

## 4.5 TEMPORARY BMPs FOR CONSTRUCTION

Construction and grading activities are a common source of fine sediment, dust, and other pollutants into Lake Tahoe, streams and the atmosphere, and can damage vegetation and compact soils. TRPA and other regulatory agencies require temporary construction BMPs to protect the health and vitality of Lake Tahoe and its inhabitants. Temporary BMPs include physical structures and construction management practices that minimize water and air pollution when properly implemented. Examples include protecting vegetation, salvaging topsoil, controlling dust, setting and following a construction plan and schedule that coordinates temporary BMPs with land disturbing activities, and educating workers on inspecting and maintaining on-site temporary BMPs.

Temporary and permanent BMPs work together as part of a functioning stormwater management system for the short and long-term, respectively, on a given property. The goal of temporary BMPs is to minimize soil erosion and contain stormwater on site for infiltration and/or treatment, or slow release for more pollutant-laden stormwater. Temporary BMPs are set in place before any ground disturbing activities start, and they are continually inspected and maintained until permanent BMPs are installed and functioning. At the end of construction, temporary BMPs are removed. Accumulated sediment captured behind temporary BMPs must be moved to areas away from water flow paths and stabilized, or to facilities off site for proper disposal.

A Temporary BMP Plan will generally be required as part of a construction permit. The detail required for a Temporary BMP Plan and the type of BMP chosen for a project will depend on factors including the following: amount of disturbance, topography of the site, and proximity and connectivity to sensitive areas including Lake Tahoe, shorezones, streams, and Stream Environment Zones (SEZs).

Temporary BMPs requirements will also vary greatly depending on the scale of the project. A residential property or project smaller than 1 acre will have different stormwater management needs than a commercial or industrial site of moderate size. Jurisdictional scale projects will require additional or higher intensity monitoring and inspection per permit conditions and requirements. A project that disturbs an area larger than 1 acre will require the development of a full Storm Water Pollution Prevention Plan (SWPPP) for submittal to the local state water quality agency. For SWPPP requirements in California, contact the Lahontan Regional Water Quality Control Board. In Nevada, contact the Nevada Division of Environmental Protection.

Prior to the start of construction, all projects require a pre-grading inspection to determine the adequacy of the BMPs on site. At this time and at any time during construction, temporary BMPs may be inspected by the TRPA. If BMPs and management practices are found to be not functioning or insufficient, changes to the Temporary BMP plan will be required.

Weather is an important consideration for construction activities and temporary BMPs. To minimize environmental impact to a site, the grading season is open from May 1 to October 15. Winterization is required to stabilize the site before winter if work is not completed. When inclement weather is anticipated, temporary BMPs must be protected and enforced to prevent overtaxing the structures in place.

Grading is not allowed when the site is covered with snow, or when soils are saturated, muddy, or unstable to prevent soil damage and erosion.

## SITE PREPARATION AND PRACTICES

- **Required BMP Maintenance, Communication, and Education:** Construction sites are busy places that often have many different people on site doing different jobs. Ultimately, it is the property owner's responsibility to make sure that the temporary construction BMPs are properly implemented and maintained on their property; however there have been many cases where contractors have been held legally responsible for discharges from construction sites due to failure to properly implement and maintain temporary BMPs. Additionally, TRPA or other regulatory agencies may issue correction notices or cease and desist orders for projects without proper temporary BMPs, causing project delays. It is important that construction site managers educate their employees and sub-contractors about the temporary construction BMP plan and do routine maintenance checks for all BMPs. At a minimum, BMPs should be inspected daily to ensure that they are in place and functional.
- **Protect the Site from Unnecessary Disturbance:** TRPA regulations require that disturbance for residential building sites are limited to 12 feet beyond the building footprint and the area between the building footprint and the road. Protecting existing trees and vegetation will buffer construction impacts and help reduce the amount of time and money needed for site restoration once construction is complete. Temporary BMPs which may be employed to protect a site include boundary/vegetation fencing, controlled ingress/egress points, and designated staging and parking areas.
- **Control the Amount of Water Running onto the Site:** Preventing water from entering the disturbed area helps to minimize the amount of water which may become polluted. Temporary BMPs such as clean water diversions and properly installed dewatering devices protect sites from becoming flooded should a precipitation event occur. A construction plan schedule, a component of a Temporary BMP Plan, should take into account seasonal weather patterns and plan for land disturbing activities when precipitation events are least likely to occur. Temporary BMPs must be enforced for impending storms, as most BMP failures occur during these heavy precipitation events.
- **Provide Source Control:** Properly storing construction materials, stockpiles (e.g. topsoil), and other hazardous materials, prevents the release of these materials into the air or waterways. Construction materials, concrete washouts and stockpiles should be contained and/or covered to protect them from rain and wind erosion. Areas which have been disturbed by construction should be stabilized with vegetation, mulch, or other erosion control products as soon as grading in the area is complete. Areas with heavy foot or vehicle traffic should be stabilized with paving or rock.