

July 25, 2019

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Subject: Review Comments Regarding Revisions to the Following Tennessee Rules:

Chapter Number	Chapter Title
0400-40-05	Permits, Effluent Limitations and Standards
Rule Number	Rule Title
0400-40-05-.01	Purpose
0400-40-05-.02	Definitions
0400-40-05-.03	Exclusions
0400-40-05-.04	Prohibitions
0400-40-05-.05	Permit Application, Issuance
0400-40-05-.06	Notice and Public Participation
0400-40-05-.07	Terms and Conditions of Permits
0400-40-05-.08	Effluent Limitations and Standards
0400-40-05-.09	Technology-Based Effluent Limitations
0400-40-05-.10	Water Quality-Based Permitting
0400-40-05-.11	Duration and Reissuance of Permits
0400-40-05-.12	Appeals
0400-40-05-.13	Adoption of EPA-Issued Permits
0400-40-05-.14	Animal Feeding Operations
0400-40-05-.15	Municipal Separate Storm Sewer Systems

Chapter Number	Chapter Title
0400-40-10	National Pollutant Discharge Elimination System General Permits
Rule Number	Rule Title
0400-40-10-.01	General
0400-40-10-.04	Municipal Separate Storm Sewer Systems

1. New Rule 0400-40-10-.04 is clearly written for application only to traditional Phase II MS4s (i.e. medium and small municipalities) under the Tennessee general MS4 permit and does not in all cases apply to non-traditional MS4s and individual MS4 Permit holders. The introductory paragraph to the New Rule should clearly state that this rule applies directly and immediately only to traditional municipal Phase II MS4s under the Tennessee general MS4 permit and specify that these requirements may be modified, or their application delayed, for a non-traditional MS4 and/or by an individual MS4 Permit. Furthermore, T.C.A. 69-3-108(s)(t), which is apparently driving these rule changes, clearly states that it applies only to a “local government entity” (i.e. a traditional municipal MS4) and thus does not apply to a non-traditional MS4. The intent of the rule should be made clear in this section and throughout the New Rules.
2. One example of the concern referred to in Comment 1 (above) is that New Rule 0400-40-10-.04(1)(c) states: “*The permittee must develop and implement, and modify as necessary, an ordinance or other regulatory mechanism...*”. However, non-traditional MS4s typically do not have the legal capability to implement an ordinance or other regulatory mechanism on their own accord, and this could only be accomplished through actions of the Tennessee State legislature or the U.S. Congress. TDEC cannot

require legislation to be enacted through their NPDES permitting authority. Again, the New Rule should clearly state that this rule applies directly and immediately only to traditional municipal Phase II MS4s under the Tennessee general MS4 permit and specify that these requirements may be modified, or their application delayed, for a non-traditional MS4 and/or by an individual MS4 Permit.

3. Rule 0400-40-10-.04(1)(a) states: “The permittee shall develop and implement a permanent stormwater management program to remove pollutants from stormwater discharges through management practices, control techniques, and systems, design, and engineering practices implemented to the maximum extent practicable.” However, the phrase “maximum extent practicable” is currently not defined anywhere in the New Rules, or is a citation provided where this definition might be found in other Tennessee Rules. Understanding the meaning of the phrase “maximum extent practicable” is essential to the successful application of any MS4 permit. Since the phrase “maximum extent practicable” may have different meanings for different types and sizes of MS4s, an explanation should be added to this section that better defines or clarifies the intent of the phrase “maximum extent practicable” and this explanation can then be added to each individual MS4 Permit clarifying what the phrase means within the application of that specific MS4 permit.
4. Similarly, Rule 0400-40-10-.04(1)(d) states: “*The implementation plan shall include a brief description of the main components of the permittee’s permanent stormwater management program, which should include: codes and ordinance development and implementation; procedures for plans review and criteria for approval; procedures for conducting and tracking site inspections; and SCM operation and maintenance policies.*”. Again, a non-traditional MS4 does not have the capacity to develop or implement “codes and ordinances”. Additionally, the prescriptive nature of the implementation plan requirements, including the 90 day schedule, may be reasonable for a Phase II size municipality, but for a non-traditional MS4 that is implementing a large state-wide program that would include input from numerous internal organizations and the alteration of multiple internal plans and procedures, these prescriptive requirements are not practical. Again, the New Rule should clearly state that this rule applies directly and only to traditional municipal Phase II MS4s under the Tennessee general MS4 permit and specify that these requirements may be modified, or their application delayed, for a non-traditional MS4 and/or by an individual MS4 Permit. Additionally, T.C.A. 69-3-108(s)(t), which is apparently driving these rule changes, clearly states that those subsections apply only to a “local government entity” (i.e. a traditional municipal MS4) and thus do not apply to a non-traditional MS4. This point be made clear in this section and throughout the New Rules.
5. Rule 0400-40-10-.04(1)(d) uses the term “SCM”, however, this apparent acronym does not appear to be defined anywhere in the New Rules or is a citation provided where this definition might be found in other Tennessee Rules. A definition of “SCM” in the context of this rule and MS4 permits should be provided, including a clear listing and description of what types of structures and systems are (or are not) included in this term, as it is used frequently in the subsequent rules.
6. Rule 0400-40-10-.04(2)(a) uses the term “new development”, however, this term does not appear to be defined anywhere in the New Rules or is a citation provided where this definition might be found in other Tennessee Rules. A definition of “new development” and its distinction from “re-development” in the context of this rule and MS4 permits, should be provided, including a clear listing and description of what size and type of activities and functions are (or are not) included in this term, as it is used frequently in the subsequent rules.

