# BF 76034 Hwy 2 Over Athabasca River
# Hydrotechnical Summary

**Channel Capacity** :

S = 0.00035
B = 200 m, h = 8.5 m, $T_h$ = 280 m
Use AT equation

At Bank Height : Y = 8.5 m, V = 2.3 m/s, Q = 4500 cms
At Channel Capacity : Y = 9.5 m, V = 2.5 m/s, Q = 5500 cms

**Historical Highwater Data :**

HW was noted in 1986 and 1989. The 1964 design estimated Y ~ 8.5m for 1954 event (based on stage at gauge 07BE001).

WSC gauge 07AE001 (DA = 19600km$^2$, 1960 - Now) reports Q ~ 2250cms in June 1960 and July 1965, and Q ~ 1800 – 2000cms many times. Gauge 07AG004 (McLeod R u/s, DA = 9100km$^2$, 1968 – Now) reports Q ~ 2000cms in 1980 and 1986. WSC gauge 07BE001 (DA ~ 74600km$^2$, 1913-1931, 1938 – Now) reports Q ~ 5700cms in 1954, Q ~ 5000cms in 1944, Q ~ 4500cms in 1971, 1980, and 1986.

**Basin Runoff Potential :**

Gross DA = 51800km$^2$, exceeds range of application of runoff depth method.

**Conclusion :**

Historic observations govern. Recommended parameters :

Y = 9.5 m, V = 2.5 m/s, Q = 5500 cms.
HW EL 560.5m (3977-P)