BF 79473 Hwy 40 Over Cutbank River
Hydrotechnical Summary

Channel Capacity :

S = 0.0035
B = 40 m, h = 4 m, T_h = 70 m
Use AT equation

At Bank Height : Y = 4 m, V = 3.1 m/s, Q = 700 cms
At Channel Capacity : Y = 5 m, V = 3.8 m/s, Q = 1100 cms

Historical Highwater Data :

HW was observed in 1982 (drift, washout, Y ~ 6m – likely headloss), August 1987 (Y ~ 3m), June 1990 (Y ~ 5 – 5.5m), and June 1997 (Y ~ 3.5m). The 1983 design was based on Y ~ 8m (Q ~ 1900cms).

WSC Gauge 07GB001 (DA ~ 850km^2, 1970 – Now) reports Q ~ 800cms (July 1982, June 1972 – gauged near peak, stage rise ~ 4m) and Q ~ 550cms (June 1990).

Basin Runoff Potential :

Gross DA = 1370 km^2 (beyond range of technique)

Conclusion :

Historic observations govern. Recommended parameters :

Y = 5.5 m, V = 4.1 m/s, Q = 1300 cms.
EL 683.5 m (10532-P)