BF 73053 Local Road Over St Mary River
Hydrotechnical Summary

Channel Capacity :

S = 0.0018
B = 60 m, h = 3.5 m, T_h = 90 m
Use AT equation

At Bank Height : Y = 3.5 m, V = 2.3 m/s, Q = 600 cms
At Channel Capacity : Y = 4.5 m, V = 2.8 m/s, Q = 1000 cms

Historical Highwater Data :

HW was observed in June 1975 (Y ~ 4.5m), June 1995 (2m below deck, over approach road, Y ~ 4m), and June 2005 (Y ~ 3m). Estimates of HW for other events include 1902 (Y ~ 5m), and 1953 (Y ~ 4m). The 1978 design was based on Y ~ 5m (Q ~ 850cms).

WSC Gauge 05AE006 (DA ~ 3530 km^2, 1911 – Now) reports Q ~ 730 cms (June 1975, gauged near peak, stage rise ~ 3m), and Q ~ 660cms (June 1995).

Basin Runoff Potential :

Gross DA = 3800 km^2 (beyond range of technique).

Conclusion :

The channel capacity estimate is consistent with historic observations. Recommended parameters :

Y = 4.5 m, V = 2.8 m/s, Q = 1000 cms.
EL 849.5 m (DD814)