BF 02394 Local Road Over Raven River
Hydrotechnical Summary

Channel Capacity :

S = 0.0035
B = 8 m, h = 2.0 m, T_h = 12 m
Use n = 0.04

At Bank Height : Y = 2.0 m, V = 1.7 m/s, Q = 35 cms
At Channel Capacity : Y = 3.0 m, V = 2.4 m/s, Q = 75 cms

Historical Highwater Data :

The 1959 report for this site notes a HWM with Y = 2.4m. HW was noted at BF08192 u/s in June 1972 with Y = 2.5m and in July 1999 with Y = 2.7m. HW was noted at BF07145 d/s in June 1972 (Y = 2.1m), July 1982 (Y = 1.5m) and July 1999 (Y = 1.7m). 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 d/s, and reports the highest flows in June 1972 and July 1999. 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 = 200 km^2.
Q_p = 140 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 = 2.4 m/s, Q = 75 cms.