BF 13541 Hwy 671 Over Beavertail Ck
Hydrotechnical Summary

Channel Capacity :

S = 0.001
B = 7 m, h = 2.0 m, T_h = 15 m
Use n = 0.045

At Bank Height : Y = 2.0 m, V = 0.9 m/s, Q = 20 cms
At Channel Capacity : Y = 3.0 m, V = 1.3 m/s, Q = 45 cms

Historical Highwater Data :

HW was observed in June 1990 to 0.8m below bottom flange (Y ~ 2.5m) and over both approach grades, with V = 1.1m/s. A 1967 report notes a HWM 2' over the grade (Y = 3.0m) and a 1998 BIM report notes a HWM with Y = 3.0m.

WSC Gauge 07GD002 (DA = 662km^2, 1983 – Now) located d/s 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 = 280 km^2 .
Q_p = 280 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 = 1.3 m/s, Q = 45 cms.