# BF 00756 Hwy 2 Over Oldman River
# Hydrotechnical Summary

**Channel Capacity** :

S = 0.0017
B = 100 m, h = 5 m, $T_h$ = 140 m
Use AT equation

At Bank Height : Y = 5 m, V = 2.9 m/s, Q = 1700 cms
At Channel Capacity : Y = 6 m, V = 3.3 m/s, Q = 2500 cms

**Historical Highwater Data :**

HW has been observed in 1902 (washout, Y ~ 4 - 5m), 1908 (washout), 1916 (ice jam, Y ~ 4.5m), 1923 (Y ~ 5m), 1953 (Y ~ 5m), 1963 (Y ~ 3.5m), 1975 (Y ~ 5m), 1994 (ice jam), 1995 (Y ~ 6m, erosion, AENV HW EL ~ 947.5m), and 2005(Y ~ 3.5m). The 1991 design was based on Y ~ 5.5m and Q ~ 2000cms. Estimated 1995 total peak inflow into dam was estimated to be Q ~ 3500cms (DA ~ 4400km$^2$), with peak outflow routed to Q ~ 2700cms.

Gauge 05AA024 (DA = 4400km$^2$, 1966 – Now, 1995 peak missing) reports Q ~ 1600cms in 1975 and Q ~ 1100cms in 2005. Gauge 05AB007 (DA = 5760km$^2$, 1910 – 1948) reports Q ~ 2500cms in 1923 and Q ~ 1150cms in 1942 and 1948.

**Basin Runoff Potential :**

Gross DA = 5770 km$^2$, runoff potential is not applicable

**Conclusion :**

Historic observations govern. Recommended parameters :

Y = 6.5 m, V = 3.5 m/s, Q = 3000 cms.
HW EL 948.0m (Dwg. 15112)