BF 81783B Hwy 35 Over Kemp River
Hydrotechnical Summary

Channel Capacity :

S = 0.002
B = 10 m, h = 3.2 m, T_h = 18 m
Use AT equation

At Bank Height : Y = 3.2 m, V = 2.1 m/s, Q = 95 cms
At Channel Capacity : Y = 4.2 m, V = 2.7 m/s, Q = 170 cms

Historical Highwater Data :

HW was noted at BF73426 just d/s in June 1960 with Y = 4.3m u/s, with overbank flooding upstream. HW was also noted at the previous bridge at BF73426 in 1953 with Y = 3.0m, and at the current bridge in May 1963 with Y = 3.0m, and June 1990 with Y = 2.0m. High ice was noted in April 1965 with Y = 2.4m, and loss of sandbag riprap was noted in August 1970. HW was noted at BF75202 d/s in 1987 with Y = 4.0m.

There are no WSC gauges on this stream. Gauge 07HF002 (DA = 667km^2, 1972 – Now) on Keg River shows HW events in August 1987, June 1991, and June 1977. The largest storms in the database for this area are July 1987 with about 140mm of rainfall, and July 1963 with about 100mm.

Basin Runoff Potential :

d = 40mm, T_p = 20hrs, q = 0.55 cms/km^2.
Gross DA = 420 km^2.
Q_p = 230 cms.

Conclusion :

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

Recommended parameters : Y = 4.2 m, V = 2.7 m/s, Q = 170 cms.