BF 70677 Local Road Over Steeprock Ck
Hydrotechnical Summary

Channel Capacity :

S = 0.002
B = 10 m, h = 2.0 m, T_h = 16 m
Use AT equation

At Bank Height : Y = 2.0 m, V = 1.6 m/s, Q = 40 cms
At Channel Capacity : Y = 3.0 m, V = 2.2 m/s, Q = 95 cms

Historical Highwater Data :

HW was observed in June 1990 to about 1m below the deck (Y ~ 2.5m), with some erosion at the SW corner. A drift jam occurred at the bridge in 1972 and a 1998 BIM report notes a HWM with Y = 1.3m. A 2001 assessment was based on Q = 80cms and Y = 2.3m.

WSC Gauge 07GD002 (DA = 662km^2, 1983 – Now) located d/s on Beavertail Ck reports Q = 123cms in June 1990, (gauged at Q = 35cms), followed by Q = 50cms in April 1997. The largest storms for this area in the storm database is about 100mm of rainfall in June 1964 and 1990.

Basin Runoff Potential :

d = 70 mm, T_p = 20 hrs, q = 1 cms/km^2.
Gross DA = 305 km^2.
Q_p = 305 cms.

Conclusion :

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

Recommended parameters : Y = 3.0 m, V = 2.2 m/s, Q = 95 cms.