

Figure 4-48. Results of RGAs conducted along Logan House Creek showing the longitudinal distribution of the combined, channel and side-slope erosion indexes, and the percent of reaches undergoing streambank failures.

4.6.7 Edgewood Creek

Edgewood Creek was not evaluated by stream walks but assessed by conducting RGAs at ten locations historically surveyed by Hill *et al.* (1990), plus two additional locations just above and below Highway 50 near Stateline, Nevada. Locations assessed are on the main channel as well as on tributaries. The watershed can be divided into two reaches: the alluvial plain and the highland. The division is based on the change of channel gradient from about 0.03 m/m along the alluvial plain to about 0.05 m/m along the highland.

In the alluvial plain reach, the lowest 3 km of channel, the outwash plain between the mouth and Highway 50 has been developed as a golf course. The channel has been relocated to suit the golf course layout, and several ponds pool the stream. The banks are stabilized through mesh encased gravel logs buried along the bank-toes. Grass, established in the gravel logs and adjacent soil, provides a protective root mass that prevents scour behind the gravel logs (Hotspot 1, Table 4-13). Above Highway 50 the channel is stable. The bank heights are less than 0.5 m and the banks have a dense, willow coverage (Hotspot 2, Table 4-13). A dam on the channel creates a small reservoir 300 m above Highway 50. The third assessed location (Hotspot 3, Table 4-13) had greater visible bank erosion than the downstream sites (Figure 4-49 D). However low bank heights and coarse bank material, limit the size of the bank exposed to fluvial erosion and the amount of fine material available for transport. Therefore the overall fine sediment erosion rating for this reach is low.

The highland reach was assessed at one location along the main stem of the north fork (Hotspot 7, Table 4-13), at four locations on tributaries to the north fork (Hotspots 6, 10-12, Table 4-13), and at three locations (Hotspots 5, 8, 9, Table 4-13) along the main stem of the south fork (Figure 4-51). The percent of reach failing is typically low at all assessed locations with a greater number of higher ratings occurring on the northern fork. However, bank heights of less than 0.7 m, and few other noted erosion spots indicate that overall channel contributions of fine sediment are low along the north fork. Channel conditions along the south fork appear more stable (Figure 4-50 channel stability index) to those of the north fork. Bank heights are less than one meter, and there are few obvious areas of erosion. The overall potential for fine-sediment supplied by channel erosion appears low for the South Fork.

Table 4-13. Summary of reconnaissance-level evaluation of areas of streambank instability and delivery of fine-grained sediments along Edgewood Creek.

Erosion hotspot	Hotspot location (UTM)		Source of fine sediment	Relative erosion magnitude
	Easting	Northing		
1	764449	4317360	None	low
2	765408	4317292	LWD induced scour	low
3	766549	4317041	0.7 m high failing banks	low
4	767358	4317353	0.5 m high eroding banks	low
5	768221	4317707		low

6	768513	4318230	Erosion on both banks	moderate
7	769064	4318842	Fines eroding from both banks	low
8	769227	4317449		low
9	769444	4317516		low
10	769594	4319113	Both banks eroding	moderate
11	769594	4319113	Left bank mass wasting	moderate
12	769594	4319113		low

Summary

Edgewood Creek, based on limited data, overall appears to have a low quantity of fine material readily available for erosion through fluvial action. The channel is stable along its lowest 5 km (Figure 4-49 A) and, although the channel becomes less stable near the headwaters, the fact that the channel is physically small limits the amount of sediment that can be liberated during a high flow event (Figures 4-49 A-D). Overall fine-sediment availability from both the alluvial plain and highland is deemed low.

Geomorphic evaluations conducted during RGAs are further summarized spatially with maps depicting the:

- (1) combined-, channel-, and side-slope erosion indexes (Figure 4-50), and
- (2) the occurrence of bank failures combined with fine-grained content of the streambanks (Figure 4-51).

In addition, results are shown graphically, displaying these data relative to distance above the stream mouth (Figure 4-49).

