BF 76474 Hwy 40 Over Smoky River
Hydrotechnical Summary

Channel Capacity :

S = 0.0025
B = 75 m, h = 3 m, T = 100 m
Use AT equation

At Bank Height : Y = 3.0 m, V = 2.4 m/s, Q = 650 cms
At Channel Capacity : Y = 4.0 m, V = 3.0 m/s, Q = 1100 cms

Historical Highwater Data :

HW was noted in June 1967 (Y ~ 3m), June 1968 (Y ~ 2.5m), June 1971 (Y ~ 3.5m), June 1972 (Y ~ 4m, span washed out), June 1982 (Y ~ 3.5m), July 1997 (Y ~ 2.5m), and July 2001 (u/s spur damaged).

Gauge 07GA001 (DA = 3840 km^2, 1968 – Now) reports Q = 1380cms (stage rise ~ 4.8m) in June 1972 (gauged at Q = 670cms, stage rise = 3.5m), Q = 1010cms in July 1997, and Q = 810cms in July 2001.

Basin Runoff Potential :

Gross DA = 3730 km^2 (exceeds range of application of runoff depth method).

Conclusion :

Historical observations govern. Recommended parameters :

Y = 4.0 m, V = 3.0 m/s, Q = 1100 cms
EL 958.0 m (4615-P)