BF 72520 Hwy 18 Over Redwater River Tributary
Hydrotechnical Summary

Channel Capacity :

S = 0.0019
B = 3 m, h = 1.2 m, T_h = 6 m
Use n = 0.05

At Bank Height : Y = 1.2 m, V = 0.7 m/s, Q = 4 cms
At Channel Capacity : Y = 1.8 m, V = 1.1 m/s, Q = 10 cms

Historical Highwater Data :

HW was noted in April 1971 (over road, Yd/s ~ 1.8m, ~ 1.2m drop across structure, estimated Q = 6 – 10cms assuming no blockage). A 1957 report notes a HWM with Y = 1.8m and estimates Q = 7cms.

There are no WSC gauges on this stream. Gauges in the area suggest HW events in April 1971, 1974 and 1997. There are no storms in the database that exceed 100mm of rainfall for this area.

Basin Runoff Potential :

d = 40mm, T_p = 20hrs, q = 0.55 cms/km^2.
Gross DA = 81 km^2.
Q_p = 45 cms.

Conclusion :

The channel capacity estimate appears to be consistent with historic data and is within the basin runoff potential.

Recommended parameters : Y = 1.8 m, V = 1.1 m/s, Q = 10 cms.