BF 73201 Hwy 40 Over Luscar Ck
Hydrotechnical Summary

Channel Capacity :

S = 0.009
B = 5 m, h = 1.2 m, T_h = 12 m (LIDAR)
Use n = 0.05

At Bank Height : Y = 1.2 m, V = 1.7 m/s, Q = 17 cms
At Channel Capacity : Y = 1.8 m, V = 2.4 m/s, Q = 40 cms

Historical Highwater Data :

HW was observed in 1969 (ice to stringer in April and drift in August), 1970 (approach grade washed out), 1980 (local flooding), and 1986 (Y ~ 1.5m). A 1995 BIM report notes a HWM with Y ~ 2m. The 1982 design was based on Q ~ 25cms.

There are no gauges on this stream. Gauges in the area suggest large events in 1969, and 1980. The storm database suggests large rainfall events in June 1980 (~160mm), Aug. 1969 (130mm), and about 110mm in June 1958, July 1986 and July 1987.

Basin Runoff Potential :

d ~ 70 – 80mm (Q ~ 1 – 1.1cms/km^2)
DA = 49km^2
Q_p ~ 50cms

Conclusion :

Channel capacity governs and is consistent with historic observations.

Recommended parameters : Y = 1.8m , V = 2.4 m/s, Q = 40 cms.