BF 00541 Hwy 601 Over Redwillow Ck
Hydrotechnical Summary

Channel Capacity :

S = 0.0008
B = 7 m, h = 2.5 m, T_h = 14 m
Use n = 0.045

At Bank Height : Y = 2.5 m, V = 0.9 m/s, Q = 25 cms
At Channel Capacity : Y = 3.5 m, V = 1.2 m/s, Q = 50 cms

Historical Highwater Data :

HW was noted in April 1974 with Y = 3.6m (estimated Q ~ 40cms). A 1966 report estimates Q = 34 – 42cms. A 1902 inspection notes a HWM with Y = 2m, and a recent photo shows grass on a fence to about 1m above water level.

Gauges 05FC005 and 05FC904 (DA = 825km2, 1983 – 1990) report a highest flow of 12cms in 1985. Other gauges in the area show the largest flood in April 1974. The largest storms in the storm database are about 140mm of rainfall in June 1970 and about 100mm in June 1911, 1944, and 1973.

Basin Runoff Potential :

d = 35 mm, T_p = 40 hrs, q = 0.25 cms/km^2.
Gross DA = 347 km^2.
Q_p = 85 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 = 1.2 m/s, Q = 50 cms.