



State of Tennessee  
**DEPARTMENT OF ENVIRONMENT AND CONSERVATION**  
**DIVISION OF WATER RESOURCES**

William R. Snodgrass - Tennessee Tower  
312 Rosa L. Parks Avenue, 11th Floor  
Nashville, Tennessee 37243-1102

**CERTIFIED MAIL RETURN RECEIPT**  
**# 9489 0090 0027 6509 4987 95**

August 21, 2023

Honorable Harold Adcock  
Mayor  
City of Greenbrier  
e-copy: lannyadcock@greenbriertn.org  
790 West College Street  
Greenbrier, TN 37073

Subject: **Small Municipal Separate Storm Sewer System Program Audit**  
**National Pollutant Discharge Elimination System**  
**NPDES Permit Tracking Number TNS077810**  
**City of Greenbrier**  
**Greenbrier, Robertson County, Tennessee**

Dear Mr. Adcock:

On July 19, 2023 and again on July 25, 2023, Brown Patton with the Tennessee Department of Environment and Conservation, Division of Water Resources (Division), conducted an audit of the City of Greenbrier's Municipal Separate Storm Sewer System (MS4) Program. The purpose of the audit was to determine compliance with the *NPDES General Permit for Discharges from Small Municipal Separate Storm Sewer Systems* (permit). During the virtual portion of the audit, Division staff met with Paula Hepp (Consultant), and Emily Morgan (Consultant) for the MS4 Program. The audit included a review of regulatory mechanisms, procedures and records, as well as observation of MS4 staff as they performed an inspection of projects covered under the local construction site stormwater runoff control program. Division staff also visited one municipal facility. The Division greatly appreciates the time and commitment from your staff in preparation of and during the audit. Their availability and knowledge of the program ensured the audit was conducted in an efficient manner.

**Permit**

The permit consists of six minimum control measures (MCMs) and a monitoring program. On October 1, 2016, the Tennessee Department of Environment and Conservation, Division of Water

Resources (Division) reissued the National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges from Small Municipal Separate Storm Sewer Systems ("Permit"). The City was issued Notice of Coverage under the 2016 Permit effective July 7, 2017.

The 2016 Permit expired on September 30, 2021, but was administratively extended and remained in effect until the City obtained coverage under the new 2022 Permit. On February 2, 2023, the Division received a complete Notice of Intent from the City. The City was issued Notice of Coverage under the 2022 Permit effective March 1, 2023. The audit of the MS4 program covered the 2016 Permit requirements from July 8, 2017, to March 1, 2023. **In addition to the audit findings and corrective actions detailed below, the Division recommends the City review the 2022 MS4 permit to identify any new requirements or timelines that may prompt the need for updating the City's NPDES Stormwater Management Program.**

**Minimum Control Measure 1 - Public Education and Outreach (Permit Section 4.2.1)**

The small MS4 permit requires the implementation of a Public Education and Outreach program about the impacts of stormwater discharges on local water bodies and the steps that can be taken to reduce stormwater pollution. A public information and education (PIE) plan shall be developed as specified in the permit.

The MS4 has developed a PIE plan. Specifically, the MS4 has performed public education and outreach utilizing methods such as a stormwater webpage, informational brochures, social media and employee education, as well as the annual *Harvest in the Brier* festival. However, the PIE plan does not address all of the required targeted education campaigns.

Full implementation of this MCM requires the following:

- Updating PIE plan to address all applicable targeted education campaigns.

**Minimum Control Measure 2 - Public Involvement and Participation (Permit Section 4.2.2)**

The small MS4 permit requires the implementation of a Public Involvement/Participation program. The permit requires the permittee to develop methods for promoting public participation in stormwater-related events and to facilitate opportunities for involvement. Notification of the participation and involvement opportunities are to be posted in appropriate media.

The MS4 provides notification of stormwater program items through methods including a stormwater webpage and social media. The program includes mechanisms for the reporting of illicit discharges or other stormwater related complaints, and has provided opportunities for public involvement such as Lake and Litter Clean-up events, waste collection events, as well as the annual Tree Giveaway in the spring.

This MCM has been developed and implemented.

