

BMP Maintenance and Adaptive Management

Overview:

This information sheet addresses BMP Compliance Working Group discussion item #8 on BMP maintenance and adaptive management. It provides background data, analysis of options to address the topic, and advances recommendations from TRPA staff and the EIP Parcel Specific Working Group.

Maintenance

The TMDL finds that sustaining pollutant load reductions requires regular inspection and maintenance of stormwater treatment BMPs.¹ The responsibility for the operations and maintenance (O&M) of BMPs resides with property owners, which leaves approximately 43,000 separate O&M systems to monitor and maintain if each parcel installs BMPs separately. More efficient and cost effective maintenance occurs with systems at an area-wide level. Local jurisdictions must verify maintenance for water quality projects and private property BMPs for which they claim credit in their TMDL load reduction targets. While TMDL verification tools exist for roadways and larger water quality projects, a simple workable verification protocol for parcel BMPs is needed to validate that credit awarded is warranted. California and Nevada awarded grant funds to TRPA and the Conservation Districts to develop protocols as part of a BMP Maintenance Guidance document for local jurisdictions. TRPA provides information on BMP maintenance practices and requirements in the TRPA Best Management Practices Handbook and may revoke BMP Certificates for properties where BMPs are not functioning.² TRPA secured grant funding from California and Nevada to develop instructional maintenance videos, administer the Lake Friendly Business program to incentivize BMP maintenance on commercial properties, and to conduct targeted maintenance enforcement by priority and in coordination with local jurisdiction load reduction plans.³

Adaptive Management

TRPA's Regional Plan adheres to a regular four-year cycle of plan evaluation and update to facilitate amendments determined necessary through an adaptive management process. This adaptive management process considers the status of plan implementation, progress towards thresholds, and updated science to determine what, if any, Regional Plan amendments are needed.⁴

¹ TMDL synthesis of findings and program adjustment recommendations memo 2010-2013, p. 6.

² 2012 Regional Plan Policy WQ-3.11 and 3.12; TRPA Code Section 60.4.9; TRPA's Stormwater Management Program Website – BMP Inspection, Maintenance and Monitoring: <http://www.tahoebmp.org/Maintenance.aspx>

³ TRPA received Proposition 50 Supplemental and Nevada 319 grant funding to develop instructional BMP maintenance videos to post on the Stormwater Management Program website by Dec 2014; TRPA received NV319 funding to contact 2,000 commercial and MFR properties in Nevada for maintenance by December 2015. Properties that submit maintenance documentation get their BMP certificate re-issued with a new date. Properties selected in coordination with local jurisdictions. Grant funding supports some technical assistance on a first come first served basis until December 2015. Properties contacted that remain out of compliance are followed up with enforcement on a priority basis. CA319 funds awarded but not yet under contract support similar processes in California for 500 properties. NV319 and CA319 grant funds support administration of the Lake Friendly Business Program. Commercial properties who submit maintenance documentation received free advertisement and their BMP certificate re-issued with a new date.

⁴ TRPA 2012 Regional Plan, Chapter 1 – Introduction, pp 1-4: http://www.trpa.org/wp-content/uploads/Regional_Plan_Goals_Policies_Final-2012-12-12.pdf

Recommendation Summary:

1. Continue current BMP maintenance strategies with available funding.
2. Refer BMP maintenance topic to the EIP Parcel Specific Working Group to review staff recommendations and identify any additional opportunities as part of developing final recommendations.
3. Use existing grants funds to coordinate with the EIP Parcel Specific BMP Working Group on a maintenance guidance document to facilitate maintenance verification and TMDL crediting.
4. Use existing grant funds to target maintenance enforcement by priority and in coordination with local jurisdiction load reduction plans.
5. Include submittal of a BMP Maintenance Plan as a standard condition of approval for all permitted projects.
6. Update water quality policies and ordinances as needed through the Regional Plan adaptive management process.

Background

2012 Regional Plan

Water Quality Policies WQ-3.11 and 3.12 state that all properties and new development, rehabilitation, and redevelopment projects shall maintain BMPs to preserve function and help prevent pollution discharges.

The Regional Plan Introduction outlines the TRPA four-year adaptive management process to update the plan based on implementation, thresholds, and new scientific information. TRPA evaluates Regional Plan Implementation annually through assessment of Regional Plan Performance Measures. TRPA evaluates environmental thresholds every four years to coincide with the Regional Plan Update cycle.

TRPA Code of Ordinances

TRPA Code Section 60.4.9 requires BMP maintenance to ensure their continued effectiveness.

