BF 72048 Local Road Over Onetree Ck Tributary
Hydrotechnical Summary

Channel Capacity :

S = 0.0006
B = 4 m, h = 2.0 m, T = 8 m
Use n = 0.045

At Bank Height : Y = 2.0 m, V = 0.6 m/s, Q = 8 cms
At Channel Capacity : Y = 3.0 m, V = 0.9 m/s, Q = 18 cms

Historical Highwater Data :

A 1962 report notes that the bridge has run full (Y = 2.5 – 3m) and estimates Q = 15cms. A 1994 BIM report notes a HWM with Y = 1.5m.

WSC Gauge 05CJ006 (DA = 496km^2, 1952 – Now) on Onetree Ck reports Q = 68cms in June 1953 (largest gauging at Q = 8cms with stage rise ~ 0.8m) and Q = 23cms in June 1973. The largest storm in the storm database is June 1953 with about 120mm of rainfall.

Basin Runoff Potential :

d = 35mm, T_p = 40hrs, q = 0.25 cms/km^2.
Gross DA = 120 km^2.
Q_p = 30 cms.

Conclusion :

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

Recommended parameters : Y = 3.0 m, V = 0.9 m/s, Q = 18 cms.