BF 09752 Local Road Over Loyalist Creek
Hydrotechnical Summary

Channel Capacity :

S = 0.0015
B = 3 m, h = 1.5 m, T_h = 8 m
Use n = 0.05

At Bank Height : Y = 1.5 m, V = 0.7 m/s, Q = 6 cms
At Channel Capacity : Y = 2.3 m, V = 1.1 m/s, Q = 15 cms

Historical Highwater Data :

A HWM of Y~1.2m was estimated in 2001 at downstream BF09265. A HWM of Y~1.3m was estimated in 2004 at downstream BF07204.

There is a WSC gauge downstream of this site at the Highway 886 crossing, (BF07204), operating briefly from 1984-1995. The largest flow recorded was 2.5cms in 1985. Gauges in the area suggest large runoff events in April 1956, June 1973, and March 1997. The largest storms in the storm database are 140mm of rainfall in June 1973 and 100mm in July 1962.

Basin Runoff Potential :

d = 35mm, T_p = 40hrs, q = 0.24 cms/km^2 (snowmelt runoff)
Gross DA = 230 km^2.
Q_p = 55 cms.

A small reservoir is located in the upper portion of this basin encompassing a DA~35 km^2 which may slightly reduce the flow potential.

Conclusion :

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

Recommended parameters : Y = 2.3 m, V = 1.1 m/s, Q = 15 cms.