BF 01150 Local Road Over Raven River
Hydrotechnical Summary

Channel Capacity :

S = 0.0005
B = 12 m, h = 4.0 m, T_h = 22 m
Use AT equation

At Bank Height : Y = 4.0 m, V = 1.4 m/s, Q = 95 cms
At Channel Capacity : Y = 5.0 m, V = 1.7 m/s, Q = 150 cms

Historical Highwater Data :

HW was noted at this site in June 1972 (Y = 2.3m) and July 1982 (Y = 1.5 m). A cross section from 1906 notes a HWM with Y = 4.3m. HW lifted the caps off the piles at the bridge in 1915. The 1961 report and design notes from 1974 refer to a HWM with Y = 4.9m. HW has been observed at other sites on this stream in 1915, 1954, 1972, 1982, and 1999.

Gauge 05CB004 (DA = 647km^2, 1972 – Now) is located u/s, and reports the highest flows in June 1972 (Q = 35cms) and July 1999 (Q = 40cms). The highest gauged flow is Q = 36cms with a stage rise of just under 3.0m. The largest storms in the database for this area are June 1970 with about 115mm of rainfall, and June 1928 with about 105mm.

Basin Runoff Potential :

d = 50mm, T_p = 20hrs, q = 0.7 cms/km^2.
Gross DA = 775 km^2.
Q_p = 540 cms.

Conclusion :

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

Recommended parameters : Y = 5.0 m, V = 1.7 m/s, Q = 150 cms.