

1. OVERVIEW OF THE STORM WATER MANAGEMENT PLAN

1.1. PURPOSE

The mission of the Michigan Department of Transportation (MDOT) is to "Provide the highest quality transportation services for economic benefit and improved quality of life." This mission involves planning, designing, constructing, and maintaining large-scale transportation facilities (e.g. freeways, highways, interchanges, bridges, and tunnels). MDOT has the responsibility to accomplish this mission in compliance with public policy and applicable regulations.

A National Pollutant Discharge Elimination System (NPDES) Permit (No. MI0057364, hereinafter referred to as the Permit) issued by Michigan Department of Environmental Quality (MDEQ) to the department for MDOT operated separate storm water drainage systems throughout the State of Michigan took effect on April 1, 2004. The statewide permit supersedes individual storm water permits in the City of Ann Arbor (Permit No. MI0053911), the City of Grand Rapids (Permit No. MI0053937), the City of Flint (Permit No. MI0053929), and the City of Warren (Permit No. MI0053945), and the general permit for the City of Livonia (Certificate of Coverage No. MIG610043). The Permit will expire on April 1, 2009 and is expected to be reissued in five year cycles thereafter. A copy of the current Permit is included in Appendix A.

The Permit directs MDOT to develop and implement a storm water management program designed to reduce the discharge of pollutants from the MDOT drainage systems to the maximum extent practicable, to protect the designated uses of the waters of the state, to protect water quality, and to satisfy the applicable state and federal water quality requirements.

MDOT is required to assess the effectiveness, recommend enhancements and report annually on the storm water management program implementation. This Storm Water Management Plan (SWMP) provides the foundation on which MDOT will continue to build as best management practices are identified and implemented.

1.2. SCOPE

This SWMP describes the procedures and practices MDOT currently uses throughout the planning, design, construction, operation and maintenance process to limit the discharge of pollutants from its storm drainage systems. It also documents the commitment by MDOT to develop and implement additional storm water management procedures and practices to comply with each of the six minimum measures stated in the Permit (hereinafter referred to as measures).

- Education and outreach on storm water impacts- public education program
- Public involvement/participation
- Illicit discharge elimination program
- Post construction storm water management program for new development and redevelopment projects
- Construction storm water runoff control
- Pollution prevention/good housekeeping for MDOT operations

This plan presents a discussion of each of these measures supported by multiple activities currently taking place or to be implemented during the initial five - year permit cycle. Due to the similarities in application of the first two measures, they are combined under a single Public Education, Outreach and Participation discussion. For the purpose of this overall SWMP document, each of the five measures is presented as a plan element.

Each SWMP activity is defined by the overall objective, specific actions, timeframe for implementation, and the expected measurable goals. Some activities are tailored to meet the requirements of a single plan element while others play a role in multiple plan elements. As part of MDOT's permit application, a Task Matrix (Appendix B) was submitted to MDEQ summarizing activities/tasks conducted under Phase I. These activities/tasks will continue and are therefore incorporated into the activities discussed in this SWMP.

Implicit in the discussion of each of the plan elements is an administrative activity to assess the plan element and annual progress reports to MDOT management and to MDEQ on the status of SWMP implementation. In years one and two of the permit cycle, this activity will focus on identifying and streamlining the data collection mechanisms required to fully implement the SWMP. As part of the assessment, MDOT will review the status of the SWMP and assure that Permit requirements are met. Success in achieving interim milestones and measurable goals for the various plan elements and/or specific best management practices will be reviewed and updated.

1.2.1. Public Education, Outreach, and Participation (refer to section 3.1)

Education/Outreach activities focus on educating the job-related and traveling public on storm water-related issues such as watershed stewardship, pollution prevention measures, and illicit discharge reporting. The information is dispersed through educational materials including newsletter articles, the MDOT Interchange (intranet), the MDOT public Web site, and the MDOT library.

