# BF 08781 Hwy 672 Over Beaverlodge River
# Hydrotechnical Summary

**Channel Capacity** :

S = 0.0007
B = 12 m, h = 3.5 m, $T_h$ = 20 m
Use AT equation

At Bank Height : Y = 3.5 m, V = 1.5 m/s, Q = 85 cms
At Channel Capacity : Y = 4.5 m, V = 1.9 m/s, Q = 140 cms

**Historical Highwater Data :**

HW has been reported with Y = 4.0 – 4.5m in June 1960, April 1963 (ice jams), June 1964, and June 1990 (V = 1.7m/s), with water over the grade each time.

WSC Gauge 07GD002 (DA = 662km$^2$, 1983 – Now) located on Beavertail Ck u/s reports Q = 123cms in June 1990 (highest gauging at Q = 35cms). Gauge 07GD001 (DA = 1610km$^2$, 1968 – Now) located d/s reports Q = 123cms in June 1990 (gauged at Q = 117cms, V = 1.3m/s, T = 29m, Y = 4.8m > zero stage), with the next highest flows being Q = 104cms (April 1974), and Q = 85cms (April 1997). The largest storms for this area in the storm database are about 110mm of rainfall in June 1964 and 1990.

**Basin Runoff Potential :**

d = 65 mm, $T_p$ = 20 hrs, q = 0.9 cms/km$^2$.
Gross DA = 1200 km$^2$ .
$Q_p$ = 1080 cms.

**Conclusion :**

The channel capacity estimate is consistent with historic observations and is within the basin runoff potential.

Recommended parameters : Y = 4.5 m, V = 1.9 m/s, Q = 140 cms.