Local Area Plans

Area Plan MOUs under development address BMP maintenance indirectly through a shared approach to BMP enforcement. MOU language states TRPA will enforce installation and maintenance of BMPs associated with permits issued by TRPA and for BMP retrofits not associated with a TMDL load reduction plan, and local jurisdictions will enforce BMPs associated with permits issued by them and for properties identified in their load reduction plan.

TMDL and Load Reduction Plans

Local jurisdictions must prepare load reduction plans that outline their approach to meeting TMDL load reduction requirements. Some plans are complete while others are in progress.⁵ Priorities focus on the most feasible and cost effective approach to reduce pollutants from urban runoff, which often focus in the highest loading areas. Some local jurisdictions include parcel specific BMPs as part of their load

⁵ Final Load Reduction Plans for Nevada jurisdictions are expected to be complete by August 2014 – Email communication from Kris Klein at Washoe County, May 29, 2014.

reduction strategy, while others rely on area-wide treatments that involve public-private partnerships.⁶ To obtain TMDL credit, local jurisdictions must verify maintenance for water quality projects and private property BMPs listed in their load reduction plans.

Options and Analysis

While it is expected that local jurisdictions should receive TMDL credit for private parcel BMPs, research indicates that parcel BMP function is variable and that performance declines if not inspected and maintained regularly.⁷ With approximately 43,000 parcels in the Lake Tahoe Region, monitoring separate O&M systems is difficult due to limited public resources. In initiating BMP maintenance enforcement, TRPA encounters many property owners without records of the type of BMPs installed or knowledge of how to maintain them. TRPA secured grant funds to continue targeted maintenance enforcement and administer the Lake Friendly Business Program to incentivize BMP maintenance on commercial properties, which is shown to be a high pollutant loading land use. While the Crediting Program includes verification tools and processes for larger water quality treatment projects and roadway conditions, no such protocol exists for parcel BMPs. Additionally, TRPA received feedback from users that maintenance templates provided in the BMP Handbook prove to be cumbersome. Existing grant funds secured from California and Nevada support the development of a simple, workable verification protocol for parcel BMPs to validate that the credit award is warranted, while providing a consistent streamlined process for property owners and local jurisdictions with limited resources.

Given that area-wide treatments facilitate more efficient and effective long term BMPs, priority should be given to these public-private partnerships.

Recommendations

1. Continue current BMP maintenance strategies with available funding to conduct targeted maintenance enforcement and administer the Lake Friendly Business Program that incentivizes BMP maintenance on commercial properties.
2. Refer this BMP maintenance topic to the EIP Parcel Specific Working Group to review staff recommendations and identify any additional opportunities as part of developing final recommendations.

The EIP Parcel Specific Working Group is made up of partner agency and local jurisdiction staff implementing and enforcing stormwater management programs to meet TRPA and TMDL requirements. Due to the large number of topics to address and the technical nature of this topic with respect to TMDL implementation, TRPA staff recommends referring this topic to the EIP Parcel Specific Working Group to review staff recommendations and identify any additional opportunities as part of developing final recommendations by August 20, 2014. Four members of the BMP Compliance Working Group serve on the EIP Parcel Specific Working Group and can communicate between the groups.

3. Use existing grants funds to coordinate with the EIP Parcel Specific BMP Working Group on a maintenance guidance document to facilitate verification of maintenance for TMDL crediting.

⁶ Washoe County intends to rely on private parcel BMPs to meet TMDL load reductions and CSLT relies on area-wide treatment.

⁷ TMDL synthesis of findings and program adjustment recommendations memo 2010-2013

Update the Inspection, Maintenance and Monitoring Chapter of TRPA's BMP Handbook with verification protocols to align with the Lake Clarity Crediting Program.⁸

4. Use existing grant funds to target maintenance enforcement by priority and in coordination with local jurisdiction load reduction plans.
5. Include submittal of a BMP Maintenance Plan as a standard condition of approval for all permitted projects. TRPA requires a BMP Maintenance Plan for all permitted BMP Retrofit projects prior to issuance of a BMP Certificate. These plans provide documentation that facilitates long term maintenance and they should be provided for all projects.
6. Update water quality policies and ordinances as needed through the Regional Plan adaptive management process. Regular updates to the BMP Handbook help ensure information reflects current best practices, including requiring pretreatment for certain infiltration systems to facilitate maintenance.

⁸ TRPA BMP handbook, Chapter 6 – Inspection, Maintenance and Monitoring:
http://www.tahoebmp.org/Documents/BMPHandbook/Ch6_InspectionMaintenanceandMonitoring.pdf
TRPA Stormwater Management Program Website – BMP Inspection, Maintenance and Monitoring:
<http://www.tahoebmp.org/Maintenance.aspx>