

## MANAGEMENT MEASURE 5 NEW DEVELOPMENT RUNOFF TREATMENT

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### 5.1 Management Measure

By design or performance (a) reduce the postdevelopment loadings of total suspended solids (TSS) so that the average annual TSS loadings<sup>a</sup> are no greater than the predevelopment loadings, or (b) reduce the average annual TSS loadings by a minimum of 80 percent of the influent concentration of TSS<sup>b</sup>.

Maintain the postdevelopment average volume and peak runoff rates at levels that are similar to predevelopment<sup>c</sup> levels or, through planning and/or design, control offsite discharges of runoff to prevent erosive impacts to downstream channels or shorelines.

Maintain discharge temperatures in runoff at levels similar to predevelopment levels or at levels that will protect aquatic communities from the thermal impacts of runoff.

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<sup>a</sup> In general, calculations of average annual TSS loadings will be based on TSS loadings from all storms below or equal to a predetermined maximum storm size. The most commonly used upper threshold that states use to calculate annual average TSS loadings is the 2-year, 24-hour storm. However, some states have recently reevaluated the benefits of controlling the 2-year versus the 1-year, 24-hour storm and, as a result, have adopted standards that require the control of all storms less than or equal to the 1-year, 24-hour storm.

EPA interprets predevelopment conditions to mean those conditions that exist prior to the current land use. In situations where the previous land use has resulted in unacceptable erosion and significant sediment movement offsite, a baseline reference condition can be used (e.g., the typical TSS loading rates from forested sites or meadows in the area). Average annual TSS loading calculations also should be based on the TSS discharge concentrations that occur after the site has been permanently stabilized.

<sup>b</sup> It is anticipated that the total TSS reductions will be calculated based on all reductions achieved through a system of structural and nonstructural management practices. The intent of this guidance is to promote the implementation of runoff management programs that protect receiving waters from increases of suspended solids that may, on an individual or cumulative basis, threaten or impair surface waters. Management practices and systems of practices should be selected based on achievement of water quality standards throughout the receiving watershed. TSS loading reduction goals therefore should be determined by assessing the capacity of the receiving water body to assimilate TSS from all contributing sources. EPA acknowledges that, in some jurisdictions, reducing 80 percent of the influent TSS concentration is not reasonable due to the presence of significant concentrations of colloidal particles. EPA also understands that treatment of these particles in many cases is not necessary to protect receiving waters and meet state or local water quality standards. In such cases, design or performance requirements should protect receiving waters from impairment from TSS loadings above the ambient TSS in receiving waters that are not due to anthropogenic sources.

<sup>c</sup> As with the TSS element of the measure, term *predevelopment* refers to runoff rates and volumes that exist on-site immediately before the planned land disturbance and development activities occur. Predevelopment is not intended to be interpreted as that period before any human-induced land disturbance activity has occurred. Watershed managers need to determine an appropriate reference or management condition as an objective to achieve. Also, for the purposes of this element of the management measure, the term *similar* is defined as “resembling though not completely identical.”