BF 71063 Local Road Over Bear River
Hydrotechnical Summary

Channel Capacity :

S = 0.0003
B = 9 m, h = 3.0 m, T_h = 20 m
Use n = 0.04

At Bank Height : Y = 3.0 m, V = 0.7 m/s, Q = 30 cms
At Channel Capacity : Y = 4.0 m, V = 0.9 m/s, Q = 60 cms

Historical Highwater Data :

A 1959 bridge report notes a HWM with Y = 3.0 – 3.5m, and a 1987 BIM report notes a HWM with Y = 3.0m. At BF 8233 u/s, HW was noted in 1958, spring 1963, June 1964, and April 1997.

Gauge 07GE007 (1985 - 1999, DA = 180 km^2) reports the highest recorded flow of 36cms on April 18, 1997. The highest gauging was at Q = 33cms, with a stage rise of just over 2m. 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 = 350 km^2.
Q_p = 290 cms.

Conclusion :

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

Recommended parameters : Y = 4.0 m, V = 0.9 m/s, Q = 60 cms.