BF 13370 Hwy 36 Over Bow River
Hydrotechnical Summary

Channel Capacity:

S = 0.0005
B = 160 m, h = 6 m, T_h = 250 m
Use AT equation

At Bank Height: Y = 6 m, V = 1.9 m/s, Q = 2400 cms
At Channel Capacity: Y = 7 m, V = 2.2 m/s, Q = 3300 cms

Historical Highwater Data:

HW was observed in 1923, 1948, 1952 (Y ~ 6m), 1958 (Y ~ 6m – Ice), 2013 HWM (2.5 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 = 21000 km^2, runoff potential is not applicable

Conclusion:

Historic observations govern. Recommended parameters:

Y = 7.0 m, V = 2.2 m/s, Q = 3300 cms
1958 HWM 732.5m (April 12, 1958 GOA memo)
2013 HWM 2.5 m below top of curb