BF 70530 Local Road Over Poplar Ck
Hydrotechnical Summary

Channel Capacity :

S = 0.001
B = 12 m, h = 6.5m, T = 24 m
Use AT equation

At Bank Height : Y = 6.5 m, V = 2.6 m/s, Q = 300 cms
At Channel Capacity : Y = 7.5 m, V = 2.9 m/s, Q = 410 cms

Historical Highwater Data :

The 60' pony truss was washed d/s in June 1944 (rebuilt with deck height = 6.1m). A 1956 report notes a HWM with Y = 6.1m. HW was observed in July 1986 (Y = 8.0m, 0.7m over deck, likely structure influence), and in July 1990 (Y = 7.5m, just over deck and west grade) with a washout at the west abutment.

WSC gauge 05DE008 (DA = 374km^2) is located close to this site but has no flow records. Gauge 05DE911 (DA = 1170km^2, 1996 – Now) is located d/s with the highest flow recorded at Q = 300cms in July 2001. Other gauges in the area have noted HW in June 1965, April 1974, and July of 1982, 1986, and 1990. The largest storms in the storm database are July 1982, 1986 and 1990 with about 130 – 140mm of rainfall.

Basin Runoff Potential :

d = 70mm, T_p = 20hrs, q = 1.0 cms/km^2.
Gross DA = 415 km^2.
Q_p = 415 cms.

Conclusion :

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

Recommended parameters : Y = 7.5 m, V = 2.9 m/s, Q = 410 cms.