7. Rule 0400-40-10-.04(2)(c) states: “SCMs must be designed, at a minimum, to achieve an overall treatment efficiency of 80% TSS removal from the WQTV.” TDEC must specify the TSS concentration baseline, or the applicable range of impacted TSS levels, for the calculation of the 80% TSS removal level to allow verification of compliance with this requirement. For example, if the level of TSS in a MS4’s post-construction stormwater discharge can be documented to be less than 50 mg/l, no SCM currently in existence would be able to achieve 80% TSS removal (i.e. removal of TSS to achieve a TSS level of 10 mg/l), however, a TSS level of no more than 50 mg/l in stormwater discharges would clearly be considered protective of water quality and achieve the goals of this Rule. Also recommend that the 80% TSS removal level be specified as only required for post-construction stormwater discharges in which the subject stormwater discharge TSS levels have not been quantified or which have been demonstrated to exceed a TSS level of 150 mg/l, which is the benchmark level for most sectors specified in the Tennessee Stormwater Multi-Sector General Permit for Industrial Activities, and thus presumed to be protective of water quality in Tennessee. Additionally, since TSS has been demonstrated to correlate with precipitation intensity, further recommend that the 80% TSS removal requirement not be applicable for rainfall events which exceed the 10-year 1-hour precipitation intensity for the subject location.
8. Rule 0400-40-10-.04(2)(c) Table specifies Water quality Treatment Volumes (WQTV) for various SCM treatment types. The WQTV for manufactured treatment devices specifies “*maximum flowrate of the design storm*” with the design storm apparently being the 1-year 24-hour precipitation depth. However, the calculation of flowrate in the design of a manufactured stormwater treatment device must be based on precipitation intensity and not precipitation depth. TDEC must specify a design storm precipitation **intensity** for this table to be meaningful for manufactured stormwater treatment devices. TDEC’s previous answer at the January 24, 2019 Informational Permit Meeting that the design storm is also based on a Time of Concentration of 15 minutes cannot be correct, as Time of Concentration is a site specific parameter for each drainage situation that is based on the size, shape, slope and other factors of the drainage catchment flowing to the manufactured stormwater treatment device, and cannot be arbitrarily assigned.
9. Rule 0400-40-10-.04(2) – The new rule should address circumstances whereby a permittee may exempt a project from meeting all or part of the Permanent Stormwater Standards due to site restrictions, existence of karst features, or other adverse conditions. The rule should allow for a MS4 to develop a list of exemptions or limitations in its Implementation Plan.
10. Rule 0400-40-10-.04(2) - TDEC should include the water quality benefits from the riparian buffers required under Rule 0400-40-10-.04(4) to be considered as part of the overall compliance with the Permanent Stormwater Standards. For example, recent research on Tennessee state highways performed by Tennessee Technological University has found that roadside vegetated swales, which in many cases will be similar in configuration to the riparian buffers, may provide run-off reduction of as much 70%, thus effectively achieving much of the prescribed 80% TSS removal requirement, and for many storm events complying with the WQTV reduction requirements (personal communication, Dr. Tania Datta). If TDEC does not include the water quality benefits from the riparian buffers required under Rule 0400-40-10-.04(4) to be considered as part of the overall compliance with the Permanent Stormwater Standards, this should be clearly stated in the new rules and the rationale for this position provided by direct discussion or citation.
11. Rule 0400-40-10-.04(3)(a) requires off-site mitigation to be accomplished within the same USGS 12-digit hydrologic unit code (HUC) watershed as the new development project. However, mitigation for ARAPs and other permitting in Tennessee now allow compensatory mitigation to be accomplished in at least the same USGS 8-digit HUC watershed, and in some cases even within

