

Introduction to Stormwater BMP Maintenance: Requirements and Considerations



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Presentation Summary

- Regulatory Background
- Implementation Strategy
- Tools & Resources Available
- Closing Considerations



New and Redevelopment Requirements

- October 2001: SCVURPPP NPDES permit amended to add stormwater requirements for development projects (Provision C.3.)
- Group 1 projects (>1 acre impervious surface) – require source control, site design, treatment BMPs, and in some cases, flow control measures
- Phasing in requirements for Group 2 projects (> 10,000 sq.ft. impervious surface)



Permit Provision C.3.e.

Operation & Maintenance of Treatment BMPs

Co-permittees are required to implement a BMP O&M Verification Program, including:

- Compile list of properties and responsible operators for all treatment BMPs
- Inspect subset of prioritized BMPs on an annual basis, with follow-up/correction
- Require owner's signed statement accepting responsibility for maintenance (private projects)
- Submit reports with Annual Reports



Permit Provision C.3.e.

O&M of Treatment BMPs, continued

Need enforceable mechanism that assigns responsibility for BMP maintenance:

- Private projects:
 - Conditions in sales/lease agreement
 - Conditions in residential project CC&Rs
 - Maintenance agreement (owner)
 - Statement that public agency will maintain
- Public projects:
 - Statement that public agency will maintain



Implementation Strategy

Preferred Approach by Co-permittees

- Owners/operators maintain BMPs on private property
- Public agencies maintain BMPs on public property
- In some cases, owners/operators maintain BMPs in public right-of-way
 - Example: Form assessment district for funding maintenance of BMPs in public right-of-way



Implementation Strategy

Stormwater Ordinances/Policies

- Help ensure that treatment BMPs are designed, constructed and maintained properly
- Requires BMP owners to regularly inspect, maintain and repair BMPs and provide access to BMP for inspection purposes
- Provides legal authority for municipality to inspect and take enforcement action if needed



Implementation Strategy

Stormwater Ordinances/Policies, cont.

- Recommended elements:
 - Maintenance agreements
 - Maintenance easement agreements
 - Inspection and maintenance procedures
 - Failure to maintain practices
 - Recordkeeping
 - Enforcement and penalties



Implementation Strategy

Maintenance Agreements

- Effective tool for ensuring long term maintenance
- Provides clear delineation of inspection and maintenance responsibilities of each party
- Legally binding on all current and subsequent owners of land served by the treatment BMP
- Eliminates the need to include written conditions requiring inspection and maintenance in every sale or lease agreement



Implementation Strategy

Maintenance Easement Agreements

- Ensures access from the public right-of-way and ample space to inspect and maintain treatment BMPs
- Legally binding on all current and subsequent owners of land served by the treatment BMP



Implementation Strategy

Criteria for Prioritizing BMPs for Inspection

- Likelihood to fail resulting in high repair and/or replacement costs;
- High level of maintenance needed for continued performance and operation;
- Decline in operational effectiveness due to age;
- Located in areas with ongoing construction activities (increased sediment loading);



Implementation Strategy

Criteria for Prioritizing BMPs (continued)

- Owned and/or maintained by residential owners;
- Public complaints or facility has history of non-compliance
- Potential to support endangered species populations
- Likelihood to create habitats favorable for mosquito production



Implementation Strategy

Factors for Setting Inspection Frequency

- Type of BMP (priority)
- Local climate and precipitation
- Land use type
- Level of effort required for inspection
- Existence of maintenance contracts
- Available resources and number of follow-up inspections in a given year



Useful Tools for Implementing BMP O&M Verification Programs

C.3. Handbook, Section VI --

- Guidance developed by Program and Co-permittee staff on:
 - Elements of O&M Verification Programs
 - Maintenance requirements for landowners
 - Municipal agency responsibilities
 - Guidance on priority/frequency of inspections
 - BMP maintenance cost estimates
 - Options for disposal of residuals
 - Vector control issues



Useful Tools for Implementing BMP O&M Verification Programs

- Treatment BMP Inspection and Maintenance Fact Sheets
 - Sixteen -- CASQA Municipal BMP Handbook
 - Six – developed by SCVURPPP
- Other resources on SCVURPPP website
 - Model inspection and maintenance checklists (City of Bellevue, WA)
 - Model maintenance and maintenance access agreements



Closing Considerations

- BMPs don't work if not maintained
 - Need good maintenance agreements
 - Need outreach to owner/operator
- Consider ease of maintenance when selecting BMPs
- Design BMPs for ease of maintenance
 - Provide access for equipment
 - Build in O&M indicators
- BMP maintenance and verification are relatively new – we will learn as we go!



For More Information...

- Visit our website at:

www.SCVURPPP.org

- CASQA BMP Handbooks:

www.cabmphandbooks.com