BF 70241 Hwy 49 Over Smoky River
Hydrotechnical Summary

Channel Capacity :

S = 0.0008
B = 200 m, h = 10 m, T = 270 m
Use AT equation

At Bank Height : Y = 10.0 m, V = 3.4 m/s, Q = 8000 cms
At Channel Capacity : Y = 11.0 m, V = 3.7 m/s, Q = 10000 cms

Historical Highwater Data :

HW was noted in July 1935 (Y ~ 9m), June 1972 (Y ~ 11m, over approach road), July 1982 (Y ~ 11m, over approach road), June 1990 (Y ~ 11m, over approach road), and July 1997 (Y ~ 8m).

Gauge 07GJ001 (DA = 50300 km^2, 1916 – 1921 + 1955 – Now) reports Q = 9400cms in June 1990 (stage rise ~ 9m), Q = 9200cms in July 1972, Q = 9020cms in July 1982, and Q = 7100cms in August 1987. The highest gauging was at Q = 3500cms and stage rise = 5.5m.

Basin Runoff Potential :

Gross DA = 50100 km^2 (exceeds range of application of runoff depth method).

Conclusion :

Historical observations govern. Recommended parameters :

Y = 11 m, V = 3.7 m/s, Q = 10000 cms
EL 384.0 m (18359-C)