BF 74365 Hwy 22 Over Pembina River Tributary
Hydrotechnical Summary

Channel Capacity :

S = 0.01
B = 1.5 m, h = 1.0 m, T_h = 3 m
Use n = 0.055

At Bank Height : Y = 1.0 m, V = 1.2 m/s, Q = 2 cms
At Channel Capacity : Y = 1.5 m, V = 1.9 m/s, Q = 6 cms

Historical Highwater Data :

HW was observed to ½ full at the 1.5m pipe in July 1986. A HWM was noted during an inspection in 2000 at 0.15m above the crown of the 1.5m pipe.

There are no gauges on this stream. Gauges in the area suggest large runoff events in June 1965, April 1974, July 1986, July 1990, and July 2001. The largest storms in the storm database are 155mm of rainfall in June 1944, 140mm in July 1982, 130mm in June 1965 and August 1969.

Basin Runoff Potential :

d = 55 mm, T_p = 20 hrs, q = 0.75 cms/km^2.
Gross DA = 8 km^2.
Q_p = 6 cms.

Conclusion :

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

Recommended parameters : Y = 1.5 m, V = 1.9 m/s, Q = 6 cms.