Storm Drain System Cleaning

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Minimum Measure: Pollution Prevention/Good Housekeeping for Municipal Operations

Subcategory: Municipal Activities

Description

Storm drain systems need to be cleaned regularly. Routine cleaning reduces the amount of pollutants, trash, and debris both in the storm drain system and in receiving waters. Clogged drains and storm drain inlets can cause the drains to overflow, leading to increased erosion (Livingston et al., 1997). Cleaning increases dissolved oxygen, reduces levels of bacteria, and supports in-stream habitat. Areas with relatively flat grades or low flows should be given special attention because they rarely achieve high enough flows to flush themselves (Ferguson et al., 1997).

Municipalities can hire professional plumbing services to remove trapped sediment and debris from storm drains with periodical flushing (Source: Drain Patrol, no date)

Some common pollutants found in storm drains include:

- trash and debris
- sediments
- oil and grease
- antifreeze
- paints
- cleaners and solvents
- pesticides
- fertlizers
- animal waste
- detergents

Applicability

This measure applies to all storm drain systems. The same principles can be applied to material and waste handling areas, paved and vegetated areas, waterways, and new development projects (Ferguson et al., 1997).

Limitations

While cleaning is necessary for all storm drain systems, there are limitations (adapted from Ferguson et al., 1997):

- Cleaning storm drains by flushing is more successful for pipes smaller than 36 inches in diameter.
- A water source is necessary for cleaning.
- Wastewater must be collected and treated once flushed through the system.
- Depending on the condition of the wastewater, it may or may not be disposed to sanitary sewer systems.
- The efficiency of storm system flushing decreases when the length of sewer line being cleaned exceeds 700 feet.

Maintenance

Ferguson et al. (1997) report removal of 55 to 65 percent for non-organic materials and grits, and 65 to 75 percent for organics.

Cost Considerations

The cost of a vactor truck can range from $175,000 to $200,000, and labor rates range from $125 to $175 per hour (Ferguson et al., 1997). Ferguson et al. (1997) also cited costs of $1.00 to $2.00 per foot for storm drain system cleaning.

References

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