BF 73542 Hwy 43 Over Hay Ck
Hydrotechnical Summary

Channel Capacity :

S = 0.003
B = 2 m, h = 1.2 m, T_h = 4 m
Use n = 0.05

At Bank Height : Y = 1.2 m, V = 0.9 m/s, Q = 3 cms
At Channel Capacity : Y = 1.8 m, V = 1.3 m/s, Q = 8 cms

Historical Highwater Data :

A 1955 report notes a HWM with Y = 0.9m and estimates Q = 5cms. A 1964 report notes HW to 1.2m above the u/s crown (Q = 8cms if no blockage). A 2002 BIM report notes a HWM with Y = 1.8m. The 2003 design was based on Y = 1.7m and Q = 20cms.

There are no WSC Gauges on this stream. Gauges in the area suggest HW events in April 1974, June 1990, and April 1997. The largest storms for this area in the storm database are 135mm of rainfall in June 1990, 120mm in July 1951 and June 1964, and 105mm in June 1965.

Basin Runoff Potential :

d = 60 mm, T_p = 20 hrs, q = 0.83 cms/km^2.
Gross DA = 100 km^2.
Q_p = 83 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 = 1.3 m/s, Q = 8 cms.