BF 76528 Hwy 40 Over Muskeg River
Hydrotechnical Summary

Channel Capacity :

S = 0.0065
B = 25 m, h = 2 m, T_h = 45 m
Use AT equation

At Bank Height : Y = 2 m, V = 2.5 m/s, Q = 170 cms
At Channel Capacity : Y = 3 m, V = 3.5 m/s, Q = 400 cms

Historical Highwater Data :

HW was observed in June 1971 (Y ~ 2m), July 1982 (Y ~ 1.5 – 2m), August 1989 (Y ~ 1.5m), and July 1997 (Y ~ 3.5m u/s, drop at opening). The 1968 design was based on Y ~ 3m.

WSC Gauge 07GA002 (DA ~ 705 km^2, 1972 – Now) reports Q ~ 310 cms (July1997), Q ~ 290cms (June 1972), and Q ~ 200cms (June 1980, gauged at Q ~ 170cms, stage increase ~ 3m).

Basin Runoff Potential :

d = 70 mm, T_p = 20 hrs, q = 1.0 cms/km^2.
Gross DA = 730 km^2.
Q_p = 730 cms.

Conclusion :

The channel capacity estimate is consistent with historic observations. Recommended parameters :

Y = 3.0 m, V = 3.5 m/s, Q = 400 cms.
EL 1136.5 m (4991-P)