

CHAPTER 4: BMP TOOLKIT

4.1 HYDROLOGIC SOURCE CONTROL

The term hydrologic source control is used in this Handbook to refer to Best Management Practices (BMPs) that limit or control the amount of stormwater runoff generated from a developed site by enhancing on-site infiltration and storage. Hydrologic source control BMPs are intended to mitigate for the loss of vegetated cover and other natural storage areas during development. Reducing the amount of runoff generated by a developed site is one of the most effective BMPs for removing nutrients and fine sediments from runoff. These BMPs also tend to be the most cost effective BMP for removing these pollutants when compared to stormwater treatment BMPs and in some installations also provide the added benefits of flood control and reducing impacts to receiving streams.

The primary reduction comes from the direct relationship of runoff volume to pollutant loading (Pollutant Load = Runoff Volume x Pollutant Concentration). This reduction is accomplished through the installation of infiltration BMPs which direct stormwater into the ground. Infiltration BMPs for parcels in the Lake Tahoe Region are generally designed to accommodate the volume of runoff generated by on-site impervious surfaces during a 20-yr/1-hr storm (about 1 inch in 1 hour). Capturing this design storm removes the “first flush” of pollutants and reduces the volume of stormwater that enters Lake Tahoe and its tributaries. Sites that have high pollutant loading, such as commercial or industrial sites or sites with ground or surface waters will require pretreatment BMPs prior to infiltration.

These BMPs apply across all project scales and range in complexity from infiltration trenches under eaves on a residential home, to large-scale subsurface infiltration systems installed below pavement in a commercial parking lot, to infiltration basins for jurisdictional public works projects.