5. Operation and Maintenance

The operation and maintenance of a municipally owned stormwater collection system involves several key responsibilities to ensure that the facility remains operational and safe at all times. These responsibilities include:

- **Inspection and reporting of results.** Regular inspections are necessary to identify and address any issues that could affect the system's performance.
- **Elimination of mosquito-breeding habitats.** Ponds, standing water, and areas where water collects for long periods are ideal breeding grounds for mosquitoes. Therefore, these areas must be maintained to prevent mosquito populations.
- **Removal and disposal of trash and debris.** Garbage and debris can obstruct the flow of water and cause damage to the system. Regular removal of these items is essential.
- **Maintenance of wetland vegetation.** Wetland areas are crucial for ecosystem health. Maintaining these areas helps in preserving biodiversity and preventing soil erosion.

**Storm Sewer System (inlets and pipe)**

- **System maintenance and replacement.** Inlets and pipes require regular maintenance to ensure they function correctly and do not become clogged or damaged.
- **Removal and disposal of sediment.** Sediment levels can be inspected at the outlet structure for any above ground basins. Basins should have floating barriers to control sedimentation and prevent it from entering the system.
- **Cleaning**
  - Sediment levels can be inspected at the outlet structure for any above ground basins. Basins should have floating barriers to control sedimentation and prevent it from entering the system.
  - Cleaning involves digging out the accumulated sediment, mud, sand, and debris with earth-moving equipment. The contractor shall remove from the site, recycle or dispose of all building materials and waste in accordance with the approved inspector's requirements.

**Gutters and Spouting.**

- **Operation and maintenance.** Gutters and downspouts are essential for diverting rainwater away from buildings. They should be used over all doorways and adjacent to decks and patios. Gutters should be checked regularly for debris and cleaned as necessary.
- **Association responsibility.** KCC shall repair and/or replace any dented, broken missing or misaligned gutters and downspouting.
- **Recommended maintenance procedures:**
  - Check for leak conditions.
  - Replace or repair leaky sections.
  - Check for debris accumulation along the sides and bottom of gutters.
  - Remove debris and clean gutters periodically.

**Bank stabilization and vegetation management.**

- **Maintaining turf grass on the tops of the berms and on the exterior slopes of embankment.** This helps in preventing soil erosion and maintaining the facility's appearance.
- **Excessive weed growth.** Areas of concern include excessive weed growth, maintaining adequate vegetative cover, sedimentation, bank stabilization, and vegetation management. Immediate stabilization and revegetation, or the facility will mobilize sediment to downstream areas. Freshly seeded areas need to be protected with erosion mat that has been securely staked in place to prevent flotation. In many cases, sodding offers the best approach to stabilization after sediment removal.

**Trash disposal and sedimentation.**

- **Remove trash from the site.** Trash and debris should be removed from the site immediately to prevent environmental degradation and sedimentation.
- **Cleaning involves digging out the accumulated sediment, mud, sand, and debris with earth-moving equipment.** The approved inspector shall occur at least annually to ensure that the facility is operating as designed and to schedule maintenance.

**General maintenance.**

- **Condition of leaf strainer.** (clogged, broken)
- **Condition of inlets (cracking of concrete, separation of pipe).** Inlet grates and pipe crossings should be checked regularly for damage and replaced as necessary.
- **Condition of leaf strainers.** Inlet leaf strainers should be inspected and cleaned regularly to prevent debris from entering the system.
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**Wetland vegetation management.**

- **Responsibility.** The operator shall remove from the site, recycle or dispose of all building materials and waste in accordance with the approved inspector's requirements.
- **Control of woody vegetation.** Control of woody vegetation will require periodic mowing and a policy to prevent the growth of extensive woody root systems. Any seedlings or plantings should be removed at the earliest opportunity and the disturbed areas properly stabilized.

**Stormwater pond management.**

- **Ponded water.** A fountain or recirculation system is recommended. Ponded water in open cans and bottles are ideal breeding grounds for mosquitoes.
- **Drainage.** Stormwater ponds can be drained periodically to suppress mosquito breeding. A drain line should be installed or extended to provide access to the pond for regular inspection and maintenance.
- **Sedimentation.** Freshly seeded areas need to be protected with erosion mat that has been securely staked in place to prevent flotation. In many cases, sodding offers the best approach to stabilization after sediment removal.