Post-Construction Stormwater Best Management Practices: Inspection and Compliance Program Overview and Updates

Kirk Lambrecht
Division Inspector
Division of Environmental Compliance

August 8, 2019
Outline

• BMP Stormwater Program Introduction
• Inspections & Compliance Overview
• Lessons Learned
• Looking Forward
Stormwater BMP Program

• Stormwater BMPs are structural, vegetative, or managerial practices used to treat, prevent, or reduce pollutants in stormwater runoff.

• MSD’s BMP program fulfills NPDES Phase II small MS4 requirements to address the quality of stormwater runoff from new and redevelopment projects ≥ 1 acre.
  • Provide water quality treatment for 90% of annual rainfall.
  • Reduce runoff volume to pre-construction levels on new development sites.
  • Channel protection through extended detention (1yr/24hr storm).
  • Stand alone BMPs must remove minimum 80% of TSS and have an acceptable longevity rate.
Stormwater BMP Program

• MSD provides site design guidance, reviews projects, issues permit for construction, inspects and approves construction.

• Following project approval, constructed BMPs are entered into the Inspection and Compliance Program.
  • Field Inspections
  • Annual Reports Due List
Stormwater BMP Program

Prior to approving plans the owner enters into a Maintenance Agreement with MSD. The MA includes the following:

- Requires owner to maintain facility in good working order;
- References SWMFR O&M which describes requirements for inspections, maintenance, and reporting;
- Reserve area for each BMP;
- Authority for MSD to make repairs should the owner fail to properly maintain the BMP; and,
- Agreement is to continue in perpetuity.
Stormwater BMP Program

Inspection and Compliance

- BMPs are inspected on a 3 year cycle.
- Informal and Formal Enforcement Actions are taken for facilities in disrepair.
  - O&M Enforcement Response Plan (updated 2019)
- Legal Authority for compliance inspections and enforcements is provided by MSD Ordinances 9030 and 15048.
- Annual report processing and review.
- Program/Technical Assistance
Inspection & Compliance

Post-Construction BMPs Built, Permitted for Construction, or Under Review as of 12/31/2018

- 5,012 Total BMPs
- Bioretention (2,496)
- Permeable Pavements (892)
- Other (526, amended soils)
Inspection & Compliance

MSD Yearly Inspections for 2015-2019

• *1,304 inspections projected for 2019 (787 through July)
Inspection & Compliance

MSD Yearly Enforcement Actions 2015-2019

- 2019 enforcements (57) represent those taken through July.
Inspection & Compliance

Most Common Reasons for Enforcement:

- Excess debris or sediment
  - Raingardens, permeable pavements, HDSUs
- Excessive erosion
- Clogging or inadequate drainage
- Invasive plants
- Structural components
  - Permeable pavements with excessive spalling, compaction, or which has been permanently sealed.
  - Missing cleanout caps
  - Broken filter cartridges
Inspection & Compliance

Lessons Learned:

• Install certain BMPs during final phases of construction and protect from construction sediment.
• Maintaining the contributing drainage area can be just as important as the treatment basin.
• Perform regular inspections and maintenance to avoid costly repairs or restoration.
Inspection & Compliance

Looking Ahead:

• The Inspection & Compliance area for Stormwater BMPs will continue to grow.
• Early stages of inspecting aged detention basins and developing I&C program.
  • Nearly 2,800 facilities. Many that were not previously approved by MSD and lack a clear maintenance agreement.
  • Inspections to occur on a five year cycle.
  • Facilities will be inspected for condition and performance. Complaints will be considered as part of the overall assessment.
Questions?

Kirk Lambrecht, Division Inspector
Division of Environmental Compliance
Phone: (314) 436-8758
Email: klambrecht@stlmsd.com