BF 07307 Local Road Over Seven Persons Ck
Hydrotechnical Summary

Channel Capacity :

S = 0.0007
B = 8 m, h = 2.5 m, T = 15 m
Use n = 0.04

At Bank Height : Y = 2.5 m, V = 1.0 m/s, Q = 27 cms
At Channel Capacity : Y = 3.5 m, V = 1.3 m/s, Q = 55 cms

Historical Highwater Data :

HW was noted in 1918 (approaches repaired, ice), and March 1994 (Y = 2.4m). A 1965 report notes a HWM with Y = 2.1 – 2.4m, and a 1993 BIM report notes a HWM with Y = 2.6m (no description).

WSC gauge 05AH033 (DA = 2550km^2, 1920 – 1930 + 1936) reports Q = 35cms in March 1928. Gauge 05AH005 (DA = 3270km^2, 1913 – 1956, 1973 – Now) reports Q = 136cms in March 1956 (gauged at Q = 72cms with stage rise = 2.8m). Gauge 05AH041 (DA = 440km^2, 1960 – Now) is located on Peigan Ck u/s, reporting Q = 32cms in 1965. The largest storms for this area in the database are June 2002 with about 150mm of rainfall, and September 1986 and June 1998 with about 100mm.

Basin Runoff Potential :

d = 35 mm, T_p = 40 hrs, q = 0.25 cms/km^2.
DA = 2640 km^2
Q_p = 660 cms

Conclusion :

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

Recommended parameters : Y = 3.5 m, V = 1.1 m/s, Q = 55 cms.