BF 09582 Local Road Over Beaverlodge River
Hydrotechnical Summary

Channel Capacity :

S = 0.0016
B = 15 m, h = 2.5 m, T_h = 25 m
Use AT equation

At Bank Height : Y = 2.5 m, V = 1.7 m/s, Q = 80 cms
At Channel Capacity : Y = 3.5 m, V = 2.2 m/s, Q = 160 cms

Historical Highwater Data :

HW was observed in April 1963 (Y = 3.6 – 3.8m, ice to bottom chord, over grade to south, ice jam), and June 1990 (Y = 2.0 - 2.5m prior to peak). A 1952 report notes a HWM with Y = 2.6m, and a 1956 report notes a HWM with Y = 2.8m.

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 = 1466 km^2 .
Q_p = 1320 cms.

Conclusion :

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

Recommended parameters : Y = 3.5 m, V = 2.2 m/s, Q = 160 cms.