# BF 01293 Hwy 547 Over Bow River
# Hydrotechnical Summary

**Channel Capacity**:

S = 0.0012
B = 110 m, h = 5.0 m, $T_h$ = 160 m
Use AT equation

At Bank Height: Y = 5.0 m, V = 2.5 m/s, Q = 1700 cms
At Channel Capacity: Y = 6.0 m, V = 2.9 m/s, Q = 2400 cms

**Historical Highwater Data:**

HW has been observed in 1902 (Y ~ 6m), 1967 (Y ~ 5m), and 2005 (Y ~ 5m). 2013 HWM (road overtopped beyond the east abutment).

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 = 16825 $km^2$, runoff potential is not applicable

**Conclusion:**

Historic observations govern. Recommended parameters:

Y = 7 m, V = 3.2 m/s, Q = 3000 cms
Approx. EL 856.2 m (based on flood photos in 2013)