BF 72557 Local Road Over Cardinal Ck
Hydrotechnical Summary

Channel Capacity :

S = 0.001
B = 5 m, h = 1.5 m, T_h = 9 m
Use n = 0.045

At Bank Height : Y = 1.5 m, V = 0.7 m/s, Q = 8 cms
At Channel Capacity : Y = 2.3 m, V = 1.0 m/s, Q = 18 cms

Historical Highwater Data :

HW was noted in 1960 (Y = 1.5m). A 1961 report notes a HWM with Y = 2.4m and estimates Q = 23cms. A 1997 BIM report notes a HWM with Y = 1m.

There are no WSC gauges on Cardinal Creek. Gauge in the area suggest HW events in May 1974, 1977, 1978, 1979, June 1990, and April 1997. The largest event in the storm database for this area was in August 1982 with rainfall coverage of about 120mm.

Basin Runoff Potential :

d = 40mm, T_p = 20 hrs, q = 0.55 cms/km^2.
Gross DA = 675 km^2.
Q_p = 370 cms.

Conclusion :

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

Recommended parameters : Y = 2.3 m, V = 1.0 m/s, Q = 18 cms.