



Post-Construction/Permanent Stormwater Management Program

Revised Implementation Plan (Rev. 02/29/2024)

In accordance with TDOT's NPDES permit (TNS077585), the following revised implementation plan is being submitted to fulfill the requirements set forth in section 2.2.5 regarding the development of a permanent stormwater management program (PSMP).

Estimating timeframes and milestones for a program being developed from scratch and of this nature has proven to be impracticable in certain areas. Therefore, this implementation plan represents TDOT's best estimation of timeframes required to develop those necessary initial program elements and will no doubt require amending as the program development advances. As the program is developed, updates will be provided in TDOT's TS4 permit annual report.

As the implementation plan is reviewed, please keep in mind that TDOT's program will be unique in that it will be developed for the purpose of regulating projects being constructed by a single property owner. Unlike traditional MS4s, TDOT is not regulating businesses and/or developers within a political boundary but regulating its own activities within TDOT right-of-way and/or permanent easements across the state. Furthermore, TDOT does not have the legal authority to create ordinances and/or regulations.

Permit Section	Requirement	Comments	Timeframe - Milestones
2.2.5 Post-Construction/Permanent Stormwater Management in New Development and Redevelopment			
2.2.5	Permits issued to entities that operate a municipal separate storm sewer system (MS4) shall include the following effluent limitations to manage post-construction stormwater at all new development and redevelopment projects that disturb one or more acres of land, or less than one acre if part of a larger common plan of development, and discharge into the permittee's MS4.	As of the date of the issued permit, TDOT projects at or beyond the Stage Zero Footprint established in the Project Delivery Network (PDN) process and less than one acre of disturbance will be exempt from the post-construction requirements of the TDOT TS4 Permit.	Exemption August 1, 2023 to July 31, 2025

2.2.5.1 Permanent Stormwater Management Program			
2.2.5.1 (a)	The permittee shall develop and implement a permanent stormwater management program to reduce pollutants in stormwater discharges through management practices, control techniques, and systems, design, and engineering practices implemented to the maximum extent practicable (MEP).	TDOT will develop and implement a program of appropriate SCM maintenance procedures that sustain pollutant reduction-efficiency for the life of the new development or redevelopment project. All procedures, reports, and documented as part of the stormwater management program. The program will include at a minimum: - The development and documentation of maintenance and inspection procedures and frequencies for approved SCMs which shall require all SCMs to be inspected at least once every five years by a licensed professional engineer, a licensed landscape architect, or other qualified professional familiar with applicable SCM design and maintenance requirements; - The development and documentation of the procedure that will used to verify that SCMs are being inspected and maintained, including any written reports; - The development and documentation of the procedure that will be used to ensure all inspection and maintenance information is included in the SCM tracking database.	TDOT will perform a literature review of other DOTs to determine the most effective SCMs to develop an initial SCM suite to pursue. It is anticipated that the initial suite of SCMs will be determined by June 2024.
2.2.5.1 (b)	The permanent stormwater management program shall include plans review, site inspections, and a means to ensure that permanent stormwater control measures (SCMs) are adequately operated and maintained.		Once the initial suite of SCMs is selected, it is anticipated that draft guidance for designers, contractors, and inspectors will be ready by March of 2025.
2.2.5.1 (c)	The permittee must develop and implement, and modify as necessary, an ordinance or other regulatory mechanism to address permanent stormwater management at new development and redevelopment projects.		Training will be developed from the written guidance, and it is anticipated to be ready by June 2025.
2.2.5.2 Permanent Stormwater Standards			
2.2.5.2 (a)	The permanent stormwater management program must require new development and redevelopment projects to be designed to reduce pollutants to the MEP, as set forth herein. Compliance with permanent stormwater standards for new development and redevelopment	TDOT will develop written design procedures which will describe the process by which all TDOT projects will be internally reviewed to determine if any component of the project will fall under the permanent stormwater requirements.	As noted above, design considerations will be developed once the initial suite of SCMs is selected. It is anticipated that design guidance will be ready by March 2025.

