BF 08341 Local Road Over Spirit River Tributary
Hydrotechnical Summary

Channel Capacity :

S = 0.003
B = 4 m, h = 2.5 m, T_h = 10 m
Use n = 0.05

At Bank Height : Y = 2.5 m, V = 1.4 m/s, Q = 25 cms
At Channel Capacity : Y = 3.5 m, V = 2.0 m/s, Q = 55 cms

Historical Highwater Data :

Drift damage occurred at this site during HW in 1934. A 1957 report refers to a HWM with water over the grade (Y > 1.8m). A 1998 BIM report refers to a HWM with Y = 2.0m based on drift deposited u/s.

There are no WSC gauges on this stream. Gauges in the area suggest HW events in June 1968 and June 1990. The largest storms for this area in the storm database are about 110 mm of rainfall in July 1935, August 1982, and June 1990.

Basin Runoff Potential :

d = 60 mm, T_p = 20 hrs, q = 0.83 cms/km^2.
Gross DA = 110 km^2.
Q_p = 90 cms.

Conclusion :

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

Recommended parameters : Y = 3.5 m, V = 2.0 m/s, Q = 55 cms.