BF 72830 Local Road Over Buchanan Ck
Hydrotechnical Summary

Channel Capacity :

S = 0.0012
B = 6 m, h = 2 m, T_h = 12 m
Use n = 0.04

At Bank Height : Y = 2.0 m, V = 1.1 m/s, Q = 20 cms
At Channel Capacity : Y = 3.0 m, V = 1.5 m/s, Q = 45 cms

Historical Highwater Data :

HW was noted in May 1964 (to deck, Y = 2.7 – 3m, estimated Q = 52cms). A 1954 report notes a HWM with Y = 1.2m. A 1963 report notes a HWM with Y = 2.7m (over the road), and estimates Q = 29cms. A 1963 report notes a HWM with Y = 2.3m. A 1996 BIM report notes a HWM with Y = 2m.

Gauge 07HC002 (DA = 232km^2, 1985 – Now) reports Q = 47cms in June 1990 and a stage rise of 2.2m (gauged at Q = 11cms). The largest storm in the storm database is August 1982 with about 120mm of rainfall.

Basin Runoff Potential :

d = 40 mm, T_p = 20 hrs, q = 0.55 cms/km^2.
Gross DA = 202 km^2.
Q_p = 110 cms.

Conclusion :

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

Recommended parameters : Y = 3.0 m, V = 1.5 m/s, Q = 45 cms.