



City of East Lansing

Stormwater Management Program



**GASOLINE
WEED KILLER
NAIL POLISH
MOTOR OIL
FERTILIZER**



pollutionisntpretty.org





National Storm Water Program History

- **1972 - Clean Water Act (CWA):** The goal of the CWA is to restore all "Waters of the United States" to their "fishable" and "swimmable" conditions
- **1987 - CWA Amendments:** Promulgated Phase I and Phase II Stormwater Rules
- **1990 - Phase I Stormwater Rules:**
- **2003 – Phase II Stormwater Rules:**





Definitions



Municipal Separate Storm Sewer System (MS4) is:

A conveyance or system of conveyances... owned by a state, city, town or other public entity that discharges to Waters of the State and is:

- Designated or used for collecting or conveying storm water
- ***Not a Combined Sewer***

Best Management Practice (BMP) is:

A proven method or practice that effectively and efficiently achieves a desired end state



MS4 Requirements Minimum Control Measures for Phase I and Phase II



1. **Public Education**
2. **Public Participation/ Involvement**
3. **Illicit Discharge Detection and Elimination**
4. **Construction Site Runoff Control**
5. **Post-construction Stormwater Management**
6. **Pollution Prevention / Good Housekeeping**



Michigan Phase I Program

- Large MS4s - Communities over 250,000
- Medium MS4s - Communities over 100,000
- Construction Sites over 5 acres



Large MS4s

- Detroit



Medium MS4s

- Ann Arbor, Flint, Grand Rapids, Sterling Heights, Warren
- University of Michigan
- MDOT



Phase II Program

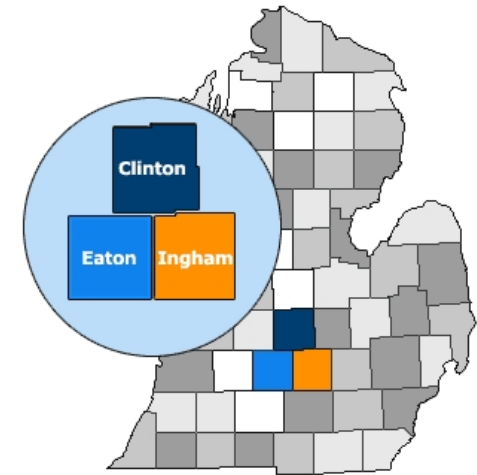
- Small MS4s
 - Construction Sites over 1 Acre
 - **Urbanized Areas:**
 - Population of > 50,000***and***
 - Overall Population Density of >1,000 sq. mile (*really 500 sq. mile*)***400+ Michigan Communities***
- Small MS4s include:***
- East Lansing and MSU!!!





