BF 74232 Hwy 770 Over North Saskatchewan River
Hydrotechnical Summary

Channel Capacity :

S = 0.0006
B = 160 m, h = 8 m, T_h = 210 m
Use AT Equation

At Bank Height : Y = 8 m, V = 2.7 m/s, Q = 4000 cms
At Channel Capacity : Y = 9 m, V = 2.9 m/s, Q = 5000 cms

Historical Highwater Data :

HW was observed in 1915 (15' above low land near ferry, estimated Y ~ 10.5m on DD401), 1952 (~ 2.5m lower than 1915, Y ~ 8m), and 1986 (Y ~ 9m).

WSC Gauge 05DE001 (DA = 21800km^2, 1915 – 1922) reports Q ~ 6500cms in 1915 (actual gauging data unknown). Gauge 05DE006 (DA = 20500km^2, 1969 – 1977) reports Q ~ 3600cms in 1972. Gauge 05DF001 (DA = 28000 km^2, 1911 - Now) reports Q ~ 5800cms (1915), 4500cms (1986), 3700cms (1952), 3600cms (1944), 3400cms (1954), and 3200cms (1972).

Basin Runoff Potential :

Gross DA ~ 24000 km^2, beyond range of method.

Conclusion :

Historic observations govern (1915 event). Recommended parameters :

Y = 10.0 m, V = 3.1 m/s, Q = 6000 cms.
HW EL 663.0m (Dwg. 3892)