BF 00710 Hwy 53 Over Blindman River
Hydrotechnical Summary

Channel Capacity :

S = 0.0006
B = 20 m, h = 4.5m, T_h = 38 m
Use AT equation

At Bank Height : Y = 4.5 m, V = 1.6 m/s, Q = 215 cms
At Channel Capacity : Y = 5.5 m, V = 2.0 m/s, Q = 330 cms

Historical Highwater Data :

HW has been recorded at this site in July 1982 (EL. 90' on dwg. 3276-P, Y = 5.8m) and July 1990 (EL. 91', Y = 6.1m) with water over the highway both times. HW in July 1986 was similar to the July 1982 event, and a slightly smaller event was noticed in July 2000. An ice jam occurred at the previous bridge in 1948 with Y = 5.5m, and ice damage was also noted in 1927.

WSC gauge 05CC008 (DA = 352km^2, 1965 – Now) reports Q = 330cms in July 1990, with other large events in July of 1981, 1982, and 1986 (190 – 230cms). The rating curve shows a stage rise of just under 5m for the July 1990 event, with Q based on extrapolation (highest gauged event Q = 114cms, Y = 2.5m) and may be in the 260 – 300cms range. Gauge 05CC001 (DA = 1790km^2, 1916 – 1922, 1962 - Now) reports Q = 395cms in July 1990. The largest storm in the database for this area is July 1990 with 120mm of rainfall (centred over upper basin), followed by July 1982 and 1986 with about 110mm.

Basin Runoff Potential :

d = 60 mm, T_p = 20 hrs, q = 0.83 cms/km^2.
Gross DA = 835 km^2.
Q_p = 695 cms.

Conclusion :

The channel capacity estimate is slightly below historic observations and is within the basin runoff potential.

Recommended parameters : Y = 6.0 m, V = 2.1 m/s, Q = 390 cms.