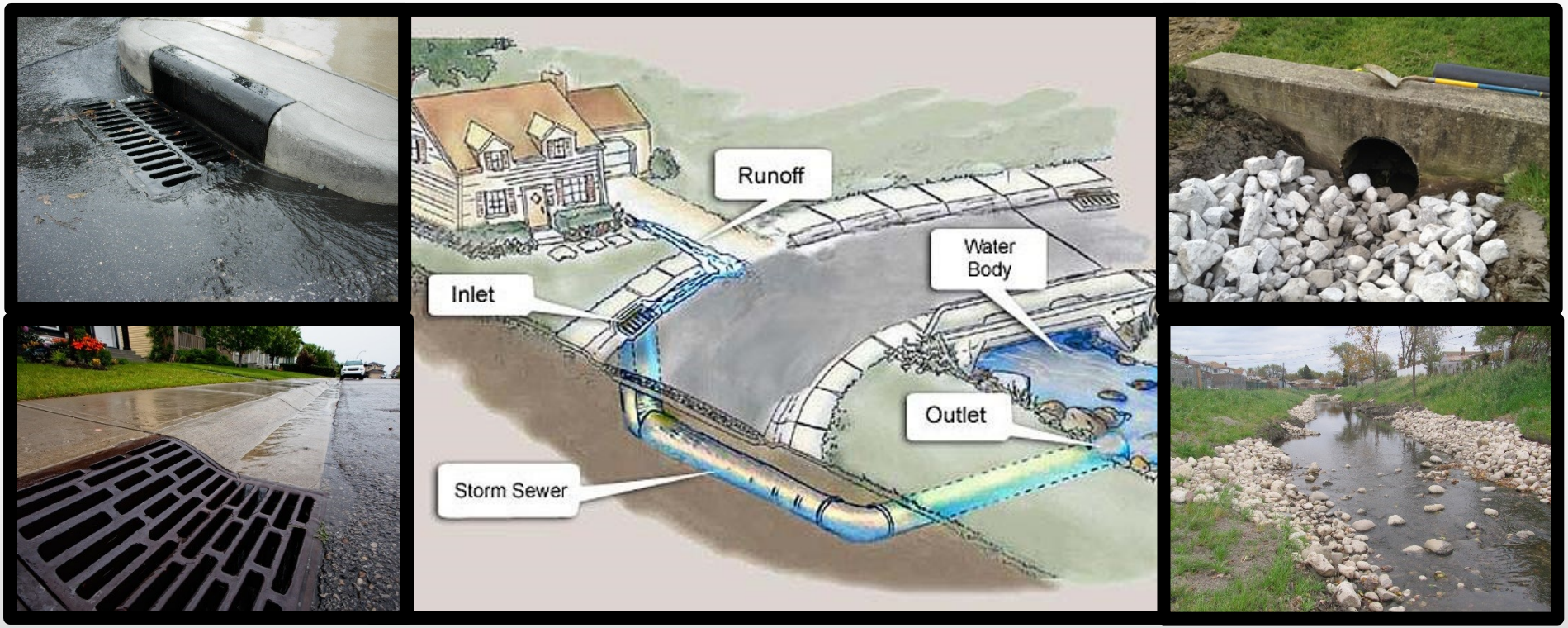
LOWER MAKEFIELD TOWNSHIP
STORM WATER MANAGEMENT
MS4 PROGRAM OVERVIEW

MS4 : Municipal Separate Storm Sewer System:

Stormwater conveyance system from roadway to stream



Permit Requirements
Minimum Control Measures (MCM)

- MCM 1 – Public Education and Outreach
- MCM 2 – Public Involvement and Participation
- MCM 3 – Illicit Discharge Detection and Elimination
- MCM 4 – Construction Site Runoff Control
- MCM 5 – Post Construction Stormwater Management
- MCM 6 – Pollution Prevention & Good Housekeeping
- Pollution Reduction Plan

MCM 1 – Public Education & Outreach

- Educate community on impact of common practices
- Provide specific actions that reduce stormwater pollution potential

How do we comply?

- Education pamphlets in Twp Bldg lobby
- Information on Township website
- Annual Stormwater Presentation – Making Your Property Stormwater Friendly

Township Compliance

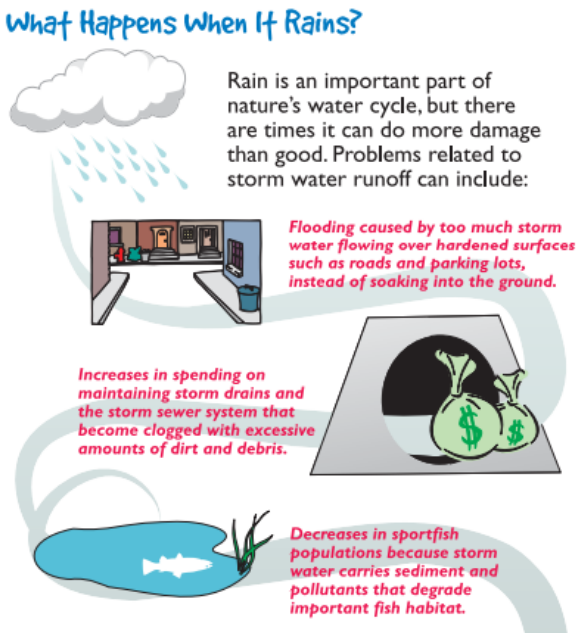
Prevent Storm Water Pollution

How Homeowners Can Help Prevent Stormwater Pollution

Stormwater runoff occurs when water from rain or snow and ice melting flows over the ground. Stormwater becomes a problem when it picks up debris, chemicals, dirt and other pollutants as it flows or when it causes flooding and erosion of streambanks. Stormwater travels through a system of pipes and roadside ditches that make up storm sewer systems. It eventually flows directly to a lake, river, stream, wetland or coastal water. All of the pollutants stormwater carries along the way empty into our waters, too, because stormwater does not get treated!

