



CITY OF TITUSVILLE

Stormwater Management Systems Inspection and Maintenance

Standard Operating Procedures

October 2016

This document provides General Guidelines and Standard Operating Procedures (SOPs) for Operation and Maintenance (O&M) of publically owned or maintained stormwater facilities.

Ownership and Easements

Maintenance responsibility lies with the owner of the land, except as modified by specific agreement. Maintenance responsibility shall be defined on final plats and final development plans. The property owner or designee shall be responsible for the maintenance of all drainage facilities including inlets, pipes, culverts, channels, ditches, hydraulic structures, and detention/retention basins located on their land unless modified by specific agreement. Maintenance access for all facilities must be adequate for the anticipated maintenance vehicles and equipment and should be shown on the final plats and final development plans. Drainage easements are required in order to ensure for the proper construction, maintenance and access to drainage improvements that have the potential to affect the public drainage system and other properties. Drainage easements shall be granted to the City for inspection and maintenance purposes and shall be shown on the final plat and final development plans.

Preventive Maintenance Activities and Education

The most effective way to maintain your stormwater facility is to prevent pollutants from entering the facility in the first place. Common pollutants include sediment, trash and debris, chemicals, pet wastes, runoff from stored materials, illicit discharges into the storm drainage system and many others. The City will also implement measure to address these potential contaminants by:

- Educating employees/residents on how their actions impact water quality and how they can help reduce maintenance needs through a public education and outreach program
- Keep public properties, streets, curb & gutters and parking lots free of trash, debris and lawn clippings through a street sweeping program
- Sweep or blow grass clippings away from paved surfaces not on to them
- Be aware of automobiles leaking fluids. Use absorbents to soak up drippings and dispose of properly
- Re-vegetate disturbed and bare areas to maintain vegetative stabilization
- Proactively clean out the upstream components of the storm drainage system, including inlets, storm sewers and outfalls
- Do not store materials outdoors (including landscaping materials) unless they are properly protected from stormwater runoff

Maintenance Procedures

Stormwater Management Facility Maintenance Programs are separated into three broad categories of work.

1. Routine Work

This work consists of regularly scheduled mowing and debris pickups for stormwater management facilities, removal of debris/material that may be blocking stormwater structures, aquatic vegetation maintenance, and baffle box cleaning. This work is conducted numerous times a year and generally follows the schedule below:

- a. Mowing
 - All appropriate areas will be mowed with the slope mower and weed eater at least once every eight weeks, during which time trash will be removed.
 - All appropriate areas will be mowed with the bush hog at least once every four weeks.
- b. Debris Removal
 - Inlets and stormwater structures will be cleaned prior to an expected heavy rain event.
- c. Aquatic Vegetation Maintenance
 - City owned ponds are under a contract for aquatic vegetation maintenance in which the contractor is responsible for keeping the nuisance aquatic vegetation below 15% of the pond surface.
- d. Baffle Box Cleaning
 - Baffle boxes are fully cleaned quarterly by a contractor, grates are cleaned monthly by the Public Works Department.

2. Work Orders

This work consists of a variety of isolated or small-scale maintenance/operational issues, i.e. small pipe failures, damaged inlets, clogged storm drains, etc. Most of this work can be completed in-house by the Public Works Department. This work is scheduled on an as-needed basis based on call-ins or staff observation. This work can be completed within a shorter time frame, generally from a few days to a few weeks.

3. Major Repairs

This work consists of larger maintenance/operational issues and failures within the stormwater management facilities. Some of this work requires that engineering staff review the original design and construction drawings to assess the situation. This work may also require more specialized maintenance equipment, design/details, surveying through either in-house Public Works staff or outside Consultants. This work is scheduled on an as-needed basis based on call-ins or staff observation. This work will be completed within a longer time frame, generally from a few months to up to a year.

Proper Disposal of Waste and Wastewater Removed from Stormwater Conveyance System

Disposal of waste and wastewater will follow FDEP's guidance as outlined in the 2004 document, *Guidance for the Management of Street Sweepings, Catch Basin Sediments and Stormwater System Sediments*.

Soil materials will be kept at the City's temporary storage site located on SR405. Un-screened materials will only be kept for 3 months before being screened or disposed of at a landfill and screened material can be kept up to 6 months before being used. Screening consists of two screenings, one coarse (1inch) and one fine (5-10mm).

Decanting of excess water from the vacuum truck will be conducted by placing a catch basin insert into a sanitary sewer manhole and pumping the excess water into the manhole to be treated by the wastewater treatment plant.