	projects is determined by designing and installing SCMs as established by Tennessee Rule 0400-40-05-.15 and complying with other requirements of Tennessee Rule 0400-40-05-.15. For design purposes, total suspended solids (TSS) may be used as the indicator for the reduction of pollutants.	TDOT will develop a list of structural SCM designs that may be used on TDOT projects. SCMs must be designed to provide full treatment capacity within 72 hours following the end of the preceding rain event for the life of the new development or redevelopment project.	
2.2.5.2 (b)	SCMs must be designed to provide full treatment capacity within 72 hours following the end of the preceding rain event for the life of the new development or redevelopment project. The permittee shall identify a suite of SCMs to be used in various situations. Information relevant to identified SCMs should be made readily available. Application of innovative SCMs is encouraged. If the permittee decides to significantly limit the number of SCM options, it must be documented as part of the stormwater management program how the performance standards of Tennessee Rule 0400-40-05-.15 can be met with the limited set of control measures that are allowed.	The water quality treatment design storm is based on the 1-year, 24-hour storm event as defined by Precipitation-Frequency Atlas of the United States. Atlas 14. Volume 2. Version 3.0. U.S. Department of Commerce National Oceanic and Atmospheric Administration (NOAA), National Weather Service, Hydrometeorological Design Studies Center, Silver Springs, Maryland or its digital product equivalent. SCMs must be designed, at a minimum, to achieve an overall treatment efficiency of 80% TSS removal from the WQTV. The quantity of the WQTV depends on the type of treatment provided. TDOT will utilize the table referenced within the permit in the section (2.2.5.2 (c)) while developing SCMs.	
2.2.5.2 (c)	Stormwater Control Measures (SCM)s must be designed, at a minimum, to achieve an overall treatment efficiency of 80% TSS removal from the Water Quality Treatment Volume (WQTV). SCMs must be designed, at a minimum, to achieve an overall treatment efficiency of 80% TSS removal from the WQTV.		
2.2.5.3. Stormwater Mitigation and Public Stormwater Fund			
2.2.5.3 (a)(b)	(a) A permittee may choose to develop an offsite mitigation program or payment in lieu into a public stormwater fund to offset the portion of the WQTV that cannot be treated on site to the MEP. The program must have a mitigation project approval procedure, and all projects must meet all requirements in this permit. Procedures and	TDOT will have the option of creating an internal (to TDOT) alternate post construction program comprising of a payment in lieu into a TDOT stormwater fund to offset the portion of the WQTV that cannot be treated on site to the TS4 MEP in accordance with Section	Procedures and requirements for the offsite mitigation and payment in lieu programs will be documented as part of the permanent stormwater management program and submitted for review and approval if it

	<p>requirements in the offsite mitigation and payment in lieu programs should be documented as part of the stormwater management program and available for review.</p> <p>(b) If the permittee allows payment into a public stormwater fund, the permittee assumes responsibility to provide the required mitigation projects. The public stormwater fund should be used to fund public mitigation projects. The payment amount into a public stormwater fund must be sufficient to design, install, and maintain the stormwater mitigation measures.</p>	<p>2.2.5.3 of the TDOT TS4 Permit. The program would require TDOT to evaluate an alternate effort with a minimum funding of at least 1.5 times the cost of stormwater management for the portion of the WQTV not treated on site by the subject stormwater project. The program would have a mitigation project approval procedure, and all projects would meet all requirements in the TDOT TS4 Permit. The TDOT stormwater fund would be used to fund mitigation projects at TDOT facilities and other existing State owned installations with documented stormwater issues. The payment amount into the TDOT stormwater fund would be sufficient to design, install, and maintain the stormwater mitigation measures. Application of any of this payment in lieu alternative to a TDOT project would require a letter to TDEC stating the reasons and basis for the use of this process and the proposed mitigation action.</p>	<p>is determined one is needed.</p>
2.2.5.4. Water Quality Riparian Buffers			
2.2.5.4	<p>Permittees shall develop and implement a set of requirements to establish, protect, and maintain permanent water quality riparian buffers to provide additional water quality treatment in riparian areas of new development and redevelopment projects that contain streams, including wetlands, ponds, and lakes.</p>	<p>TDOT currently adheres to the Construction General Permit (CGP) requirements for buffer zones while designing and constructing projects. TDOT will review its current design considerations and make any necessary adjustment to meet the following requirements.</p> <p>- Stormwater discharges should enter the water quality riparian buffer as sheet flow, not as concentrated flow, where site conditions allow;</p>	<p>Any changes needed to TDOT's current design guidance for water quality riparian buffers, will be incorporated into the design guidance noted above which is anticipated to be ready by March 2025.</p>

