BF 72111 Local Road Over Athabasca River Tributary
Hydrotechnical Summary

Channel Capacity :

S = 0.002
B = 2 m, h = 1.0 m, T_h = 4 m
Use n = 0.05

At Bank Height : Y = 1.0 m, V = 0.7 m/s, Q = 2 cms
At Channel Capacity : Y = 1.5 m, V = 1.0 m/s, Q = 5 cms

Historical Highwater Data :

HW was noted in April 1974 with washout of the culvert (capacity ~ 2cms). A 1994 BIM report notes a HWM with Y = 1.4m u/s of the pipe, and a 2002 assessment estimates Q = 8cms.

There are no WSC gauges on this stream. Gauges in the area suggest HW events in June 1970, July 1971, April 1974, July 1986, July 1988 and April 1997. The largest storms in the storm database are about 110mm in June 1970, and June 1971.

Basin Runoff Potential :

d = 40 mm, T_p = 20 hrs, q = 0.55 cms/km^2.
Gross DA = 46 km^2.
Q_p = 25 cms.

Conclusion :

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

Recommended parameters : Y = 1.5 m, V = 1.0 m/s, Q = 5 cms.