BF 74350 Local Road Over Rousseau Ck
Hydrotechnical Summary

Channel Capacity :

S = 0.0025
B = 6 m, h = 3.0 m, T_h = 10 m
Use n = 0.045

At Bank Height : Y = 3.0 m, V = 1.7 m/s, Q = 40 cms
At Channel Capacity : Y = 4.0 m, V = 2.2 m/s, Q = 80 cms

Historical Highwater Data :

HW was noted in 1967 (over the deck, Y = 4m u/s), and in 1972 (washout at abutment). A 1966 report notes a HWM with Y = 4.0m and estimates Q = 70cms. A 1968 report notes a HWM with Y = 4.5m and estimates Q = 93cms. A 1995 BIM report notes a HWM with Y = 2.5m.

There are no WSC gauges on Rousseau Ck. Gauge 07HC002 on Buchanan Ck reports its highest flow in June 1990. Other gauges in the area suggest HW events in May 1964, July 1972, July 1963, June 1977, May 1978, and April 1997. The largest storms in the storm database for this area are August 1982 (120mm) and July 1963 (90mm).

Basin Runoff Potential :

d = 40 mm, T_p = 20 hrs, q = 0.55 cms/km^2.
Gross DA = 311 km^2.
Q_p = 171 cms.

Conclusion :

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

Recommended parameters : Y = 4.0 m, V = 2.2 m/s, Q = 80 cms.