

BMPs are most commonly monitored by analysis of water quality samples and photographic documentation.

Start the *BMP Monitoring Plan* with a site-description that includes uses and conditions on site. Determine what will be monitored and what standards will be used to evaluate the data collected. If monitoring water quality, use the standards outlined in the TRPA Code for comparison. If performing photographic monitoring for a BMP such as revegetation, compare to a reference site or use other success criteria such as percent vegetative cover. Refer to the Revegetation Plan guidance in Chapter 5, Soil and Vegetation Management for more detail.

Next, identify the sampling locations and proposed methods and provide rationale for each. Examples include collecting grab samples at the outlet of a cartridge filtration system which discharges directly to Lake Tahoe, or photographic monitoring of a slope which requires successful revegetation to prevent sediment discharge onto an adjacent road. Water quality monitoring and sampling should follow the protocols and guidelines outlined by the Lake Tahoe Interagency Monitoring Program. Larger sites may need to provide photos of sampling locations and have them denoted on a site plan, as specified in permit conditions.

Determine sampling frequency based on establishment of a data set large enough to capture a variety of conditions including summer and winter storms and first flush events. Photographic monitoring of revegetation generally occurs at the beginning and end of each growing season, though winter monitoring may be included to document protection of sensitive areas from snow removal.

Monitoring plans include observations at the time of data collection that assist in the analysis of BMP effectiveness. These observations include intensity of use, weather patterns, the interval between storm events, point in the hydrograph and relative intensity of the storm. This additional information will help property owners and regulators determine if BMPs are performing as designed and may help explain any violations of standards.

Monitoring plans should identify corrective measures to resolve any violations of BMP standards should they occur and be designed to work in conjunction with the BMP Inspection and Maintenance Log to identify actions that will improve BMP performance. A *BMP Monitoring Plan* template is available at the end of this chapter.

Data analysis is documented in the *BMP Monitoring Report* and submitted to TRPA. It is essential to clearly define when this report will be submitted to TRPA and who will be responsible for providing it. A TRPA Monitoring Report template is provided at the end of this chapter.

## 6.4 PROJECTS GREATER THAN 5 ACRES

Jurisdictions within the Lake Tahoe Region must reduce their pollutant loading to meet targets identified in the Lake Tahoe Total Daily Maximum Load (TMDL). The Lake Tahoe TMDL specifies the maximum amount of fine sediment, nitrogen, and phosphorus that can be discharged to the Lake and still restore Lake Tahoe's clarity.



*Vactor equipment removes sediment and other debris out of a drop inlet, preventing re-suspension of materials into the storm drain during the next storm event.*

As part of the Lake Tahoe TMDL effort, jurisdictions in partnership with regulatory and funding agencies implement regional water quality improvement projects that treat and infiltrate runoff from the public right of way. Operations and maintenance of municipal water quality infrastructure is very complex and each jurisdiction develops its own operations and maintenance plan. Effectively implementing these plans is essential to maintaining the long term effectiveness of regional BMPs, and to achieving Lake Tahoe TMDL pollutant load reduction targets.

The Lake Tahoe TMDL program includes several tools for the local jurisdictions to assess, quantify, and track pollution reduction targets. The Best Management Practices Rapid Assessment Methodology (BMP RAM) is a tool for gauging and tracking the relative condition of municipal water quality treatment BMPs. The BMP RAM quantifies the BMP performance condition and informs the user of the relative urgency for maintenance.

Inspection protocols, maintenance actions, and monitoring requirements associated with BMPs in Chapter 4, BMP Toolkit follow the BMP RAM protocols as closely as possible for treatment BMPs to establish consistency between the private and public sectors. This BMP Handbook does not duplicate the BMP RAM. However, when inspecting a treatment BMP, a landowner or manager may use both this handbook and the BMP RAM manual where applicable.