Like Education/Outreach activities, training activities strive to educate through active participation. They consist of formal and informal training sessions presented to the job-related public. These training sessions are currently being conducted with the support of individual storm water management training modules. The training modules and overall education, outreach, and participation plan element will be updated or expanded, as appropriate.

1.2.2. Illicit Discharge Elimination (refer to Section 3.2)

Illicit Discharge Elimination Plan (IDEP) Element activities address actions including mapping, screening, and investigating MDOT's priority outfalls or point source discharges within urbanized areas of Michigan. The term 'outfall' is synonymous with the term 'point source discharge' and will be used throughout the remainder of the SWMP. Activities in support of this plan element include priority screening and investigations at those locations where MDOT roadways cross impaired water bodies as required by the Permit.

1.2.3. Post Construction Storm Water Management for New Development and Redevelopment Projects (refer to Section 3.3)

Activities in support of this plan element begin far in advance of actual projects with the careful consideration of new sources of storm water entering the MDOT drainage system; coordination with Municipal Planning Organizations (MPO) that have storm water management plans; and cooperation with MDEQ to address storm water issues.

1.2.4. Construction Storm Water Runoff Control (refer to section 3.4)

This plan element is fully implemented for MDOT's transportation related construction and reconstruction projects and is documented by the current Drainage Manual and the Soil Erosion and Sedimentation Control program. Activities in support of this plan element will include maximizing opportunities to enhance the current best management practices.

1.2.5. Pollution Prevention/Good Housekeeping for MDOT (refer to section 3.5)

Activities in support of this plan element focus primarily on enhancing current activities with the ultimate goal of preventing or reducing pollutant runoff from MDOT operations and properties. Many of these management practices have been in place at MDOT for many years and are described in facility Pollution Incident Prevention Plans, procedures manuals, and guides maintained by the Maintenance Support Area and the Construction & Technology Support Area.

1.3. MDOT FACILITIES AND SEPARATE STORM WATER SYSTEMS

MDOT is the sole operator of its storm water drainage system. MDOT contracts out many routine maintenance operations to County Road Commissions and local municipalities and may rely on those contracts for certain maintenance services.

MDOT's facilities are located in diverse settings, ranging from highly urbanized to very rural, including Great Lakes coastal areas, forests, and farmland. Across the state of Michigan, MDOT operates and maintains approximately 9,700 miles of state trunkline, 7 region offices; 83 rest areas; 90 roadside parks; 26 transportation service centers; and 28 maintenance facilities, some of which house special crews and repair facilities in support of maintenance operations. Drainage systems that serve MDOT properties and facilities ultimately discharge storm water and permitted or exempt non-storm water to waters of the state. Figure 1-1 shows the seven MDOT Regions and the specific MDOT-owned or operated facilities addressed by this SWMP are identified in the region-specific chapters.

To protect public safety and prevent property damage, MDOT designs and operates its storm water drainage systems to prevent standing water on traveled areas. Highways in urban settings typically have curbs and gutters that direct storm water runoff to enclosed drainage systems, whereas storm water from rural freeways and highways typically flow to drainage ditches and swales.

Where storm water runoff drains from off-site areas onto MDOT's right-of-way or MDOT facility sites, the MDOT-operated drainage systems are designed to convey this additional storm water. In urban areas, some drainage systems outlet directly to receiving waters, while others discharge to municipal storm drainage systems.

In many locations, waters of the state pass through or under MDOT property or facilities. These waters may contain pollutants at the point at which they enter MDOT property or facilities. In these circumstances, MDOT is not responsible for pollutants that enter onto MDOT's properties.

1.4. MDOT STAFF RESPONSIBILITIES FOR STORM WATER MANAGEMENT

This SWMP describes specific actions MDOT will take to ensure compliance with storm water NPDES permit requirements. The overall goal of the storm water management program at MDOT is to ensure that pollutants in discharges from municipal separate storm sewer systems owned or operated by the Department are reduced to the maximum extent practicable. Responsibility for meeting this overall goal rests with the MDOT Environmental Committee.