### **Minimum Control Measure 3 – Illicit Discharge Detection and Elimination (IDDE) (Permit Section 4.2.3)**

The small MS4 permit requires the permittee to develop, implement and enforce a plan to detect and eliminate illicit discharges into the storm sewer system. The permittee must develop and maintain a storm sewer system map, and effectively prohibit, through a regulatory mechanism, non-stormwater discharges into the storm sewer system. The permittee must also implement an appropriate Enforcement Response Plan (ERP), and educate public employees, businesses and the general public concerning the hazards and damage to water quality associated with illicit discharges.

The MS4 has adopted the Stormwater Management Ordinance No 20-20 that prohibits illicit discharges, provided mechanisms for the public to report suspected illicit discharges, developed and maintained a storm sewer system map, and performed employee illicit discharge education. However, the storm sewer system mapping is incomplete, and does not include all inputs and all general direction of stormwater flow. Additionally, the MS4 has not developed specific procedures for conducting the IDDE program, which must include procedures for the response and investigation of illicit discharges and complaints.

Full implementation of this MCM requires the following:

- Updating storm sewer system map to include all inputs and general direction of stormwater flow; and
- Developing and implementing IDDE procedures.

### **Minimum Control Measure 4 – Construction Site Stormwater Runoff Control (Permit Section 4.2.4)**

The small MS4 permit requires the development, implementation, and enforcement of a program to reduce pollutants in stormwater runoff to the stormwater system from construction activities that result in land disturbance of greater than or equal to one acre, or less than one acre if part of a larger common plan of development. In part, this MCM includes an ordinance or other regulatory mechanism to require erosion prevention and sediment controls (EPSCs), sanctions to enforce compliance, specific procedures for construction site plan review and approval, as well as specific procedures for priority construction activities, permittee inspection and compliance documentation.

The MS4 has adopted the Stormwater Management Ordinance No 20-20 that controls construction stormwater discharges, and established a plans review process and inspection program for construction projects. The ordinance requires construction site operators to implement appropriate EPSC best management practices consistent with those described in the Tennessee Erosion and Sediment Control Handbook, and specifies technical standards to be consistent with the *Tennessee General NPDES Permit for Discharges of Stormwater Associated with Construction Activities* (CGP) requirements.

The MS4's plans review procedures included evaluation of EPSCs and specific CGP technical standards. However, the plans review documentation is not being maintained. At a minimum, the MS4 review process should include documentation of the following procedures and technical standards:

- determination of discharges into waters with unavailable parameters or exceptional Tennessee waters;
- design storm (2-yr/24 hr. and 5-yr/24 hr.) consistent with the CGP;
- sediment basin for drainage areas (10 acres and 5 acres) consistent with the CGP; and
- construction buffer requirements (15-ft/30-ft and 30-ft/60-ft) consistent with the CGP.

Construction site inspection and documentation procedures were evaluated by performing a visit to Cattle Trails Estates, TNR244178, and Greenbrier Middle School, TNR246140, construction sites. The MS4's inspector, Emily Morgan, demonstrated a working knowledge of erosion prevention and sediment control practices, and performed and documented a comprehensive site inspection.

Full implementation of this MCM requires the following:

- Revising plans review documentation to include technical standards consistent with the CGP (buffer, design storm, basin drainage requirement).

#### **Minimum Control Measure 5 – Permanent Stormwater Management at New Development and Redevelopment Projects (Permit Section 4.2.5)**

The small MS4 permit requires the implementation of a permanent (post-construction) stormwater management program focused on removing pollutants from stormwater discharges through management practices, control techniques, and system design and engineering methods implemented to the maximum extent practicable. In part, this MCM includes an ordinance or other regulatory mechanism to address permanent stormwater pollutant management for New Development Projects, procedures for plans review and approval, procedures for conducting and tracking site inspections, and procedures to ensure permanent stormwater control measures are adequately maintained.

The new MS4 permit was issued and became effective on September 1, 2022, and requires programs to comply with all permanent stormwater requirements of the new 2022 Permit by September 1, 2024.

As a result, evaluating compliance for this minimum control measure was limited to documenting program elements and activities implemented at the time of the audit. The MS4's Permanent Stormwater Management program includes a stormwater management ordinance that addresses permanent stormwater pollutant management for new development and redevelopment projects. The MS4 has also implemented procedures for plans review and approval, and procedures to track and ensure permanent stormwater control measures are properly, installed and maintained.

