BF 71552 Hwy 13 Over Poplar Ck Tributary
Hydrotechnical Summary

Channel Capacity :

S = 0.002
B = 3 m, h = 2.5 m, T = 8 m
Use n = 0.05

At Bank Height : Y = 2.5 m, V = 1.2 m/s, Q = 17 cms
At Channel Capacity : Y = 3.5 m, V = 1.8 m/s, Q = 40 cms

Historical Highwater Data :

HW has been recorded over the road at the current 2.7m culvert in July 1982 (estimated Q = 27cms), July 1986 (drift on guardrail), and July 1990 (erosion of d/s fill). Modelling suggests Q = 20 – 25cms through the pipe and up to 15cms over the road for a total flow in the 35 – 40cms range. A culvert on the channel to the east that was apparently later diverted to this one was washed out in June 1944. A 1958 report notes a HWM with Y = 2.4m and estimates Q – 9cms. A 1970 report notes a HWM with Y = 1.8 – 2.1m and estimates Q = 10cms.

There are no WSC gauges on this stream. Gauges in the area suggest runoff events in July 1982, July 1986, July 1990, and July 1999. The storm database indicates about 130mm of rainfall in July 1982, July 1986, and July 1990.

Basin Runoff Potential :

d = 70 mm, T_p = 20 hrs, q = 1.0 cms/km^2.
Gross DA = 41 km^2.
Q_p = 41 cms.

Conclusion :

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

Recommended parameters : Y = 3.5 m, V = 1.8 m/s, Q = 40 cms