The Environmental Committee is MDOT's principal body approving statewide guidance on environmental issues, actions and related matters. The Environmental Committee's mission is to ensure that MDOT complies with environmental laws in a focused, effective fashion and to foster an environmental ethic throughout the Department. As necessary, the Environmental Committee will take policy and technical issues impacting transportation engineering to the MDOT Engineering Operations Committee for discussion and action. Environmental technical teams have been established, by focus area, to provide environmental analysis and to recommend a course of action for Environmental Committee consideration. The Municipal Separate Storm Sewer System Team, chaired by the Operations Environmental Stewardship Engineer, is one such technical team. The Operations Environmental Stewardship Engineer functions as the Department's environmental advocate for all highway operations, is a member of the Environmental Committee, and is the liaison between all environmental technical teams and Environmental Committee. Additionally, the Operations Environmental Stewardship Engineer is the project manager for the storm water management program.

The Municipal Separate Storm Sewer System Team (MS4 Team) will provide continuing oversight for the storm water program and will participate in the annual analysis of program effectiveness and continued enhancement to the program. The MS4 Team consists of members from MDOT regions and central office representing all major operational and planning groups within the Department. This team provides technical input for MDOT storm water management issues, while the Region Storm Water Coordinators serve as educators and resources to their region. MS4 Team makeup is shown in Table 1-1 and the current membership is posted on the MDOT Storm Water Management Web site.

Table 1-1: MDOT MS4 Team Representation

Title or Position	Section or Unit	Organization
Storm Water Program Manager	C&T Administration	Bureau of Operations
Environmental Policy Coordinator	Policy	Bureau of Planning
Environmental Clearance (Aquatics)	Environmental Section	Bureau of Planning
Drainage Design Specialist	Design	Operations, Development
Grading and Drainage Engineer	Construction & Technology	Operations, Delivery
Maintenance	Maintenance	Operations, Delivery
Real Estate Permit Coordinator	Real Estate	Operations, Development
Storm Water Coordinator	- - -	Representing Each Region

1.5. LEGAL AUTHORITY

MDOT derives its legal authority to regulate and/or prohibit direct discharges from Michigan statute MCL 247.651; MSA 9.1097(1).

MDOT’s legal authority extends only to the limits of the right-of-way (ROW) owned or controlled by MDOT. MDOT will refer to local and state agencies, which have legal enforcement authority to conduct inspections and investigations outside of these limits, if necessary, to detect and eliminate illicit discharges.

The removal of illicit connections and discharges is addressed in Section 9.13 of the Construction Permit Manual, *Illicit Discharges Into MDOT Storm Water Drainage Systems*. Section 9.13 relies on PA 368 of 1925, Highway Obstructions and Encroachments, for the legal authority to remove illicit connections and discharges within the MDOT ROW. Connections or discharges outside of the MDOT ROW are referred to the local municipality, health department or the MDEQ for enforcement as appropriate.

Section 14.01 of the Construction Permit Manual, *Drainage Design For Accessing State Trunklines*, provides the basis for controlling connections to the MDOT storm sewer system. In order for a landowner to receive a permit to tap into the MDOT storm sewer system, they must certify that:

- The proposed outlet control from the proposed drainage system is discharged at a flow rate equal to or less than the existing flow rate conditions into the MDOT storm water conveyance system;
- The velocity of the discharge is properly dissipated;
- There exists sufficient storage on the permit applicant’s property for all the range of flows required to be analyzed, so that no harmful interference to MDOT ROW or adjacent properties will be caused as a result of utilizing the proposed storm water conveyance system; and
- The design includes any control measures necessary to prevent discharge to MDOT’s storm water system of any substances that are not allowed in the system under MDOT’s NPDES permit.

