BF 07447 Hwy 539 Over Bow River
Hydrotechnical Summary

Channel Capacity:

S = 0.0006
B = 160 m, h = 7.0 m, T_h = 210 m
Use AT equation

At Bank Height: Y = 7.0 m, V = 2.4 m/s, Q = 3200 cms
At Channel Capacity: Y = 8.0 m, V = 2.7 m/s, Q = 4100 cms

Historical Highwater Data:

HW has been observed in 1928 (ice jam), 1947 (ice jam, Y ~ 6.5m), and 1969 (ice jam). The 2004 design was based on Y ~ 7.5m and Q ~ 4000cms. 2013 HWM (7 m below top of curb).

WSC Gauge 05BM004 (DA ~ 20300 km^2, 1910 – 1933, 1964 – Now)
1923, reported Q ~ 2180 cms, gauged near peak, Y ~ 5.5 m
1929, reported Q ~ 2540 cms
1932, reported Q ~ 2310 cms
2005, reported Q ~ 2040 cms
2013, reported Q ~ 3380 cms

Basin Runoff Potential:

Gross DA = 20175 km^2, runoff potential is not applicable

Conclusion:

Historic observations govern. Recommended parameters:

Y = 7.0 m, V = 2.4 m/s, Q = 3200 cms
EL 746.0m (22952-C)