neighboring 8-digit HUC watersheds. Although most traditional municipal Phase II MS4s may be located in a single HUC-12 watershed, the larger MS4s often bridge multiple watersheds. This rule be modified to say that off-site mitigation must be performed within the same MS4 as the new development project, regardless of watershed boundaries, thus providing flexibility while still achieving the intent of the Rule.

12. Rule 0400-40-10-.04(3)(a)&(b) - TDEC must provide a description of the nature and structure of the stormwater mitigation program, or the methodology by which such a program would be developed. For example, would each MS4 be able to set-up and administer its own mitigation program and stormwater fund, or would TDEC or an outside agency administer the program and approve the mitigation projects? Would the mitigation projects be restricted to stormwater related activities, or would stream and wetland mitigation also be allowed?
13. Rule 0400-40-10-.04(4)(b) – Since buffer requirements are now consistent with the CGP requirements, the phrase from the CGP should also be incorporated: *“The 30-foot criterion for the width of the buffer zone can be established on an average width basis at a project, as long as the minimum width of the buffer zone is more than 15 feet at any measured location. If the site encompasses both sides of a stream, buffer averaging can be applied to both sides, but must be applied independently.”* This would allow the buffers to be established at the very beginning of the site construction and remain undisturbed through post-construction.
14. Rule 0400-40-10-.04(4) – The rule should clearly state that SCMs can be allowed within the riparian buffers at the discretion of the MS4. For linear projects where the space between the new development and the water body may be limited, allowing the SCM within the buffer will be unavoidable. Proper design of the SCM would ensure that it in no way reduces the effectiveness of the buffer, and special provisions for the maintenance of SCMs located within buffers would have to be part of the MS4’s Implementation Plan. If an individual MS4 chooses to prohibit the location of SCMs within the buffers in their jurisdiction, the MS4 could include that in their ordinance and/or Implementation Plan.
15. Rule 0400-40-10-.04(5) (a) and (b) Codes and Ordinance Review and Updates: These requirements may not be possible for non-traditional MS4s and a statement to that effect should be added to this rule. T.C.A. 69-3-108(s)(t), which is apparently driving these rule changes, clearly states that those subsections apply only to a “local government entity” (i.e. a traditional municipal MS4) and thus do not apply to a non-traditional MS4. Again, this point should be made clear in this section and throughout the New Rules.
16. Rule 0400-40-05-.06(3)(g) states: *“For each application, the Commissioner shall prepare a rationale that includes or considers as appropriate: Identification of outfalls, pollutants, and the amount of pollutants disclosed by the permit applicant and within the Department’s reasonable contemplation”.* Again, this rule is clearly written for application only to traditional Phase II MS4s (i.e. medium and small municipalities) under the Tennessee general MS4 permit and would be totally impractical for some larger non-traditional MS4s and individual MS4 Permit holders. The introductory paragraph to this Rule should state that this rule applies directly and immediately only to traditional municipal Phase II MS4s under the Tennessee general MS4 permit and specify that these requirements may be modified, or their application delayed, for a non-traditional MS4, and/or by an individual MS4 Permit. Additionally, T.C.A. 69-3-108(s)(t), which is apparently driving these rule changes, clearly states that those subsections apply only to a “local government entity” (i.e. a traditional municipal MS4) and thus do not apply to a non-traditional MS4. This point should be made clear in this section and throughout the New Rules.

