areas. As written, this rule will drive up compliance costs, limit future innovation in stormwater management, and increase the potential for greater urban sprawl across the state.

Thanks in advance for consideration of our comments on this important water quality issue. We are more than happy to meet with TDEC and other stakeholders to discuss our concern in greater detail. Please do not hesitate to contact me at your earliest convenience.

Respectfully,



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