BF 02145 Hwy 651 Over Redwater River Tributary
Hydrotechnical Summary

Channel Capacity :

S = 0.004
B = 2 m, h = 1.5 m, T_h = 5 m
Use n = 0.055

At Bank Height : Y = 1.5 m, V = 1.0 m/s, Q = 5 cms
At Channel Capacity : Y = 2.3 m, V = 1.6 m/s, Q = 14 cms

Historical Highwater Data :

A 1959 report notes a HWM with Y = 2m. Notes in 1969 and 1974 refer to washouts.

There are no gauges on this stream. Gauges in the area suggest HW events in April 1974, 1985, 1987, and 1997. The largest storm in the storm database is July 1953 with about 150mm of rainfall.

Basin Runoff Potential :

d = 40 mm, T_p = 20 hrs, q = 0.55 cms/km^2.
Gross DA = 28 km^2.
Q_p = 15 cms.

Conclusion :

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

Recommended parameters : Y = 2.3 m, V = 1.6 m/s, Q = 14 cms.