		<ul style="list-style-type: none"> - Water quality riparian buffers must have the minimum widths prescribed in the TS4 Permit, unless site-specific conditions necessitate alternative widths; and - Include a process to review proposed activities within buffers to ensure the pollutant removal function of the buffer will be retained. 	
2.2.5.5. Codes and Ordinances Review and Update			
2.2.5.5 (b)	Current permittees shall continue to implement the existing permanent stormwater management program and update legal instruments according to the compliance schedule in subparagraph (1)(d) of Tennessee Rule 0400-40-05-.15.	With TDOT's PSMP being unique in that TDOT will not be regulating external entities (i.e., landowners), TDOT will integrate language into the design guidance documents and develop contract language to ensure compliance with the issued TS4 permit.	Guidance documents and/or contract language is anticipated to be ready by March 2025
2.2.5.6. Development Project Plan Review, Approval, and Enforcement			
2.2.5.6 (a)	Procedures for review and approval of development site plans, including inter-departmental consultations and a re-submittal process when modifications to the project require changes to an approved site development design plan;	As noted above. TDOT will integrate into its design guidance any procedures needed for approval and review of plans to ensure performance standards are being met. Inspection protocols to ensure proper construction will also be integrated into the guidance documents.	Guidance documents for selected SCMs will be ready by March 2025.
2.2.5.6 (b)	A plans review process that requires SCMs to be properly designed, installed, and maintained to meet the performance standards established in Tennessee Rule 0400-40-05-.15. The process must also include incentives adopted by the permittee as authorized by paragraph (2) of Tennessee Rule 0400-40-05-.15, along with water quality buffers as required by paragraph (4) of Tennessee Rule 0400-40-05-.15 ; and		
2.2.5.6 (c)	A verification process to document that SCMs have been installed per design specifications within 90 days of installation. Verification shall include submission of as-built plans to the permittee, permittee		

	inspection, or inspection by a qualified design professional. The verification process shall include enforcement procedures to bring noncompliant projects into compliance, which shall be detailed in the enforcement response plan. (see 2.4)		
2.2.5.7. Maintenance of Permanent Stormwater Control Measure Assets			
2.2.5.7(a)	Permanent SCMs, including SCMs used at mitigation projects, must be installed, implemented, and maintained to meet the performance standards of paragraph (2) of Tennessee Rule 0400-40-05-.15, and provide full treatment capacity within 72 hours following the end of the preceding rain event.	SCMs must be inspected on a regular basis. For each SCM installed as part of a TDOT project, a database will be developed/maintained which includes a description of the system components, a site map, documentation of ongoing site SCM inspection and maintenance activities, and the schedule of future inspections. Landscape plans should also be included for bioretention areas.	As guidance documents are being developed for the suite of SCMs, maintenance protocols will be addressed.
2.2.5.7 (b)	The permittee must develop and implement a program to require implementation of appropriate SCM maintenance procedures to sustain pollutant reduction-efficiency for the life of the new development or redevelopment project. All procedures, reports, and documented as part of the stormwater management program.		
2.2.5.8. Inventory and Tracking of Permanent Stormwater Control Measure Assets			
2.2.5.8	Continue to implement and maintain a system to inventory and track the status of all structural SCMs as required by section 2.2.5.8	<p>All structural SCMs installed on TDOT projects will be included in a database/tracking mechanism with complete information, including:</p> <ul style="list-style-type: none"> - A brief description of the type of SCM and basic design characteristics; - Inspection schedules; - A brief description of, or reference to, maintenance procedures and frequency; - Photographs of the installed SCMs; and - Maintenance and inspection records. 	<p>TDOT is currently using a program to track departmental assets along ROWs. Discussions have taken place to see if this program can be used to track installed SCMs. It is anticipated that by June 2024 TDOT will determine if this existing program can be used to track SCM assets.</p> <p>If TDOT's current tracking system proves to not be a viable option, other options will be researched and utilized to fulfill this requirement.</p>