BF 01423 Hwy 50 Over Parlby Ck
Hydrotechnical Summary

Channel Capacity :

S = 0.0007
B = 6 m, h = 2.5 m, T_h = 12 m
Use n = 0.045

At Bank Height: Y = 2.5 m, V = 0.8 m/s, Q = 20 cms
At Channel Capacity: Y = 3.5 m, V = 1.1 m/s, Q = 40 cms

Historical Highwater Data:

HW was noted in April 1974 to just below the deck (Y ~ 3 – 3.5m). A 1949 report notes a HWM with Y = 3.3m. A 1959 report estimates Q = 28 – 33cms. An 1898 drawing shows a HWM with Y = 3.3m.

Gauge 05CD007 (DA = 515km^2, 1983 – Now) reports Q ~ 20 – 25cms in April 1996 and 2003. The largest storms in the storm database are about 125mm of rainfall in Aug. 1982, and about 110mm in July 1963.

Basin Runoff Potential :

d = 35 mm, T_p = 40 hrs, q = 0.25 cms/km^2.
Gross DA = 435 km^2.
Q_p = 110 cms.

Conclusion :

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

Recommended parameters : Y = 3.5m, V = 1.1 m/s, Q = 40 cms.