# BF 09241 Hwy 764 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 :**

Reports from 1954 and 1955 note HWM with Y = 1.5m and estimate Q = 5 – 6cms.

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 = 25 $km^2$.
$Q_p$ = 18 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.