BF 71748 Hwy 43 Over Sturgeon Ck Tributary
Hydrotechnical Summary

Channel Capacity :

S = 0.004
B = 2 m, h = 1.0 m, T_h = 4 m
Use n = 0.06

At Bank Height : Y = 1.0 m, V = 0.8 m/s, Q = 2 cms
At Channel Capacity : Y = 1.5 m, V = 1.1 m/s, Q = 6 cms

Historical Highwater Data :

HW was noted in June 1996 (to 1.4m below u/s crown, low V, Y ~ 1.0m). Reports from 1951 and 1953 estimate Y ~ 1.2m and Q = 6cms. The 1993 design was based on Y = 1.6m and Q = 10cms, and the 2003 design was based on Y = 1.5m and Q = 8cms. A 1996 BIM report notes a HWM with Y = 1.5m.

There are no WSC Gauges on this stream. Gauges in the area suggest HW events in August 1976, April 1977, August 1987, June 1996, and April 1997. The largest storms in the storm database are about 100mm of rainfall in July 1983, June 1990, and June 1996.

Basin Runoff Potential :

d = 65 mm, T_p = 20 hrs, q = 0.9 cms/km^2.
Gross DA = 6 km^2.
Q_p = 6 cms.

Conclusion :

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

Recommended parameters : Y = 1.5 m, V = 1.1 m/s, Q = 6 cms.