BF 72230 Local Road Over Little Smoky River Tributary
Hydrotechnical Summary

Channel Capacity :

S = 0.005
B = 3 m, h = 1.6 m, T_h = 8 m
Use n = 0.05

At Bank Height : Y = 1.6 m, V = 1.4 m/s, Q = 12 cms
At Channel Capacity : Y = 2.4 m, V = 2.1 m/s, Q = 30 cms

Historical Highwater Data :

HW was noted at this site in 1954 (Y = 2.1 – 2.4m, Q = 23cms), and 1963 (0.1m above u/s crown, 1.8m below d/s crown, Q = 20cms). A large hanging outlet formed on the previous pipe, due possibly to a combination of degradation and insufficient burial and protection. The current pipe was designed based on Q = 30cms.

There are no WSC gauges on this stream. Gauges in the area suggest HW events in April 1990, 1994, and 1997. The largest storms for this area in the storm database are about 110mm of rainfall in August 1982 and June 1993.

Basin Runoff Potential :

d = 60 mm, T_p = 20 hrs, q = 0.83 cms/km^2.
Gross DA = 66 km^2.
Q_p = 55 cms.

Conclusion :

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

Recommended parameters : Y = 2.4 m, V = 2.1 m/s, Q = 30 cms.