### **Minimum Control Measure 6 - Pollution Prevention/Good Housekeeping for Municipal Operations (Permit Section 4.2.6)**

The small MS4 permit requires the permittee to develop and implement an operation and maintenance program that has the ultimate goal of preventing or reducing pollutant runoff from municipal operations. The program must include operation and maintenance plans for all applicable municipal operations. In addition, an employee training program should be implemented for employees responsible for municipal operations at facilities within the jurisdiction that handle, generate and/or store materials which constitute a potential pollutant of concern for MS4s.

The MS4 has implemented an operation and maintenance program for stormwater system field activities, including a training program for employees. Although the program includes basic written procedures, specific operation and maintenance plans have not been developed for all applicable municipal operations. The plans must include information and documentation related to maintenance activities, schedules and the proper disposal of waste from structural and non-structural stormwater controls.

As part of determining compliance with this minimum control measure, the MS4's Public Works facility located on College Street was inspected. The operation and maintenance program appeared generally effective, and included pollution prevention best management practices (BMPs) related to equipment maintenance and material storage. However, operation and maintenance plans have not been developed for all municipal facilities and activities. Additionally, operation and maintenance activity documentation, such as site inspections, are not being maintained. There were several piles of trash and/or debris being stored directly on the ground, including some metal refuse being kept for recycling to the rear of the facility. These items must be stored in such a way as to prevent contact from both rainfall and runoff. There was also minor staining observed on the ground where the garbage truck(s) were parked.

Full implementation of this MCM requires the following:

- Developing and implementing operation and maintenance plans for all applicable municipal facilities and activities;
- Maintaining documentation on operation and maintenance activities; and
- Addressing corrective actions at municipal facility.

### **Monitoring, Recordkeeping, and Reporting (Permit Section 5)**

Sections 5.1 and 5.2 of the permit require analytical and non-analytical monitoring to be conducted in streams with unavailable parameters for nutrients, pathogens, siltation, and habitat alteration. The monitoring program is intended to provide data that, when combined with other MS4 information, identifies and eliminates pollutant sources, and assists in determining the effectiveness of the overall MS4 program in improving water quality. Sections 5.3 and 5.4 describe record-keeping and reporting requirements, which include the submittal of an annual report by September 30<sup>th</sup> of each calendar year.

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The City did perform the analytical and non-analytical monitoring required by the 2016 MS4 permit. Additionally, annual reports have been submitted to the Division by September 30 of each calendar year, as well as being presented to the public for comments and suggestions prior to submittal to Division.

**Required Actions:**

Based on the audit findings, full implementation of City of Greenbrier's MS4 program requires the following actions to be taken.

- Updating PIE plan to address all applicable targeted education campaigns;
- Updating storm sewer system map to include all inputs and general direction of stormwater flow;
- Developing and implementing IDDE procedures;
- Revising plans review documentation to include technical standards consistent with the CGP (buffer, design storm, basin drainage requirement);
- Developing and implementing operation and maintenance plans for all applicable municipal facilities and activities;
- Maintaining documentation on operation and maintenance activities; and
- Addressing corrective actions at municipal facility.

Additionally, the Division requests a written response by September 25, 2023, describing what steps have or will be taken to address these actions, as well as a schedule of completion for each proposed corrective action.

Once again, the Division greatly appreciates the time and commitment from your staff in preparation of and during the audit. Compliance with permit requirements helps ensure discharges are protective of water quality. If you have any questions or concerns with regard to the MS4 permit or this audit, please contact me at 423-854-5458 or via email at [Brown.Patton@tn.gov](mailto:Brown.Patton@tn.gov).

Sincerely,



Brown Patton  
Division of Water Resources

**Greenbrier** MS4 Audit

August 21, 2023

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CC: Stephanie Toland, City of Greenbrier, City Recorder, [stoland@greenbriertn.org](mailto:stoland@greenbriertn.org)  
Ann Morbitt, Division of Water Resources, [Ann.Morbitt@tn.gov](mailto:Ann.Morbitt@tn.gov)  
Bill Murph, Division of Water Resources, [Bill.Murph@tn.gov](mailto:Bill.Murph@tn.gov)

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