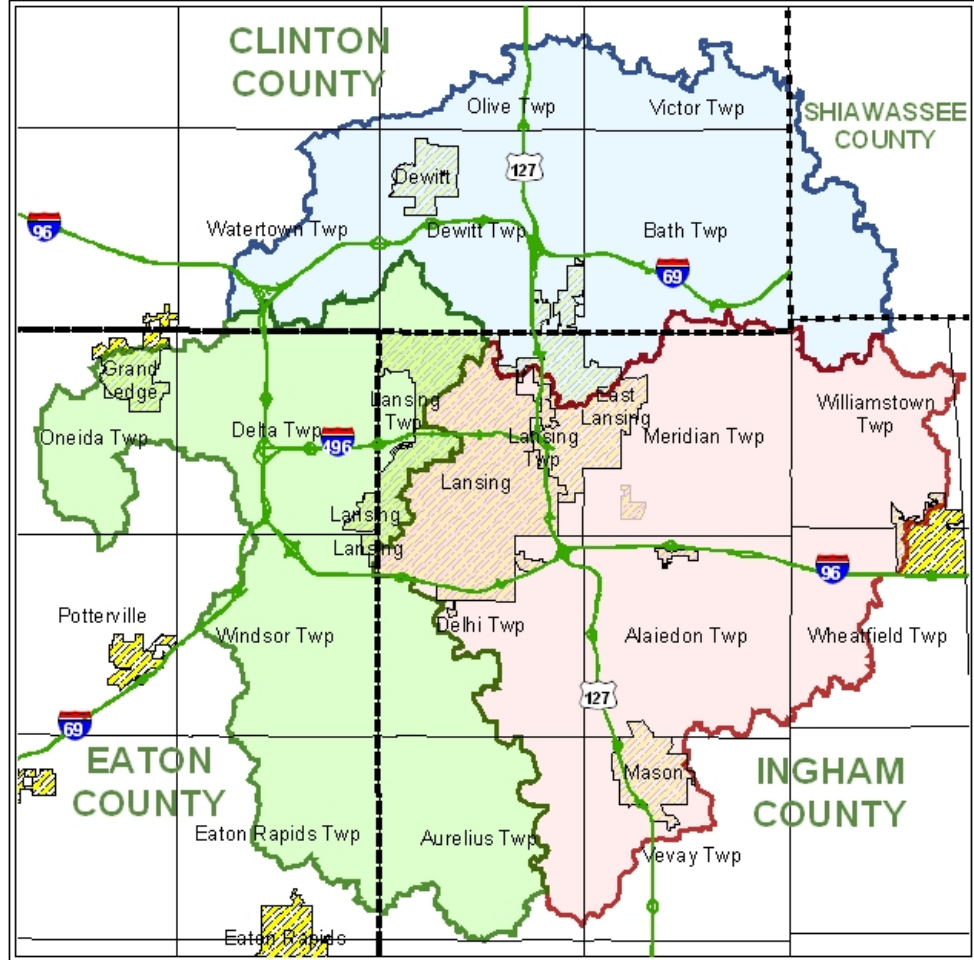
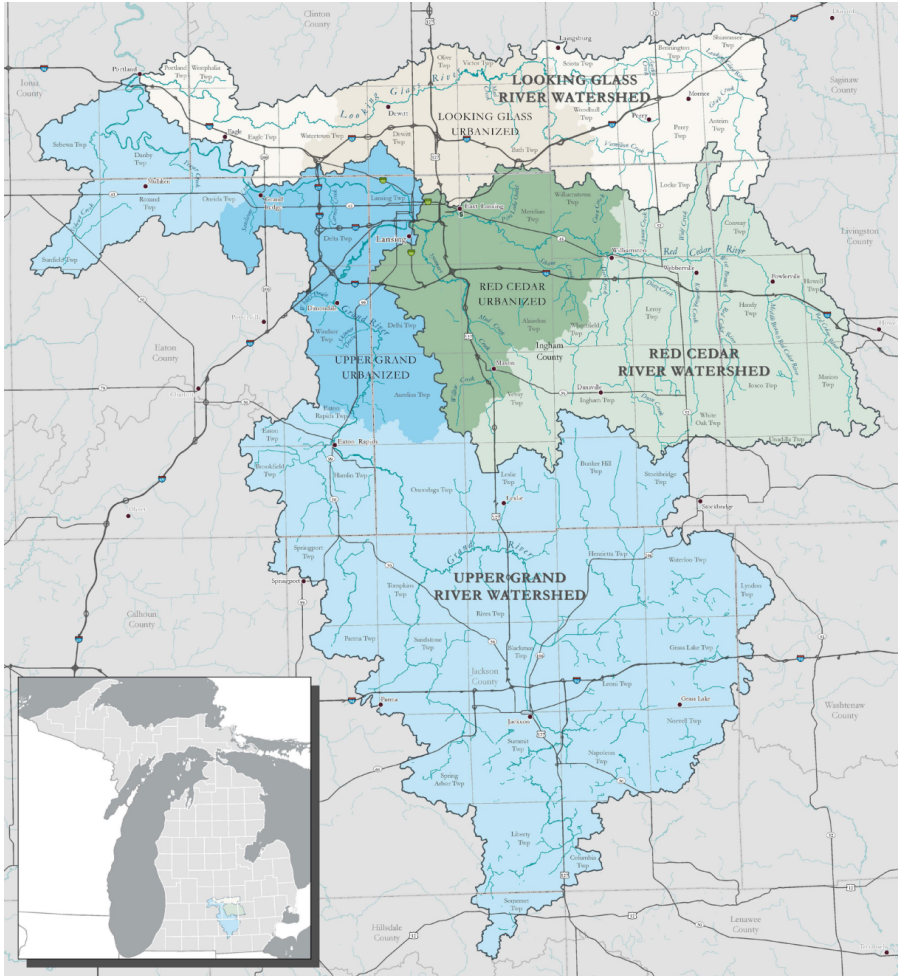
Phase II Response

