BF 78332 Local Road Over Logan River
Hydrotechnical Summary

Channel Capacity :

S = 0.0013
B = 7 m, h = 2.0 m, T_h = 15 m
Use n = 0.04

At Bank Height : Y = 2.0 m, V = 1.2 m/s, Q = 25 cms
At Channel Capacity : Y = 3.0 m, V = 1.7 m/s, Q = 60 cms

Historical Highwater Data :

Bridge reports from 1974 and 1976 note HWM with Y = 2.1 – 2.7m.

WSC gauge 07CA012 (DA = 425km2, 1900 – Now) reports Q = 77cms (stage rise = 1.8m) in May 1985 and Q = 68cms in July 1986. However, the largest measurement is at Q = 15cms (stage rise = 1.2m). The largest storms in the storm database for this area are 110mm of rainfall in June 1970 and August 1980.

Basin Runoff Potential :

d = 40 mm, T_p = 20 hrs, q = 0.55 cms/km^2.
Gross DA = 390 km^2.
Q_p = 215 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 = 1.7 m/s, Q = 60 cms.