

Dry-weather flow contribution of metals, nutrients, and solids from natural catchments

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ABSTRACT

Dry-weather flow can be a substantial source of pollutants, particularly in urbanized areas such as southern California. To effectively evaluate and manage watershed-based pollutants, it is essential to understand the contribution of constituents from both developed and natural areas. Such information can be used by managers to set appropriate regulatory targets and to better evaluate severity of anthropogenic effects. This study quantified levels of suspended solids (TSS), metals, and nutrients from nineteen representative natural (undeveloped) streams in ten watersheds in southern California. Dry-weather concentrations and fluxes were typically one to two orders of magnitude lower than those from developed catchments. Constituent concentrations varied based on the catchment characteristics, with geologic type being the dominant factor that influenced variability among constituent levels. Concentration and flux values were independent of latitude, elevation, and catchment size suggesting that results from this study can be extrapolated to provide regional estimates of background water quality.

Full Text

ftp://ftp.sccwrp.org/pub/download/DOCUMENTS/AnnualReports/2007AnnualReport/AR07_031_044.pdf