- Beginning in 1999 a small group of local communities met with MDEQ to discuss the proposed rules and to discuss how best to respond to them
- They decided to work jointly as regional watershed communities to develop the initial responses to the regulations.
- As such the Greater Lansing Regional Committee for Stormwater Management (GLRC) was formed in 2002.
<http://mywatersheds.org/>
- The GLRC was organized to address the stormwater management issues in the watersheds of the: Grand River, Red Cedar River and the Looking Glass River





Watershed





Phase II Response

- In October 2003 the City of East Lansing and the other Phase II communities were issued certificates of coverage by MDEQ to discharge stormwater to the waters of the state from a community's Municipal Separate Storm Sewer System (MS4). These certificates of coverage were a uniform general permit form used for all communities throughout the state
- The initial emphasis was to develop individual watershed management plans for each watershed. The plans were to address the criteria established in the federal and state Phase II stormwater rules and outlined in each of the various city's certificate of coverage.
- In 2006 the Grand River, Red Cedar River, and Looking Glass River watershed management plans were completed and published.
- The three watershed management plans all agreed upon the same:
 - 10 long-term goals
 - 55 specific objectives
 - 182 specific action items



Phase II Response

- MDEQ later elected to revise their program and to require individually customized NPDES permits for each community
- The City of East Lansing submitted its required NPDES permit *“application for discharge of stormwater to surface waters from a municipal separate storm sewer system”* to MDEQ in January 2013.
- The application was reviewed by MDEQ and additional information was submitted in November 2013



Phase II Response

The NPDES application was extremely extensive and included all previous documents as well as the city's commitment and plan for addressing the following required elements:

- (1.) the city's enforcement response plan
- (2.) the public participation/ involvement process
- (3.) a public education plan
- (4.) An illicit discharge elimination program
- (5.) A construction storm water runoff control program
- (6.) The post-construction storm water runoff program
- (7.) The program for pollution prevention and good housekeeping activities for municipal operations including a stormwater pollution prevention plan for the State Road DPW facilities

The materials submitted with the application was formally approved as part of the permit and is considered the city of East Lansing's official stormwater management program.



Where we are Today

The City of East Lansing & Michigan State University received the first two NPDES permits issued in the state by MDEQ.

JUST LUCKY I GUESS!!!!!!

They became effective June 1, 2015.





NPDES Stormwater Permit

- The NPDES permit formally authorizes the City of East Lansing to discharge storm water from its MS4 to the surface waters of the state via the outfalls and points of discharge identified in the city's application. **Yes a permit to discharge that which falls from the sky!**
- The city identified 78 specific outfalls to be authorized under this permit.
- The permit also incorporates the East Lansing public school district's facilities under the jurisdiction of the city's NPDES permit as a **"nested jurisdiction"**
- This provides an exemption for the school district and saves them from having to develop and administer its own stormwater management program and from having to obtain its own permit from MDEQ.