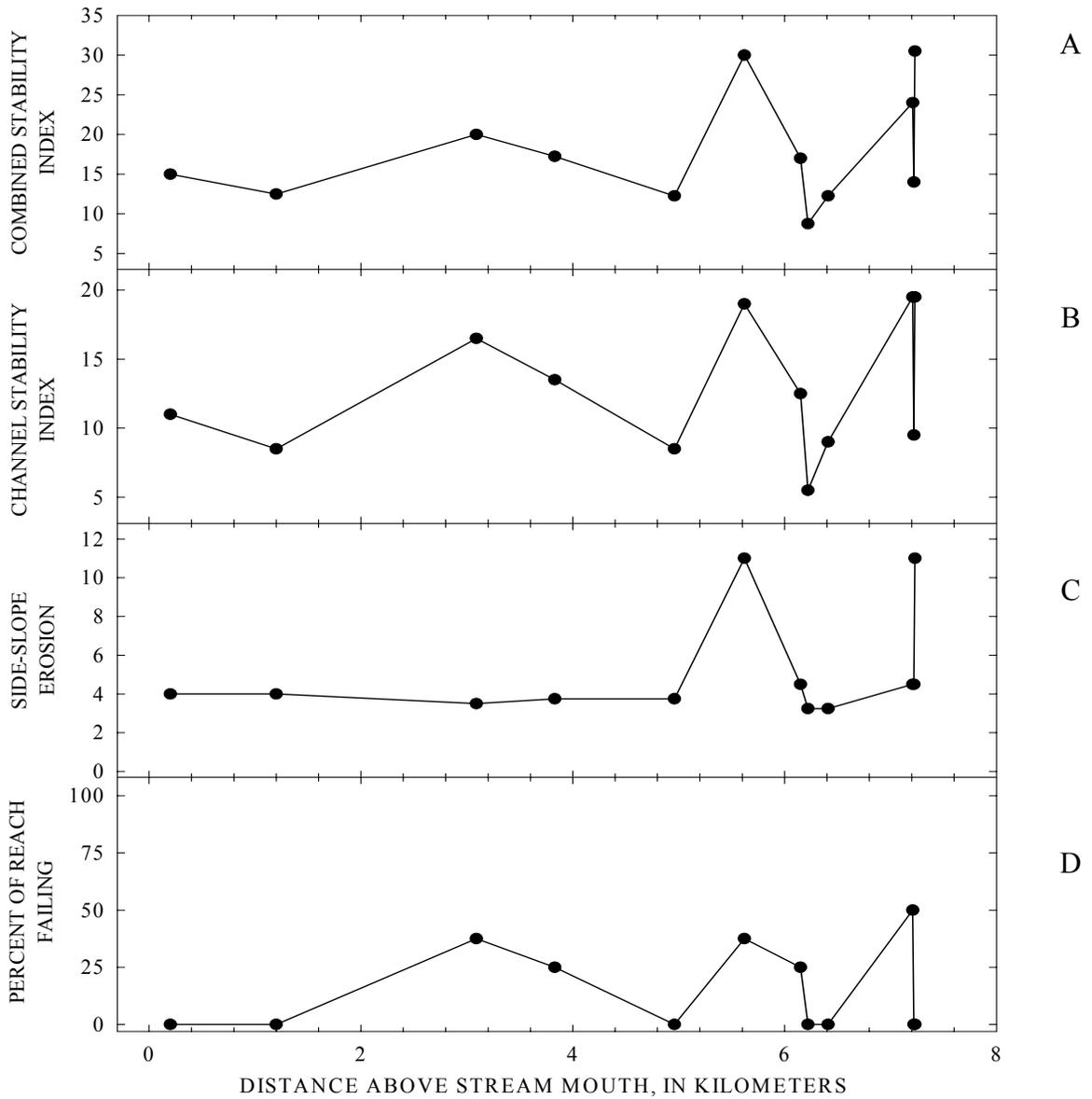


Figure 4-49. Results of RGAs conducted along Edgewood Creek showing the longitudinal distribution of the combined, channel and side-slope erosion indexes, and the percent of reaches undergoing streambank failures.