BF 00627 Local Road Over Blindman River
Hydrotechnical Summary

Channel Capacity :

S = 0.0006
B = 25 m, h = 4.3 m, T_h = 45 m
Use AT equation

At Bank Height : Y = 4.3 m, V = 1.6 m/s, Q = 240 cms
At Channel Capacity : Y = 5.3 m, V = 1.9 m/s, Q = 370 cms

Historical Highwater Data :

HW has been recorded at this site in July of 1982 (Y = 3.6m, south fill damage), 1986 (Y = 2.7m, no signs of overbank flow in photos) and 1990 (Y = 5.5m u/s, Y = 4.6m d/s, over the road). There is also a reference to an ice related event in 1920 and bridge reports in 1956 and 1958 suggest water and ice had been up to the bottom of the previous structure which had a similar deck height (Y = 4.5m).

WSC gauges 05CC008 (DA = 352km^2, 1965 - Now) reports Q = 330cms (possibly less due to extrapolation) in July 1990 and 05CC001 (DA = 1790km^2, 1916 – 1922, 1962 - Now) reports Q = 395cms in July 1990. Other large runoff events are April 1974 (d/s gauge), July 1981, 1982 and 1986. Flow was measured at 05CC001 at 345cms on July 5, 1990 with a stage rise of 3.5m and V = 2.5m/s. The storm database shows the largest storm for this basin to be about 110m of rainfall in July 1990, although the eye was centered over the productive northern portion of the basin.

Basin Runoff Potential :

d = 60 mm, T_p = 20 hrs, q = 0.83 cms/km^2.
Gross DA = 1630 km^2.
Q_p = 1350 cms.

Conclusion :

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

Recommended parameters : Y = 5.3 m, V = 1.9 m/s, Q = 370 cms.