BF 77700 Local Road Over Stimson Creek
Hydrotechnical Summary

Channel Capacity :

S = 0.0025
B = 8 m, h = 2.2 m, T_h = 16 m
Use n = 0.04

At Bank Height : Y = 2.2 m, V = 1.7 m/s, Q = 45 cms
At Channel Capacity : Y = 3.2 m, V = 2.3 m/s, Q = 100 cms

Historical Highwater Data :

HW was noted in 1952 (water over grade at culvert, washout, previous site just u/s), 1963 (Y = 2.1m, scour at north abutment), January 1986 (Y = 0.6m above normal flow), and June 1995 (west abutment washout). A 1960 report notes a HWM with Y = 2.4m, and a 1992 BIM report notes a HWM with Y = 2.5m.

WSC gauge 05BL007 (DA = 263km^2, 1912 – 1919, 1938 - Now) reports Q = 98 cms in June 1995 (stage increase = 2m). The largest gauging is at Q = 60 cms and stage increase = 1.6m. The largest storms in the database for this area are June 1963 (160mm), May 1923 (150mm), June 1932 and May 1942 (140mm).

Basin Runoff Potential :

d = 70mm, T_p = 20 hrs, q = 1.0 cms/km^2.
Gross DA = 229 km^2.
Q_p = 230 cms.

Conclusion :

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

Recommended parameters : Y = 3.2 m, V = 2.3 m/s, Q = 100 cms.