17. Rule 0400-40-05-.15(1)(c) and (d): Non-traditional MS4s typically do not have the legal capability to implement an ordinance or other regulatory mechanism and can only be accomplished through actions of the Tennessee State legislature or the U.S. Congress. TDEC cannot require legislation to be enacted through their NPDES permitting authority. The Revised Rule should clearly state that this rule applies directly and immediately only to traditional municipal Phase II MS4s under the Tennessee general MS4 permit and specify that these requirements may be modified, or their application delayed, for a non-traditional MS4, and/or by an individual MS4 Permit. T.C.A. 69-3-108(s)(t), states that those subsections apply only to a “local government entity” (i.e. a traditional municipal MS4) and thus do not apply to a non-traditional MS4. Again, this point should be made clear in this section and throughout the New Rules.
18. Rule 0400-40-05-.15(2)(b) states: *“For design purposes, total suspended solids may be used as the indicator for the removal of pollutants (such as sediment, nutrients, and pathogens).”* Although a correlation between TSS removal and removal of other pollutants may exist for some stormwater treatment methods, this correlation does not exist for all treatment methods and including such a universal statement in the new rules will lead to the acceptance and use of some treatment methods that are not effective in removing pollutants such as nutrients and pathogens. For example, the 2016 International Stormwater BMP Database Final Report Summary Document states: “Nutrients in the particulate form can be removed from a variety of BMP types; however, removal of soluble forms is more challenging.” TSS removal will be an indicator for the removal of pollutants in the particulate form but will not be an indicator for those pollutants which are present in stormwater in soluble forms,

This sentence should be deleted from the rule unless TDEC has alternate MS4 post-construction stormwater treatment data from Tennessee sources that demonstrates the correlation between TSS levels and the removal of other pollutants.

19. Rule 0400-40-05-.15(2)(c) states: *“SCMs must be designed, at a minimum, to achieve an overall treatment efficiency of 80% TSS removal from the WQTV.”* TDEC must specify the TSS concentration baseline, or the applicable range of impacted TSS levels, for the calculation of the 80% TSS removal level to allow verification of compliance with this requirement. For example, if the level of TSS in a MS4’s stormwater discharge can be documented to be less than 50 mg/l, no SCM currently in existence would be able to achieve 80% TSS removal (i.e. removal of TSS to achieve a TSS level of 10 mg/l), however, a TSS level of no more than 50 mg/l in stormwater discharges would clearly be considered protective of water quality and achieve the goals of this Rule. Recommend that the 80% TSS removal level be specified as only required for post-construction stormwater discharges in which the TSS levels have not been quantified or which have been demonstrated to exceed a TSS level of 150 mg/l, which is the benchmark level for most sectors specified in the Tennessee Stormwater Multi-Sector General Permit for Industrial Activities, and thus presumed to be protective of water quality in Tennessee. Additionally, since TSS has been demonstrated to correlate with precipitation intensity, recommend that the 80% TSS removal requirement not be applicable for rainfall events which exceed the 10-year 1-hour precipitation intensity for the subject location.
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stormwater treatment devices. TDEC's previous answer at the January 24, 2019 Informational Permit Meeting that the design storm is also based on a Time of Concentration of 15 minutes cannot be correct, as Time of Concentration is a site-specific parameter for each drainage situation that is based on the size, shape, slope and other factors of the drainage catchment flowing to the manufactured stormwater treatment device and cannot be arbitrarily assigned.

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22. Rule 0400-40-05-.15(4)(b) – Since buffer requirements are now consistent with the CGP requirements, recommend that this phrase from the CGP also be incorporated: *“The 30-foot criterion for the width of the buffer zone can be established on an average width basis at a project, as long as the minimum width of the buffer zone is more than 15 feet at any measured location. If the site encompasses both sides of a stream, buffer averaging can be applied to both sides, but must be applied independently.”* This would allow the buffers to be established at the very beginning of the site construction and remain undisturbed through post-construction.
23. Rule 0400-40-05-.15(5) (a) and (b) Codes and Ordinance Review and Updates: These requirements may not be possible for non-traditional MS4s and language to that effect should be added to this rule. T.C.A. 69-3-108(s)(t), which is apparently driving these rule changes, clearly states that those subsections apply only to a “local government entity” (i.e. a traditional municipal MS4) and thus do not apply to a non-traditional MS4. This point should be made clear in this section and throughout the New Rules.

If you have any questions, or require additional information and documentation, please contact me at 865-384-5813 or at mcramer@ensafe.com.



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