BF 01219 Hwy 2 Over Redwater River
Hydrotechnical Summary

Channel Capacity :

S = 0.0006
B = 8 m, h = 2.2 m, T = 15 m
Use n = 0.04

At Bank Height : Y = 2.2 m, V = 0.8 m/s, Q = 20 cms
At Channel Capacity : Y = 3.2 m, V = 1.1 m/s, Q = 45 cms

Historical Highwater Data :

HW has been observed in June 1907, June 1914, April 1971 and April 1974. Most past designs and noted HWM are in the 2.5 to 3.0m range, and significant overbank storage activation has been observed.

WSC Gauge 05EC007 (DA = 469 km^2, 1985 – 1995) reports Q = 27cms in April 1985. Gauge 05EC005 (DA = 1550km^2, 1978 – Now) and 05EC003 (DA = 1490km^2, 1973 – 1978) report Q = 115cms in April 1974 and 65cms in April 1997. The largest storm for this area in the database is July 1953 with about 150mm of rainfall.

Basin Runoff Potential :

d = 40mm, T_p = 20hrs, q = 0.55 cms/km^2.
Gross DA = 236km^2.
Q_p = 130cms.

Conclusion :

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

Recommended parameters : Y = 3.2 m, V = 1.1 m/s, Q = 45 cms.