BF 76163 Highway 88 over Boyer River
Hydrotechnical Summary

Channel Capacity :

S = 0.00045
B = 20 m, h = 5.0 m, T_h = 50 m
Use AT Equation

At Bank Height : Y = 5.0 m, V = 1.5 m/s, Q = 260 cms
At Channel Capacity : Y = 6.0 m, V = 1.8 m/s, Q = 400 cms

Historical Highwater Data :

A 1963 HWM of Y~4.7m is noted on file. Estimated extreme HW level of 857' (Y~5.8m) was noted for existing structure (DD429).

There is a WSC gauge upstream (~15km) of this site at Fort Vermilion. The highest recorded flows at this gauge, 07JF002 (1962 – present; DA =6660km^2), are 215 cms (Y~5.9m) in May 1974 and 115cms (Y~4.4m) in May 1963. The largest storms for this area in the storm database are about 120mm of rainfall in July 1998 and June 1991.

Basin Runoff Potential :

DA ~ 8575 km^2 , exceeds range of application of technique.

Conclusion :

The channel capacity estimate is consistent with historic observations.

Recommended parameters : Y = 6.0m V = 1.8m/s, Q = 400 cms.