NPDES Stormwater Permit

The NPDES permit stipulates requirements for addressing each of the seven program criteria identified in the stormwater management plan

Public Participation/Involvement Process (PPP)

"The permittee shall implement the PPP to encourage public participation/involvement in the implementation and periodic review of the SWMP to the maximum extent practicable."

Public Education Plan (PEP)

"The permittee shall implement the pep as part of the SWMP to the maximum extent practicable. At the minimum, the PEP shall promote, publicize, and facilitate education for the purpose of encouraging the public to reduce the discharge of pollutants in stormwater runoff."



Enforcement Response Procedure (ERP)

"The permittee shall implement the ERP for violations of the permittee's ordinances or regulatory mechanisms identified in the SWMP to the maximum extent practicable."



NPDES Stormwater Permit

Construction Storm Water Runoff Control Program

"The permittee shall implement the construction storm water runoff control program to address areas of construction activity that disturb one (1) or more acres."



Pollution Prevention And Good Housekeeping Activities For Municipal Operations

"The permittee shall implement the pollution prevention and good housekeeping program with the goal of preventing or reducing pollutant runoff from municipal facilities and operations that discharge storm water to surface waters of the state."



Illicit discharge Elimination Program (IDEP)

"The permittee shall implement and enforce the IDEP to detect and eliminate illicit discharges and connections to the permittee's MS4."





NPDES Stormwater Permit

Post-Construction Storm Water Runoff Program

“The permittee shall implement and enforce the program to address post-construction storm water runoff from new development and redevelopment projects that disturb one (1) or more acres... and that discharge into the permittee’s MS4.”

The post-construction runoff requirements requires that the city pass and an ordinance and that the “...permittee shall implement and enforce the ordinance requiring implementation of best management practices (BMPs) by the project developer to achieve the post-construction storm water runoff performance standards at the project site to the maximum extent practicable.”

Requirements:

1. Water quality treatment performance standard: **Treat the first one (1) inch of runoff from the entire site. [Treat]**
2. Channel protection performance standard: **The post-construction runoff rate and volume of discharges shall not exceed the predevelopment rate and volume for the project site for all storms up to the two-year, 24-hour storm. [Preconstruction Run-off = Post Construction Run-off]**



Compliance Plan

1. Development of an implementation plan for each element of the permit and SWMP that provides a brief narrative as to what is required and how we will fulfill that requirement
2. Development of site-specific data/information forms to gather background material regarding that specific issue. As an example under the pollution prevention and good housekeeping section we developed a form for each of the over 70 city owned facilities that included the following:
 - Facility type and location
 - Facility activities and potential pollutants
 - BMPs identified to prevent or reduce pollutant runoff at that facility
 - Inspection forms for each facility for use as part of an annual on-site inspection to confirm that the BMPs were being adhered to
3. Checklists were developed for most elements to be filled out at least once a year to help us verify compliance with the requirements of our permit. The checklists will also serve as a reminder of the specific reporting requirements of the permit that must be followed and provide an opportunity for us to reevaluate the city's implementation plan.

Goal: Make it easy to comply!



Do Outs, Challenges and Opportunities

- **Ordinance** -Adoption for requirements (**NLT March 2016**)
 - *Ordinance has been reviewed by City Attorney*
- **Funding Program (unfunded mandate)**- How to fund beyond the general fund?
 - *Fees, assessments, etc...?*
- **Audits and Record keeping**- Tracking compliance
 - *Inspection checklists and tracking system is under development*
- **Collaboration**- Interdepartmental and nested jurisdiction
 - *ELSD has been contacted about participating in our program*
- **Green Infrastructure**- Incentives, funding and implementing
 - *Design manual and policy are in draft form*
- **Perception and Education**- We are “treating” rain water- this is abstract and has costs. This will require extensive public education about the “who, what, why and how”
 - *Education efforts are ongoing and will increase to include PSAs and enhanced website content*