

# Saginaw Valley State University Drainage System Maintenance Procedures

## OVERVIEW

As a consequence of its function, the stormwater conveyance system collects and transports urban runoff that may contain certain pollutants. Maintaining catch basins, detention basins / retention basins, vegetated swales, rain gardens, 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. These procedures require that all structural storm water controls at Saginaw Valley State University be maintained to reduce, to the maximum extent practicable, the contribution of pollutants to stormwater. This maintenance standard operating procedure will be reviewed and updated/revised annually following the implementation of a new structural storm water control. Any updates will be included in future progress reports submitted to the Michigan Department of Environment, Great Lakes, and Energy (MDEGLE).

## Procedures

### *Catch Basins*

- Will be inspected during the dry season (summer).
- Will be inspected according to the Catch Basin Prioritization Procedures.
  - High priority catch basins will be inspected each 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 basins at the time of the inspection will be documented.
- Catch basins that are half full of sediment (have 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.
- When a catch basin is cleaned, the depth of the sump will be documented.
- 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 SVSU. 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).

#### ***Bio-Retention/Rain Gardens***

- Bio-Retention/Rain Gardens will be inspected annually for the following:
  - Accumulated trash and debris
  - Health of the vegetation
  - Eroded areas
- Any necessary maintenance warranted from inspections will be performed on an as needed basis. Any maintenance waste material extracted will be disposed of properly.
  - Re-mulch void areas
  - Mow turf areas
  - Treat diseased trees and shrubs
  - Remove and replace dead and diseased vegetation

#### ***Detention Basins***

- Detention Basins will be inspected annually for the following:
  - Inlet and outlet structures- to ensure that flow restricting devices are not blocked and are operating properly.
  - Embankments- to ensure structural stability and for eroded areas.
  - Accumulated trash and debris.
  - Riprap around the inlet and outlet structures within detention basins is intact and not clogged with sediment and debris.
- Accumulated trash in the basin will be removed within 30 days of the inspection. Trash will be placed in a dumpster for proper waste disposal.
- Vegetation will be maintained per applicable ordinances.
- Any necessary maintenance warranted from inspections, other than removal of trash and debris, will be performed within 90 days of the inspection. Any maintenance waste material extracted will be disposed of properly.
- Inspection findings and maintenance completed will be documented.

#### ***Vegetated Swales***

- Vegetated Swales will be inspected annually for the following:
  - Embankments to look for eroded areas
  - Accumulated Trash and Debris
- Vegetation will be maintained per applicable ordinances.
- Any necessary maintenance warranted from inspections, other than removal of trash and debris, will be performed within 90 days of the inspection. Any maintenance waste material extracted will be disposed of properly.
- Inspection findings and maintenance completed will be documented.

#### ***Constructed wetlands***

- Constructed wetlands will be inspected annually for the following:

- Accumulated trash and debris
  - Accumulation of sediment from storm sewers
- Any necessary maintenance warranted from inspections, other than removal of trash and debris, will be performed within 90 days of the inspection. Any maintenance waste material extracted will be disposed of properly.