BF 00548 Local Road Over Cripple Ck
Hydrotechnical Summary

Channel Capacity :

S = 0.014
B = 1.5 m, h = 1.2 m, T_h = 6 m
n = 0.055

At Bank Height : Y = 1.2 m, V = 1.7 m/s, Q = 7.5 cms
At Channel Capacity : Y = 1.8 m, V = 2.5 m/s, Q = 20 cms

Historical Highwater Data :

HW was noted in 1908 (extent unknown), 1924 – causing both road approaches to wash out, 1989 – backwall scour noted, estimated highwater mark of 1.7m, and 2005 – no damage noted.

There are no WSC gauges on Cripple Ck. There is a nearby gauge on Trout Creek (Gauge 05AB005, DA~440 sqkm) with records from 1908 – present. The largest event recorded were in June 2005 (Q~60cms), June 1923 (Q~40cms), and June 1995 (Q~30cms). The largest storms in the storm database for this area are June 1953, May 1923, and June 1963 with about 110mm of rainfall.

Basin Runoff Potential :

The basin is located within areas of 100mm (rainfall) and 15mm (snowmelt) zones.

d = 100mm, T_p = 20hrs, q = 1.39 cms/km^2.
Gross DA_1 = 8 km^2
Q_{p1} = 11 cms (rainfall)

d = 15mm, T_p = 40hrs, q = 0.10 cms/km^2
Gross DA_2 = 27 km^2
Q_{p2} = 3 cms (snowmelt)

$Qp = Q_{p1} + Q_{p2}$
Qp = 14cms

Conclusion :

The basin runoff potential governs for this site.

Recommended parameters : Y = 1.5 m, V = 2.1 m/s, Q = 14 cms.