BF 78152 Hwy 63 Over Hangingstone River
Hydrotechnical Summary

Channel Capacity :

S = 0.004
B = 15 m, h = 2.2 m, T_h = 25 m
Use AT equation

At Bank Height : Y = 2.2 m, V = 2.2 m/s, Q = 100 cms
At Channel Capacity : Y = 3.2 m, V = 3.0 m/s, Q = 200 cms

Historical Highwater Data :

HW was observed in 1933 (Ice Jam, water over road), 1951 (Y ~ 3m), and 1958 (Ice Jam, over road, Y ~ 3.5m). The 1976 design was based on Y ~ 5m (Q ~ 200cms).

WSC Gauge 07CD004 (DA ~ 960km^2, 1965 – Now) reports Q ~ 165cms (July 1970, August 1976, gauged at Q ~ 130cms, stage rise ~ 2m), and Q ~ 115cms (July 1988, August 1995).

Basin Runoff Potential :

d = 40 mm, T_p = 20 hrs, q ~ 0.55 cms/km^2.
Gross DA = 960 km^2.
Q_p = 530 cms.

Conclusion :

The channel capacity estimate is consistent with historic observations. Recommended parameters :

Y = 3.2 m, V = 3.0 m/s, Q = 200 cms.
EL 250.0 m (18798-C)