1.6. RELATED DOCUMENTS

An important function of the SWMP and MDOT's overall Storm Water Management Program is to ensure that those who direct and perform activities that may affect the quality of storm water system discharges are aware of their respective roles and responsibilities. Detailed guidance and requirements needed by personnel whose daily activities may have an impact on storm water quality are found in a variety of other MDOT documents including the following:

- Bridge Design Manual
- Bridge Design Guides
- Bridge Design Standard Plans
- Construction Manual
- Construction Permit Manual
- Drainage Manual
- Maintenance Performance Guides
- Road Design Manual
- Road Design Standard Plans
- Soil Erosion and Sedimentation Control Manual
- Standard Specifications for Construction
- Supplemental Specifications and Special Provisions

With the exception of the Maintenance Performance Guides, Supplemental Specifications and Special Provisions, these documents are available for purchase from the MDOT Publications Office and most can be viewed, downloaded, or printed from the MDOT Web site. These documents are updated annually or as new standards and procedures are developed.

Publications Office
517-322-1676
email: MDOT-Publications@michigan.gov

Storm Water Management Web Site
<http://www.michigan.gov/stormwatermgt>

1.7. EMERGENCY RESPONSE AND DISCHARGE NOTIFICATION

1.7.1 Storm Water Quality Issues -

Designated Uses – Waters of the state are protected for certain designated uses as set forth in Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act, 1994 Public Act 451, as amended, (NREPA). Specifically, R323.1100 of the Michigan Administrative Code states that all surface water bodies shall be protected for the following minimum designated uses:

- Agriculture
- Navigation
- Industrial water supply
- Public water supply at the point of intake
- Warm water fishery
- Other indigenous aquatic life and wildlife
- Partial body contact recreation
- Total body contact recreation between May 1 and October 31

Certain waterways are additionally designated and, therefore, protected for use as a cold-water fishery.

Impaired Uses - Impaired uses occur where water bodies are not meeting state water quality standards. These water bodies are considered to have non-attainment status and are listed in the state of Michigan's 303(d) list prepared under the federal Clean Water Act. Refer the MDEQ Web site for Michigan's list of impaired water bodies. State and federal law require the development of Total Maximum Daily Load (TMDL) allocations for 303(d)-listed water bodies. Development of a TMDL by MDEQ requires that a plan be developed to mitigate the specific pollutants which cause the listing and non-attainment of water quality standards at the source.

1.7.2 Notification Requirements - In accordance with Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act, 1994 Public Act 451, as amended (NREPA), MDOT will notify MDEQ, verbally through the MDOT Region Storm Water Coordinator, within 24 hours of becoming aware of any discharges to the drainage system that MDOT suspects may endanger health or the environment.

Notification must include the name of the regulated discharger, if known, location of the discharge and outfall, and the nature of the discharge. If the notice is provided outside of regular working hours, MDOT will call the MDEQ 24-hour Pollution Emergency Alerting System (PEAS) at 1-800-292-4706.

