BF 77316 Highway 734 Over Brazeau River
Hydrotechnical Summary

Channel Capacity :

S = 0.0045
B = 30 m, h = 5 m, Th = 70 m
Use AT equation

At Bank Height : Y = 5 m, V = 3.8 m/s, Q = 950 cms
At Channel Capacity : Y = 6 m, V = 4.5 m/s, Q = 1400 cms

Historical Highwater Data :

A HWM was noted in July 1988 (Y~4.1m). The existing bridge (2002) was designed for Y~7m (Q~2000cms).

WSC gauge 05DD007 (DA~2600km^2, operating 1961-present) reports high flow events in June 1980 (Q~550cms), June 1972 (Q~350cms) and July 1990 (Q~350cms). Downstream WSC gauge 05DD005 (DA~5600 km^2, operating 1956-present) reports high flow events in 1986 (Q~1090cms), July 1966 (Q~575cms), and July 1982 (Q~530cms).

The storm on basin tool reports large events in July 1986 (150mm), August 1969 (130mm), June 1972 (105mm), and July 1966 (105mm).

Basin Runoff Potential :

d = 80mm, Tp = 20hrs, q = 1.11cms/km^2
Gross DA = 2600 km^2
Qp = 2900cms

Conclusion :

Historic highwater observations are within the channel capacity and basin runoff potential. Channel capacity values govern.

Recommended parameters :

Y = 6 m, V = 4.5 m/s, Q = 1400 cms