BF 75778 Local Road Over Boyer River
Hydrotechnical Summary

Channel Capacity :

S = 0.0012
B = 4 m, h = 2.0 m, T_h = 8 m
Use n = 0.045

At Bank Height : Y = 2.0 m, V = 0.8 m/s, Q = 10 cms
At Channel Capacity : Y = 3.0 m, V = 1.2 m/s, Q = 25 cms

Historical Highwater Data :

There is a reference to HW in May 1979 (flooding due to culvert in berm). The 1991 BIM reports a HWM with Y = 2.5m. HW has been noted at BF73436 u/s (at gauge 07JF004) in 1957 (Y = 2m), 1963 (Y = 1.2m), and 1965 (Y = 1.6m). There is reference to HW in 1970, 1974, and 1979 at BF75287 d/s, with Y = 3.2m reported for 1974 and shown on DD899.

Gauge 07JF004 (1979 – Now, DA = 94km^2) reports Q = 21cms in May 1979, and was gauged at Q = 19cms with a stage increase of 1.2m. Gauge 07JF002 (1963 – Now, DA = 6660km^2) shows that May 1974 is the largest event on record (Q = 215cms), followed by May 1963 and 1979 with Q = 120cms. The largest storms in the storm database for this area are 140mm in July 1987 and June 1991, and 110mm in July 1998.

Basin Runoff Potential :

d = 40 mm, T_p = 20 hrs, q = 0.55 cms/km^2.
Gross DA = 145 km^2.
Q_p = 80 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 = 1.2 m/s, Q = 25 cms.