BF 76425 Hwy 58 Over Chinchaga River
Hydrotechnical Summary

Channel Capacity :

S = 0.00045
B = 75 m, h = 4.5 m, T_h = 115 m
Use AT equation

At Bank Height : Y = 4.5 m, V = 1.5 m/s, Q = 650 cms
At Channel Capacity : Y = 5.5 m, V = 1.8 m/s, Q = 1000 cms

Historical Highwater Data :

DD477 prepared in 1967 notes HWM (based on silt marks) to EL. 353.0m (Y = 4.6m), and shows a design HW EL. of 356.0m (Y = 7.6m). The 2007 design was based on Y ~ 6.5 – 7m.

WSC Gauge 07OC001 (DA = 10,400km^2, 1970 – Now) reports Q = 824cms in April 1974 (gauged at Q = 740cms, 3.6m stage rise, A = 380m^2, T = 115m, V = 2m/s), Q= 770cms in May 1972, and Q = 725cms in June 1977. The peak stage in April 1974 is EL. 352.7m (Y = 4.3m). The largest storms in the storm database for this basin are July 1987 with 135mm, and June 1991 and July 1998 with about 110mm.

Basin Runoff Potential :

Gross DA = 10,534 km^2, beyond the range of runoff depth applicability.

Conclusion :

Historic observations govern. Recommended parameters :

Y = 5.5 m, V = 1.8 m/s, Q = 1000 cms
EL 354.0 m (26826-P)