

# **Thomas Township**

## **Drainage System Maintenance**

### **OVERVIEW**

As a consequence of its function, the stormwater conveyance system collects and transports urban runoff that may contain certain pollutants. Maintaining catch basins, stormwater inlets, and other stormwater conveyance structures on a regular basis will remove pollutants, prevent clogging of the downstream conveyance system, restore catch basins' sediment trapping capacity, and ensure the system functions properly hydraulically to avoid flooding. To ensure proper maintenance and effectiveness of these drainage systems, please review and apply the following approaches, protocols, and requirements below. This maintenance procedure shall be reviewed and updated annually based on new construction on municipal property or storm water utility.

### **Procedures**

#### **Catch Basins and Storm Drain Conveyance System**

- Will be inspected during the dry season (summer).
- Will be inspected according to Catch Basin Prioritization Procedures.
  - High priority catch basins will be inspected every year.
  - Medium priority catch basins will be inspected every 2 years
  - Low priority catch basins will be inspected every 5 years.
- The condition of the catch basin at the time of the inspection will be documented.
- Catch basins that are half full of sediment \* (sediment within 18 inches of the pipe invert of the discharge pipe) will be cleaned within 90 days by a contractor.
- The contractor will use a vac truck when the catch basins are accessible to vac trucks.
- Catch basins are considered clean when the remaining material is not more than 2 inches in depth.
- The total amount of waste/sediment removed annually from the catch basins will be documented and included in progress reports.
- Waste materials from catch basin and storm sewer line cleaning will not be stored at Township properties. The contractor will dispose of all waste materials removed from catch basins and storm sewer lines immediately to an approved disposal area.
- The contractor will dispose of waste materials according to the Department of Environment, Great Lakes, and Energy disposal guidelines for catch basins. ([http://www.michigan.gov/documents/deq/wb-stormwater-CatchBasinGuidance\\_216198\\_7.pdf](http://www.michigan.gov/documents/deq/wb-stormwater-CatchBasinGuidance_216198_7.pdf))
- The inventory of catch basins will be updated annually to include new structures.

\* For purposes of this procedure, a conservative assumption will be made that the sump is 36 inches deep and the catch basin will be cleaned if sediment is within 18 inches of the pipe invert of the discharge pipe (half full of sediment).

### ***Vegetated Swales/Bio-Swales***

- Inspect grass alongside slopes and the bed of the swale for erosion and the formation of rills and gullies; attend to and correct on an as needed basis.
- Remove trash and debris.
- Replenish vegetation, grass species, and wetland species on an as needed basis.
- Keep grass mowed to a height of 3-4 inches to provide sufficient performance of removing pollutants.
- Any necessary maintenance warranted from inspections will be performed on an as needed basis.
- Any maintenance waste material extracted should be disposed of properly.

### ***Detention Basins***

- Clean out any accumulated trash in the basin. Dispose of trash properly.
- Inspect for invasive plant species and remove or eradicate following proper procedures.
- Maintain vegetation properly, per applicable ordinances.
- For a detention basin, check the inlet and outlet structures and assure that flow restricting devices are not blocked and are operating properly. (may also need to additionally examine during wet weather event)
- Regularly inspect the embankments to ensure structural stability and for eroded areas.
- Ensure that riprap around the inlet and outlet structures within detention basins is intact and replace when the riprap is clogged with sediment and debris.
- Inspect for sediment accumulation at the inlet pipes.
- Do not use pesticides, herbicides, or fertilizers.
- Any necessary maintenance warranted from inspections will be performed on an as needed basis. Any maintenance waste material extracted should be disposed of properly.
- Document findings and maintenance completed.

### **MEASURABLE GOALS**

- Volume of sediment removed from the system per year.
- Volume of trash removed from the system per year.
- Number of structures cleaned or maintained per year.