gradient, bed and bank material varying in size from gravel to 3 m in diameter, dense dogwood and alder on the banks, and upland slopes attached to the channel without a floodplain. The overall fine sediment erosion potential from the banks is considered negligible due to the lack of fines available (Hotspots 6 to 1, Table 4-10).

The canyon section spans 1.3 km from the trail crossing up to a second trail crossing near the mouth of the upper valley. The steep gradient channel is dominated by bedrock and boulder step-pools. Banks consist of cobble/boulder deposits, durable granite and diorite bedrock, and decomposing granite bedrock. Alders and willows grow on narrow flood plains in the pool areas. Upland slopes are steep and rocky. A vegetation-free talus pile dominates the left upland. Sparse vegetation has taken hold on the decomposing granite knob on the right upland. Bank contributions of fine sediment are negligible with the exception of an eroding streambank in a till/outwash deposit at the head of the section (Hotspots 1 to 4, Table 4-10). Upland contributions may be more significant due to the steep upland slope and lack of a floodplain buffer.

Summary

Being depositional, the delta reach is very likely a low contributor of fine sediment due to the typically low banks and dense vegetation. The highest quantities of fluvially generated sediment in the watershed likely come from the numerous high escarpments along the lower end of the incised till reach which show up as a series of spikes between river kms 1 to 3 (Figure 4-38 C). The upper half of the till reach is rated as a moderate producer of fine sediment due to the reduced height of the escarpments and greater frequency of coarse material and vegetation protecting the banks Figure 4-35). The aggrading reach is collecting coarse particles (gravel and larger), while passing particles of sand and finer sizes. The fine particles are delivered by channel widening and fluvial scour generated by large woody debris which is reflected in the rise in side-slope erosion from km 4.2 to 6.2 (Figure 4-38 C). Overall, the aggrading reach appears to be a moderate producer of fine material from streambanks. Fine sediment production appears to drop to a low level heading upstream into the canyon reach. Banks are either extremely bouldery or composed of bedrock with essentially no areas of fine material exposed. However steep upland slopes are connected to the channel and may be a relatively high contributor of fine material. General Creek, as a whole, tends to become more stable moving upstream (Figure 4-38 B) due to the higher proportion of cobbles and boulders making up the bank material and the lower bank heights.

Geomorphic interpretations made during the stream walk and evaluated during RGAs are further summarized spatially with maps depicting the:

(1) combined-, channel-, and side-slope erosion indexes (Figure 4-36), and

(2) the occurrence of bank failures combined with fine-grained content of the streambanks (Figure 4-37).

In addition, results are shown graphically, displaying these data relative to distance above the stream mouth (Figure 4-38).

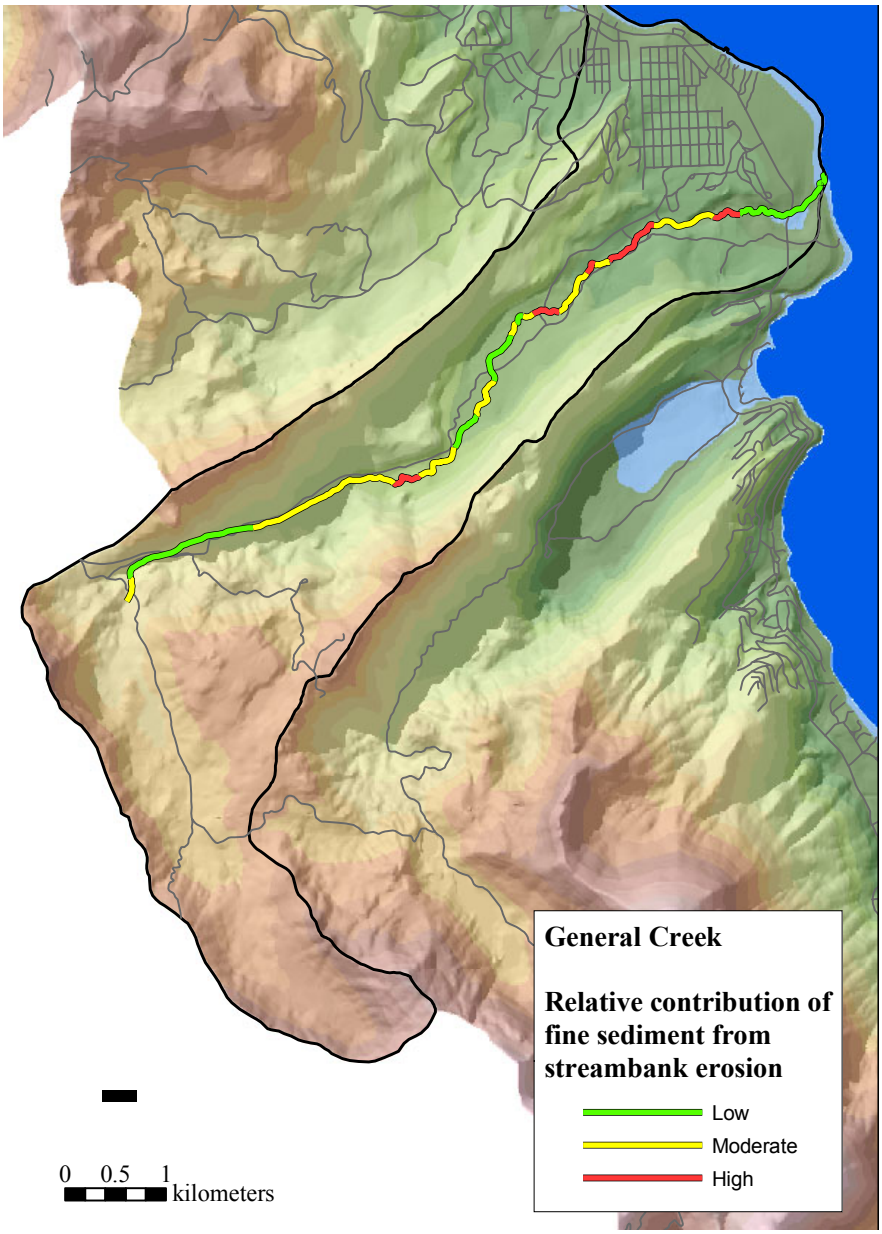

Figure 4-35. Map of the relative contribution of fine sediment from streambank erosion for General Creek.