BF 81129 Local Road Over Athabasca River
Hydrotechnical Summary

Channel Capacity :

S = 0.0003
B = 280 m, h = 7.5 m, T_h = 350 m
Use AT equation

At Bank Height : Y = 7.5 m, V = 2.0 m/s, Q = 4600 cms
At Channel Capacity : Y = 8.5 m, V = 2.2 m/s, Q = 5700 cms

Historical Highwater Data :

HW levels have been estimated at Y ~ 8.5m for 1954 (Q ~ 5800cms) and Y ~ 7.0m for 1986 (Q ~ 4500cms).

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 = 76500km^2, exceeds range of application of runoff depth method.

Conclusion :

Design parameters for this site are governed by historic observations.

Recommended parameters : Y = 8.5 m, V = 2.2 m/s, Q = 5700 cms.