Here are some of the most important ways for Township residents to prevent stormwater pollution:

- Properly dispose of hazardous substances, such as used motor oil, cleaning supplies and paint – never pour them down any part of the storm sewer system, and report anyone who does.
- Use pesticides, fertilizers and herbicides properly and efficiently to prevent excess runoff of these items.
- Look for signs of soil and other pollutants, such as debris and chemicals, leaving construction sites in stormwater runoff or tracked into roads by construction vehicles. Report poorly managed construction sites that could impact stormwater runoff to the Township.
- Install innovative stormwater practices on residential properties, such as rain barrels or rain gardens, that capture stormwater and keep it on-site instead of letting it drain away into the storm sewer system.



Step 1: Map your Lot

MCM 2 – Public Involvement & Participation

- Provide opportunities for volunteer actions and programs
- Establish groups and teams for watershed review

How do we comply?

- Twp Environmental Advisory Council
- Public Review of Stormwater Ordinances
- Public Review of Land Development applications

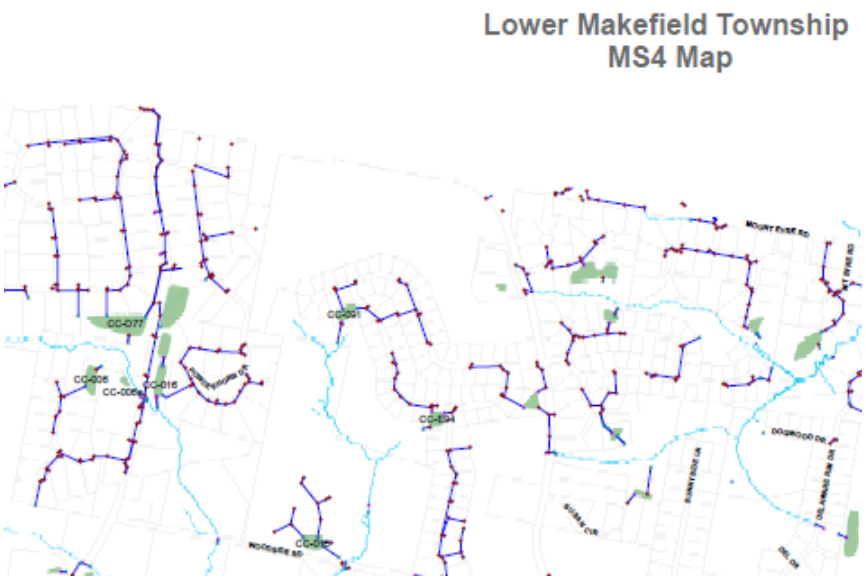
MCM 3 – Illicit Discharge Detection

- Develop and update storm sewer system map
- Investigate illicit discharges
- Provide ordinance against ID

How do we comply?

- Ordinance Section 173-33 and 174-33 - Prohibited Discharges
- Upgrading Storm Sewer Map in GIS
- Basin Inspections

Township Compliance



MCM 4 – Construction Site Runoff Control

- Develop procedures for managing construction runoff involving plan review, site inspection, and enforcement for erosion and sediment control measures

How do we comply?

- Earth disturbance over 2,000 sf requires E&S review
- Routine Construction Inspections
- Notice of E&S Violation Issuance

MCM 5 – Post Construction Stormwater Management

- Develop ordinance for controlling development stormwater
- Establish plans for long term operation and maintenance

How do we comply?

- Additional Impervious area needs stormwater mitigation
- Require an Operation and Maintenance agreement for constructed stormwater facilities (BMPs)

Township Compliance

Figure 4: Example of Infiltration Trench Installation

MCM 6 – Pollution Prevention

- Develop procedures for managing Twp owned stormwater facilities
- Develop procedures for pollutant containment and disposal

How do we comply?

- Public Works training and plan for pollutant handling and containment
- Routine inspection and maintenance of BMPs

Township Compliance

Pollution Reduction Plan

- Identify Impaired Watersheds
- Map Storm Sewer Within Impaired Areas
- Develop Plan To Reduce Pollutants
- 10% Reduction In Sediment
- 10% Reduction In Total Nitrogen
- 5% Reduction In Total Phosphorous

Township Compliance

- Report Due September 2020
- Impaired Watersheds of Core Creek, Rock Run,
- Implement BMPs to reduce pollutants by 2023
- Streambank Restoration and Basin Retrofits are most “bang for your buck”.
- Township has over 30 basins in impaired areas for potential retrofit

Basin Retrofit