BF 08701 Local Road Over Pembina River Tributary
Hydrotechnical Summary

Channel Capacity :

S = 0.0016
B = 2.5 m, h = 1.2 m, T_h = 5 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 = 1.0 m/s, Q = 8 cms

Historical Highwater Data :

A 1956 report notes a HWM with Y = 1.2m. Reports from 1961 and 1978 estimate Q = 8 – 10cms.

There are no gauges on this stream. Gauges in the area suggest large runoff events in June 1965, April 1974, and July 1986. The largest storms in the storm database are 135mm of rainfall in June 1965, and 120mm in August 1957 and August 1969.

Basin Runoff Potential :

d = 50mm, T_p = 20hrs, q = 0.7 cms/km^2.
Gross DA = 28 km^2.
Q_p = 20 cms.

Conclusion :

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

Recommended parameters : Y = 1.8 m, V = 1.0 m/s, Q = 8 cms.