BF 71966 Local Road Over Pothole Ck
Hydrotechnical Summary

Channel Capacity :

S = 0.0035
B = 6 m, h = 2.5 m, T_h = 12 m
Use n = 0.045

At Bank Height : Y = 2.5 m, V = 1.8 m/s, Q = 40 cms
At Channel Capacity : Y = 3.5 m, V = 2.5 m/s, Q = 85 cms

Historical Highwater Data :

A 1965 report notes a HWM with Y ~ 1.8m, and a 2003 BIM report notes a HWM with Y ~ 2.5m. A 1965 PFRA note recommends designing for Q = 85cms. The 1983 design was based on Y = 2.1m and Q = 71cms.

Gauge 05AE012 (DA = 374km^2, 1915 – 1951 (25 years)) reports Q = 50cms in Mat 1927 and Q = 40cms in June 1951. Gauge 05AE016 (DA = 772km^2, 1919-Now (72 years)) reports Q = 95cms in June 1951 (not gauged near peak), Q = 66cms in May 1927, and Q = 61cms in June 1953. The largest storms in the storm database are 155mm of rainfall in May 1980, 135mm in June 1908, and ~ 110mm in June 1937, 1975, 1991, and 1995.

Basin Runoff Potential :

d = 35 mm, T_p = 40 hrs, q = 0.25 cms/km^2.
Gross DA = 360 km^2.
Q_p = 90 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 = 2.5 m/s, Q = 85 cms.