

Table 7.3.3.1: Sediment and Habitat Targets for the Lagunitas Creek and its Tributaries

Sediment Condition Targets
Streambed Mobility (τ^*): $0.03 < \tau^* \leq 0.06$; this target applies to gravel-bedded channel reaches where the adjacent valley flat is a floodplain.
Watershed-wide median depth of redd scour (D_s) ≤ 12 cm
Habitat Condition Targets
Large Woody Debris (LWD) Loading ≥ 300 m ³ /ha in Redwood Channels ^c and ≥ 100 m ³ /ha in Hardwood Channels
<p>Explanatory notes:</p> <p>The numeric target for reach-average value of streambed mobility at bankfull stage, or Tau-Star (τ^*), is greater than 0.03 and less than or equal to 0.06, corresponding to a partially-to-fully mobile streambed. This is the natural range of mobility in most gravel-bedded channels. The target applies only to gravel-bedded channel reaches where the adjacent valley flat is a floodplain and where: a) the streambed slope is between 0.001 and 0.03, and b) actual or potential spawning habitat is provided for anadromous salmonid species. As defined by renowned geomorphologists Thomas Dunne and Luna B. Leopold: "The floodplain is the flat area adjoining a river channel constructed by the river in the present climate and overflowed at times of high discharge. It is inundated on the average once every one or two years."</p> <p>The watershed-wide median value for depth of scour (D_s) at actual or potential spawning sites for coho salmon and/or steelhead shall be ≤ 12 cm below the level of the overlying streambed substrate. This target applies for discharges \leq the 5-year recurrence interval event (annual maximum series). Channel reaches that provide actual or potential spawning habitat are as defined above. Potential spawning sites within those reaches can be identified based on the following characteristics: 1) median particle size diameter (D_{50}) in the surface layer of the streambed is between 16 and 64 mm; 2) surface area of the gravel deposit is ≥ 1.0 square meter; and 3) location at a riffle head, pool tail, pool margin, and/or a gravel deposit associated with a flow obstruction (e.g., woody debris, boulders, banks, etc.).</p> <p>Redwood channels are defined as those where the adjacent valley floor and/or hillslopes are vegetated primarily by coast redwood forest. Hardwood channels are defined as those where the adjacent valley flat is vegetated by a hardwood forest (typically some combination of willow species, white alder, California bay laurel, bigleaf maple, tan oak, and/or Oregon ash). The large woody debris loading targets apply to channel reaches that provide actual or potential spawning habitat for anadromous salmonids as defined above.</p>