



July 9, 2019

Tennessee Department of Environment and Conservation
Division of Water Resources
Attn: Vojin Janjić (Vojin.Janjic@tn.gov)
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243

Re: Comments re: Chapter 0400-40-10-.04 Municipal Separate Storm Sewer Systems

Dear Vojin Janjić:

I am a professional Civil Engineer licensed to practice in the State of Tennessee and a member of TNSA. I am submitting for your consideration the following comments to Chapter 0400-40-10 National Pollutant Discharge Elimination System General Permits or specifically Chapter 0400-40-10-.04 Municipal Separate Storm Sewer Systems. In general, my perspective is that if you want to reduce pollution and are using TSS as the indicator for removal, then the regulations should be subordinated to that goal. I have tried to describe this with my comments below.

Section 2.a

Please state that the maximum extent practicable (MEP) is defined in 2.b.

Section 2.b

Why use the 1-year, 24-hour storm event? It seems that this event was chosen due to familiarity as opposed to effectiveness in TSS removal. A 1-year event is too large for effective TSS removal, especially for smaller, more frequent events. Please consider replacing this and requiring retention of the first 0.80-inch of runoff by either infiltration or capture and use. A calculation should be provided by the professional engineer to demonstrate these results.

Section 2.c

Not all impervious surfaces contribute pollution and not all contribute the same amount (e.g., a roof for a residential home contributes less than bus parking). Please consider weighting the impervious areas based on the potential pollutant contribution.

Please remove the table it is confusing and should not take the place of engineering calculations (e.g., STAR model) for the specific design to achieve a specific TSS goal.

If it is not removed, how do we know that the TSS goals are achieved? Why does the table not mention TSS? What is biologically active filtration and why 12 inches of internal weir storage? Why do the depths vary? Depending upon the situation or the site, we often use

multiple SCMs. How would this be measured using the table? The varying depths would diminish the effectiveness of the desired removal rates for smaller storm events.

Section 2.d

No comments.

Section 2.e.

In my opinion, this credit is ambiguous and generic. Why not use engineering calculations for the specific design to achieve a specific result?

Section 2.e.1

Instead of a generic standard, please consider basing the TSS reduction on the difference in pollutant impact between the redeveloped conditions as compared to the existing conditions.

Section 2.e.2

Vertical density by itself is not directly related to TSS removal; however, if rooftops are downgraded (as most should be) because of lower pollutant contributions (refer comment to Section 2.c), then a vertical credit would have already been achieved by both this reduction and the reduction in overall impervious area that is inherent with vertical construction as opposed to single story building of the same square footage.

Section 3

No comments.

Section 4.a

Anecdotally, ninety five-percent of the water leaving a developed site is concentrated. As written, this regulation applies to the five-percent or least commonly occurring situation. Therefore, in order to achieve this criterion, for almost every situation, water will need to be converted from concentrated flow to sheet flow. Given this, it would be more useful to describe the acceptable criteria for achieving this (e.g., level spreaders).

Section 4.b

Is the minimum width a total width or just for one side? Personally, I know; however, I've been asked this question multiple times by land owners and we have to call TDEC to confirm in order to satisfy their concerns. Please add a statement to define this.

I hope that this is helpful. Please contact me if you have any questions.

Thank you,



William C. Fulghum, Jr., P.E.