BF 74749 Local Road Over Bad Heart River Tributary
Hydrotechnical Summary

Channel Capacity :

S = 0.013
B = 2 m, h = 1.2 m, T_h = 4 m
Use n = 0.055

At Bank Height : Y = 1.2 m, V = 1.6 m/s, Q = 6 cms
At Channel Capacity : Y = 1.8 m, V = 2.5 m/s, Q = 16 cms

Historical Highwater Data :

HW was noted in 1980 (3m above u/s crown, estimated Q = 12cms in 2001 assessment). A 1979 report estimates Q = 8cms. A 1995 BIM report notes a HWM with Y = 2.9m (likely ponding above u/s crown).

There are no WSC gauges on this stream. Gauges in the area suggest HW events in April 1974, June 1990, and April 1997. The storm database notes storms in June 1990 (150mm), August 1982 (130mm), and June 1965 (105mm).

Basin Runoff Potential :

d = 60mm, T_p = 20hrs, q = 0.83 cms/km^2.
Gross DA = 41 km^2.
Q_p = 34 cms.

Conclusion :

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

Recommended parameters : Y = 1.8 m, V = 2.5 m/s, Q = 15 cms.