BF 77177 Hwy 11 Over North Saskatchewan River
Hydrotechnical Summary

Channel Capacity :

S = 0.0021
B = 110 m, h = 5 m, T_h = 170 m
Use AT Equation

At Bank Height : Y = 5 m, V = 3.0 m/s, Q = 2000 cms
At Channel Capacity : Y = 6 m, V = 3.5 m/s, Q = 3000 cms

Historical Highwater Data :

HW has been observed at this site in 1972 (Y ~ 4.5m), 1981 (Y ~ 3.0m), 1982 (Y ~ 2.1m), and 1986 (Y ~ 3.0m). An estimate of the 1915 HW at BF09847 (Hwy 11A, just u/s) has Y ~ 6.5m.

WSC Gauge 05DC001 (DA = 11000km^2, 1913 – Now) reports a highest flow of 4100cms in June 1915 (highest gauging that year at Q = 300cms). Other significant runoff events were recorded in June 2005 (Q ~ 2400cms, gauged at Q = 2165cms, Y ~ 4.5m), June 1952 (Q ~ 2000cms), and June 1972 (Q ~ 2000cms).

Basin Runoff Potential :

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Gross DA = 11100 km^2(runoff potential not applicable)

Conclusion :

Historic observations (1915) govern. Recommended parameters:

Y = 6.5 m V = 3.7 m/s, Q = 3500 cms.
HW EL 952.0m (Dwg. 5709)