

Table ES1. Summary of effects of instream sediment removal, and implications for salmonid habitat. [See Table 3 in Chapter 4.]

Element of Instream Sediment Removal	Physical Effect	Possible Consequence for Salmonid Habitat
Removal of sand and gravel from a location or from a limited reach.	Propogates stream degradation both upstream and downstream from removal site.	Loss or reduction in quality of pool and riffle habitats.
	Scour of upstream riffles.	Lower success of spawning redds.
	Reduced pool areas.	Loss of spawning and rearing habitat.
	Bed surface armoring.	Lower quality of spawning and rearing habitat; changes to invertebrate community.
	Scour or burial of armor layer.	
	Surface caking or pore clogging.	
Removal of sand and gravel from a bar.	Loss of sand and gravel from neighboring bars.	Possible loss of riffle and pool habitats.
	Wider, more uniform channel section, less lateral variation in depth, reduced prominence of the pool-riffle sequence.	More difficult adult and juvenile migration. Reduced trophic food production. Lower quality of rearing habitat.
	Surface caking or pore clogging.	
Removal of sediment in excess of the input.	Channel degradation.	Deeper, narrower channel. Dewatered back channels and wetlands.
	Lower groundwater table.	Possible reduction of summer low flows; possible reduction of water recharge to off-channel habitat.
	Complex channels regress to single thread channels.	Less habitat complexity.
	Armoring of channel bed, may lead to erosion of banks and bars.	Less spawning area. Reduced water quality. Prompt new bank protection works – reducing habitat.
	Or, scour or burial of armor layer.	
Reduced sediment supply to downstream.	Induced meandering of stream to reduce gradient. Erosion on alternate banks downstream.	Reduced riparian vegetation. Increased local sedimentation. Prompt new bank protection works. Propagate river management and habitat losses downstream.
	Armoring of bed, or scour of armor layer.	
Removal of vegetation and woody debris from bar and bank.	Reduce shade.	Increase water temperature in inland, narrow rivers.
	Decrease channel structure from wood.	Possibly reduce cover; reduce number and depth of pools; reduce area of spawning gravel; limit channel stability.
	Decrease drop-in food, nutrient inputs.	Decrease stream productivity.