BF 76745 Local Road Over Athabasca River Tributary
Hydrotechnical Summary

Channel Capacity :

S = 0.008
B = 1.5 m, h = 1.0 m, T_h = 3 m
Use n = 0.05

At Bank Height : Y = 1.0 m, V = 1.2 m/s, Q = 3 cms
At Channel Capacity : Y = 1.5 m, V = 1.9 m/s, Q = 7 cms

Historical Highwater Data :

A 1967 report notes a HWM over the grade (Y = 1.2m) and estimates Q = 3cms.
A 2002 BIM report notes a HWM with Y = 1.5m.

There are no WSC gauges on this stream. Gauges in the area suggest HW in June 1920, July 1986, July 1988, and April 1997. The largest storms in the database for this area are in July 1931 with 130mm of rainfall and June 1970 with about 105mm.

Basin Runoff Potential :

d = 40mm, T_p = 20hrs, q = 0.55 cms/km^2.
Gross DA = 25 km^2.
Q_p = 14 cms.

Conclusion :

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

Recommended parameters : Y = 1.5 m, V = 1.9 m/s, Q = 7 cms.