BF 73947 Local Road Over Poplar Ck Tributary
Hydrotechnical Summary

Channel Capacity :

S = 0.006
B = 3 m, h = 2.0 m, T_h = 7 m
Use n = 0.055

At Bank Height : Y = 2.0 m, V = 1.6 m/s, Q = 15 cms
At Channel Capacity : Y = 3.0 m, V = 2.4 m/s, Q = 40 cms

Historical Highwater Data :

HW was noted in July 1986 (water and drift over the road, H ~ 13m, Q > 30cms if no blockage, large d/s scour hole), in 1952 (HWM with Y = 2.7 – 3.3m), and in April 1988 (BIM report notes Y = 4.0m u/s of culverts, Q ~ 10 – 15cms). A 2000 assessment report estimates Q = 14cms and the 2002 design was based on Q = 22cms and Y = 2.0m.

There are no WSC Gauges on this stream. Gauges in the area suggest HW events in June 1965, June 1980, July 1982, July 1986, July 1990, and July 1999. The largest storm in the storm database is about 150mm of rainfall in July 1982, and about 120mm in July 1990 and June 1965.

Basin Runoff Potential :

d = 60 mm, T_p = 20 hrs, q = 0.85 cms/km^2.
Gross DA = 49 km^2.
Q_p = 40 cms.

Conclusion :

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

Recommended parameters : Y = 3.0 m, V = 2.4 m/s, Q = 40 cms.