BF 07948 Hwy 59 Over Bear River Tributary
Hydrotechnical Summary

Channel Capacity :

S = 0.003
B = 5 m, h = 1.6 m, T_h = 10 m
Use n = 0.045

At Bank Height : Y = 1.6 m, V = 1.3 m/s, Q = 15 cms
At Channel Capacity : Y = 2.4 m, V = 1.9 m/s, Q = 35 cms

Historical Highwater Data :

HW was noted in spring 1958 (culvert washout, estimated Q = 20cms, Y = 3.0m u/s of the culvert), and in 1962 and June 1964 with Y = 2.2 - 2.4m. A 1957 report notes a HWM with Y = 2.1m and estimates Q = 16cms. The 2000 design was based on Y = 2.2m and Q = 29cms.

There are no WSC gauges on this stream. Gauges in the area suggest a HW event in April 1997. The largest storms in the storm database are June 1964 with about 130mm, and June 1965, June 1971, and June 1990 with about 100mm.

Basin Runoff Potential :

d = 60 mm, T_p = 20 hrs, q = 0.83 cms/km^2.
Gross DA = 103 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 = 2.4 m, V = 1.9 m/s, Q = 35 cms.