BF 75664 Hwy 744 Over Little Smoky River
Hydrotechnical Summary

Channel Capacity :

S = 0.0016
B = 80 m, h = 5.0 m, T_h = 130 m
Use AT equation

At Bank Height : Y = 5 m, V = 2.7 m/s, Q = 1400 cms
At Channel Capacity : Y = 6 m, V = 3.2 m/s, Q = 2000 cms

Historical Highwater Data :

HW was observed in 1963 (Y ~ 4m), 1983 (Y ~ 4m), 1996 (Y ~ 5m), and 1997. The 1962 design was based on Y ~ 6m.

WSC Gauge 07GH002 (DA = 11,100km^2, 1959 – Now) reports Q ~ 2200cms in June 1996 (gauged at Q ~ 1000cms, stage increase ~ 4m), and Q ~ 1100cms in April 1965 and July 1983.

Basin Runoff Potential :

DA = 12340km^2, beyond range of basin runoff potential technique.

Conclusion :

Historic observations govern. Recommended parameters :

Y = 6.0 m, V = 3.2 m/s, Q = 2000 cms.
EL 428.5m (3464-P)