BF 75287 Hwy 697 Over Boyer River
Hydrotechnical Summary

Channel Capacity :

S = 0.0004
B = 6 m, h = 2.5 m, T_h = 12 m
Use n = 0.04

At Bank Height : Y = 2.5 m, V = 0.7 m/s, Q = 15 cms
At Channel Capacity : Y = 3.5 m, V = 1.0 m/s, Q = 35 cms

Historical Highwater Data :

HW was noted in 1970 (Y = 2.3m), 1974 (road to east raised due to frequent overtopping), and April 1979 (Y = 1.8m, over road to east).

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 = 235 km^2.
Q_p = 130 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 = 1.0 m/s, Q = 35 cms.