BF 70600 Local Road Over Plamondon Ck
Hydrotechnical Summary

Channel Capacity :

S = 0.002
B = 2 m, h = 1.4 m, T = 5 m
Use n = 0.05

At Bank Height : Y = 1.4 m, V = 0.8 m/s, Q = 4 cms
At Channel Capacity : Y = 2.1 m, V = 1.2 m/s, Q = 10 cms

Historical Highwater Data :

HW was noted in 1974 with Y = 1.5m d/s and estimated Q = 9cms. A 1966 report notes a HWM with water over the grade and Y = 1.8m d/s with an estimated Q = 13cms. The 1992 design was based on Y = 2.2m and Q = 11cms.

There are no WSC Gauges on this stream. Gauges in the area indicate HW events occurred in June 1920, and April 1971, 1974, and 1997. Gauge 07CA004 on Lac La Biche (1976 – Now) d/s shows the highest level in 1997, with 1996 and 1979 also being relatively high. There are no storms in the database that exceed 100mm of rainfall for this area.

Basin Runoff Potential :

d = 40 mm, T_p = 20 hrs, q = 0.55 cms/km^2.
Gross DA = 84 km^2.
Q_p = 46 cms.

Conclusion :

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

Recommended parameters : Y = 2.1 m, V = 1.2 m/s, Q = 10 cms.