BF 73864 Hwy 49 Over Spirit River Tributary
Hydrotechnical Summary

Channel Capacity :

S = 0.0025
B = 3 m, h = 1.2 m, T_h = 6 m (improved channel)
Use n = 0.05

At Bank Height : Y = 1.2 m, V = 0.9 m/s, Q = 4 cms
At Channel Capacity : Y = 1.8 m, V = 1.2 m/s, Q = 10 cms

Historical Highwater Data :

The channel has been modified for drainage and designed for Q = 4cms. A 1965 report notes a HWM with Y = 1.5m and estimates Q = 6cms. A 2001 BIM inspection notes a HWM with Y = 1.5m.

There are no WSC Gauges on this stream. Gauges in the area suggest HW events in April 1974, June 1990, and April 1997. The largest storms in the storm database are about 110mm of rainfall in July 1935, August 1982, and June 1990.

Basin Runoff Potential :

d = 60 mm, T_p = 20 hrs, q = 0.85 cms/km^2.
Gross DA = 8 km^2.
Q_p = 7 cms.

Conclusion :

Basin runoff potential governs and is consistent with historic observations.

Recommended parameters : Y = 1.5 m, V = 1.1 m/s, Q = 7 cms.