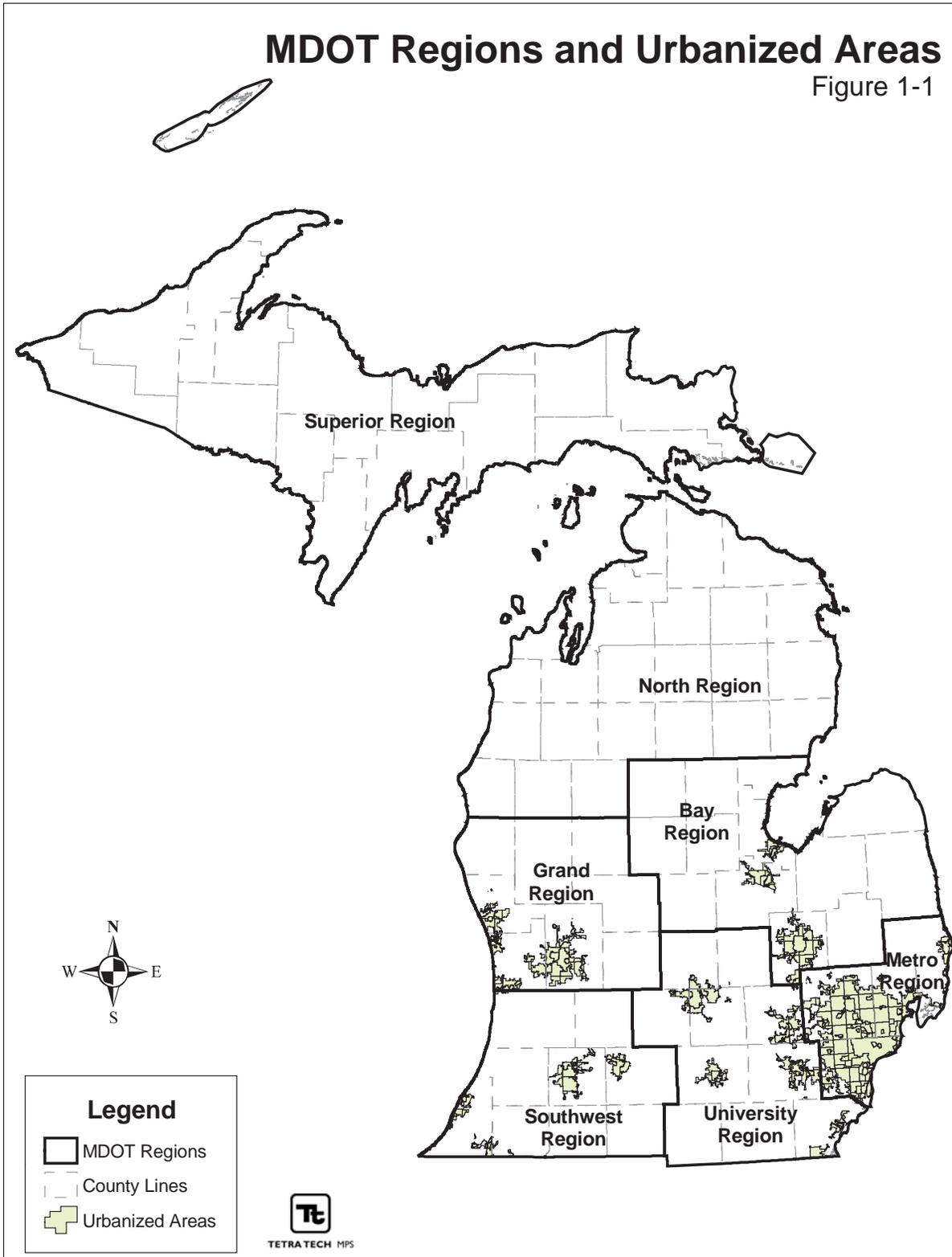
If the discharge does not pose imminent danger to health or the environment, MDOT will report either verbally or in writing within five days of the time MDOT becomes aware of the discharge.

1.8. APPENDICES

- Appendix A. MDEQ NPDES Permit No. MI0057364
- Appendix B. Task Matrix
 - Summarizes the tasks and activities that were conducted under Phase I. It also summarizes the responsible party for certain tasks.
- Appendix C. MDOT Best Management Practices
 - Contains a list of MDOT's approved BMPs.
- Appendix D. Statewide Watershed and Local Stream Organizations
 - Contains a list of environmental and watershed organizations from whom input will be sought on the SWMP.
- Appendix E. Public Comments and MDOT Responses on SWMP
 - Summarizes comments received and responses to these comments.
- Appendix F. Illicit Discharge Elimination Program (IDEP) Protocol Manual
 - Defines the procedures for conducting fieldwork, pollutant thresholds, and sampling procedures under the IDEP.

MDOT Regions and Urbanized Areas

Figure 1-1



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