BF 77791 Hwy 587 Over Kneehills Ck
Hydrotechnical Summary

Channel Capacity :

S = 0.0012
B = 5 m, h = 1.2 m, T_h = 8 m
Use n = 0.045

At Bank Height : Y = 1.2 m, V = 0.7 m/s, Q = 5 cms
At Channel Capacity : Y = 1.8 m, V = 1.0 m/s, Q = 12 cms

Historical Highwater Data :

A 1973 report notes a HWM with Y = 1.5m. A d/s scour hole was observed in 2003.

WSC gauges 05CE016 (DA = 640km^2, 1967 – 1969) reports Q = 40cms in April 1969. WSC gauge 05CE002 (DA = 2430km^2, 1921 – 1936, 1956 – 1999) reports high flows in April of 1969, 1971, and 1997. The largest storm in the storm database is June 1970 with about 105mm of rainfall.

Basin Runoff Potential :

d = 35mm, T_p = 40hrs, q = 0.25 cms/km^2.
Gross DA = 46 km^2
Q_p = 12 cms.

Conclusion :

The channel capacity estimate is consistent with historic observations and matches the basin runoff potential.

Recommended parameters : Y = 1.8 m, V = 1.0 m/s, Q = 12 cms.