BF 77308 Hwy 676 Over Little Smoky River Tributary
Hydrotechnical Summary

Channel Capacity :

S = 0.009
B = 3 m, h = 1.2 m, T_h = 7 m
Use n = 0.055

At Bank Height : Y = 1.2 m, V = 1.5 m/s, Q = 9 cms
At Channel Capacity : Y = 1.8 m, V = 2.0 m/s, Q = 20 cms

Historical Highwater Data :

HW occurred in June 1996 (1.6m > crown, drift, damage to bevel, overflow to BF77309) and June 1990 (Y = 4m u/s). A 1970 report estimates Q = 13cms and Y = 1.8m. The 1982 design was based on Q = 13cms, and a 2001 assessment estimated Y = 1.4m and Q = 13cms.

There are no WSC Gauges on this stream. Gauges in the area suggest HW events in April 1997 and April 2003. The largest storms in the storm database are about 120mm of rainfall in August 1982, and about 110mm in June 1990 and June 1996.

Basin Runoff Potential :

d = 60 mm, T_p = 20 hrs, q = 0.85 cms/km^2.
Gross DA = 28 km^2.
Q_p = 24 cms.

Conclusion :

The channel capacity estimate is consistent with historic observations and is within the basin runoff potential.

Recommended parameters : Y = 1.8 m, V = 2.0 m/s, Q = 20 cms.