



TOWN OF TRUCKEE COMMUNITY DEVELOPMENT DEPARTMENT BUILDING AND SAFETY DIVISION

Erosion Prevention Planning and Design for Truckee Building Construction

To help protect water quality and reduce storm water runoff, the Town of Truckee requires an erosion prevention plan be included as part of the submitted construction plan documents. The plan must be site specific and be prepared by a certified or licensed professional. The plan must show temporary and permanent Best Management Practices (BMPs) or erosion prevention methods, infiltration or detention methods, and must include timelines within which erosion prevention measures will be made. Permanent BMPs include planned revegetation, slope stabilization and drainage improvements. Temporary BMPs include barriers to limit ground disturbance and erosion. Both should be incorporated into the design and construction of the project.

The Town discourages the use of “drip line trenches.” This method of infiltration has been used in the Tahoe basin to accomplish infiltration of newly created impervious cover. It disperses water adjacent to foundations. This can lead to problems including differential settlement and water intrusion into and under buildings. **The adopted California Building Code (CBC) REQUIRES that runoff is directed away from buildings and foundations.** To avoid foundation problems and water accumulation under buildings, surface water must be carried away from foundations.

The Town of Truckee encourages the use of Low Impact Development (LID) methods to prevent erosion both during the construction project and for the long term. LID is a storm water management and land development strategy that emphasizes conservation and use of on-site natural features integrated with engineered, small scale hydrologic controls to more closely mimic natural hydrologic functions. It involves dispersing runoff water into vegetated areas for infiltration. The type of hydrologic controls should be designed for the soil and subsurface conditions at the site.

The BMP plan should not concentrate runoff. Roof and driveway runoff should be dispersed to infiltration systems and landscaped areas. Vegetation can be used to infiltrate runoff. The general principles of LID include:

1. Conservation: Conserve natural vegetation and soil.
2. Site Design: Design site to minimize total impervious area.

3. Direct runoff into or across vegetated areas to filter runoff and encourage groundwater recharge.
4. Use integrated management practices to reduce runoff from impervious surfaces and retain pre-development time of concentration.

The additional storm water runoff created by construction of impervious areas such as driveways and roofs must be retained or detained on site. Common methods of retention and detention include drywells, infiltration trenches, bioretention gardens, porous pavement, grassed swales, infiltration basins, gravel, mulch, and water spreading. Infiltration should be accomplished through an integrated treatment system to retain and infiltrate storm water runoff.

Total impervious area includes the total area of hard surfaces such as roofs, roads, parking lots, sidewalks that prevent infiltration and results in high levels of runoff. Directly connected impervious areas are impervious surfaces from which runoff directly enters the storm drain system or nearby streams and rivers. Disconnected impervious areas are impervious areas whose runoff is diverted to landscaping or other means of retention, such that runoff is reduced to that which would occur if the area were not paved.

Erosion is prevented in two ways, by limiting the extent and duration of disturbance. Showing barriers to limit the extent of disturbance on the plans and installing them in the field will reduce ground disturbance. Final grading the site and installing permanent BMPs as soon as possible will also minimize erosion potential. There is no need to wait for final inspection to install permanent BMPs.

Helpful websites include:

<http://www.lowimpactdevelopment.org/index.html>

<http://www.epa.gov/nps/lid/>