# BF 73731 Local Road Over Beaverlodge River
# Hydrotechnical Summary

**Channel Capacity** :

S = 0.002
B = 5 m, h = 1.4 m, $T_h$ = 9 m
Use n = 0.045

At Bank Height : Y = 1.4 m, V = 1.0 m/s, Q = 10 cms
At Channel Capacity : Y = 2.1 m, V = 1.4 m/s, Q = 23 cms

**Historical Highwater Data :**

Several reports in the 1960's refer to HWM close to the bridge deck (Y = 1.5 – 2.1m), with flow estimates in the 6 – 10cms range. A 1998 BIM report notes a HWM with Y = 1.8m.

WSC Gauge 07GD002 (DA = 662km$^2$, 1983 – Now) located on Beavertail Ck 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 = 130 km$^2$ .
$Q_p$ = 115 cms.

**Conclusion :**

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

Recommended parameters : Y = 2.1 m, V = 1.4 m/s, Q = 23 cms.