BF 76609 Hwy 22 Over Bow River
Hydrotechnical Summary

Channel Capacity :

S = 0.0018
B = 70 m, h = 5 m, T_h = 140 m
Use AT equation

At Bank Height : Y = 5 m, V = 2.7 m/s, Q = 1400 cms
At Channel Capacity : Y = 6 m, V = 3.2 m/s, Q = 2100 cms

Historical Highwater Data :

HW has been noted in 1995 and high ice observed in 1991. The 1975 design was based on Y ~ 6m at Q = 2100cms, with 1958 high ice ~ 0.5m higher.

WSC Gauge 05BH004 (DA ~ 7860km^2, 1911 – Now) reports Q ~ 1500cms (1932), 1300cms (1929, gauged close to peak), and 1100cms (1915). Historic photos from Calgary show higher events in 1879, 1897, and 1902, with estimates of Q > 2000cms.

Basin Runoff Potential :

Gross DA = 7270 km^2, runoff potential is not applicable

Conclusion :

Historic observations govern. Recommended parameters :

Y = 6.0 m, V = 3.2 m/s, Q = 2100 cms
EL 1123.5m (5100-P)