BF 07959 Hwy 54 Over Dickson Ck
Hydrotechnical Summary

Channel Capacity :

S = 0.003
B = 2.5 m, h = 1.4 m, T_h = 5 m
Use n = 0.05

At Bank Height : Y = 1.4 m, V = 1.0 m/s, Q = 5 cms
At Channel Capacity : Y = 2.1 m, V = 1.5 m/s, Q = 13 cms

Historical Highwater Data :

HW was noted in July 1999 with water u/s to about 0.7m below the road, some drift at the inlet, and a high velocity jet from the outlet (modelling suggests Q = 8cms). The 1951 report notes a HWM with Y = 2.1m and estimates Q = 7cms. A 1976 inspection noted a recent HWM with water above the u/s crown and estimates Q = 8cms.

There are no WSC gauges on this stream. Gauges in the area suggest HW events in June 1972, July 1982, July 1986, June 1990, July 1990, and July 1999. The largest events in the storm database for this area are June 1970 with 130mm and 115mm, and 105mm in June 1928 and August 1938.

Basin Runoff Potential :

d = 40 mm, T_p = 20 hrs, q = 0.55 cms/km^2.
Gross DA = 88 km^2.
Q_p = 48 cms.

Conclusion :

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

Recommended parameters : Y = 2.1 m, V = 1.5 m/s, Q = 13 cms.