BF 06754 Hwy 842 Over Bow River
Hydrotechnical Summary

Channel Capacity:

S = 0.0009
B = 130 m, h = 5.0 m, T_h = 160 m
Use AT equation

At Bank Height: Y = 5.0 m, V = 2.3 m/s, Q = 1700 cms
At Channel Capacity: Y = 6.0 m, V = 2.7 m/s, Q = 2400 cms

Historical Highwater Data:

HW was observed in 1928 (ice jam, washout), 1948 (ice jam, washout, Y ~ 7m), 1967 (Y ~ 5m), and 1995 (Y ~ 5.2m).

WSC Gauge 05BM002 (DA = 15700 km^2, 1956 – Now)
1963, 1967 and 1969, reported Q ~ 1200 cms
1995, reported Q ~ 1690 cms
2005, reported Q ~ 1980 cms
2013, reported Q ~ 3300 cms

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

Historic photos from Calgary show highest events in 1879, 1897, and 1902, with estimates of Q > 2000cms.

Basin Runoff Potential:

Gross DA = 17700 km^2, runoff potential is not applicable.

Conclusion:

Historic observations govern. Recommended parameters:

Y = 7.0 m, V = 2.9 m/s, Q = 3000 cms
EL 818.05m (M-6754-98-5)