BF 71003 Local Road Over North Sask. River Tributary
Hydrotechnical Summary

Channel Capacity :

S = 0.002
B = 3 m, h = 1.6 m, T_h = 7 m
Use n = 0.05

At Bank Height : Y = 1.6 m, V = 0.9 m/s, Q = 7 cms
At Channel Capacity : Y = 2.4 m, V = 1.3 m/s, Q = 18 cms

Historical Highwater Data :

HW was noted in 1952 with the bridge floated away (Y = 2.1 – 2.4m). A 1953 report notes a HWM with Y = 1.5 – 1.8m and estimates Q = 7cms. A 1959 report notes a HWM with Y = 2.1 – 2.4m (possible backwater from North Saskatchewan River confluence), and estimates Q = 10 – 15cms. A 1978 report notes a HWM with Y = 1.5m and estimates Q = 12cms. A 1998 BIM report notes a HWM with Y = 2.5m (no description).

There are no WSC gauges on this stream. Gauges in the area suggest HW events in June 1965, April 1974, July 1982, July 1986, and July 1990. The storm database notes storms in July 1982 (165mm), June 1944 (150mm), and June 1965 and August 1969 (100mm).

Basin Runoff Potential :

d = 60 mm, T_p = 20 hrs, q = 0.83 cms/km^2.
Gross DA = 32 km^2.
Q_p = 26 cms.

Conclusion :

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

Recommended parameters : Y = 2.4 m, V = 1.3 m/s, Q = 18 cms.