BF 76310 Highway 620 over Tributary to Pembina River
Hydrotechnical Summary

Channel Capacity :

S = 0.009
B = 2 m, h = 1.5 m, T_h = 5 m
Use n = 0.055

At Bank Height : Y = 1.5 m, V = 1.5 m/s, Q = 8 cms
At Channel Capacity : Y = 2.3 m, V = 2.4 m/s, Q = 20 cms

Historical Highwater Data :

HW was noted in 2000 with Y = 2.0m. The 1965 design flow was Q = 9cms. In 1986, water was reported to be over the road (approx. 6m embankment height).

There are no WSC gauges on this stream. Gauges in the area suggest HW events in July 1986, June 1980, and June 1972. The largestest storms in the storm database for this area are 145mm of rainfall in July 1982, 118mm in August 1989, and 112mm in July 1986.

Basin Runoff Potential :

d = 60mm, T_p = 20hrs, q = 0.83 cms/km^2.
Gross DA = 28 km^2.
Q_p = 23 cms.

A few small ponds are located along the length of this stream which may result in minimal storage.

Conclusion :

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

Recommended parameters : Y = 2.3 m, V = 2.4 m/s, Q = 21 cms.