BF 08694 Hwy 884 Over Sounding Ck
Hydrotechnical Summary

Channel Capacity :

S = 0.0008
B = 5 m, h = 1.8 m, T_h = 10 m
Use n = 0.045

At Bank Height : Y = 1.8 m, V = 0.7 m/s, Q = 10 cms
At Channel Capacity : Y = 2.7 m, V = 1.0 m/s, Q = 25 cms

Historical Highwater Data :

A 1962 design note estimates Q = 23cms, with a note that PFRA have estimated Q = 24cms considering impact of Antelope Lake.

WSC gauge 05GA012 (DA = 2280 km^2, 1984 - Now) reports Q = 5cms in April 1997. Gauge 05GA008 (DA = 3000 km^2, 1968 - Now) reports Q = 26cms in April 1974 (stage rise of 2.3m for Q = 20cms). The largest storms in the storm database are June 1973 and July 1962 with about 130mm of rainfall.

Basin Runoff Potential :

d = 35mm, T_p = 40 hrs, q = 0.25 cms/km^2.
Gross DA = 1690 km^2.
Q_p = 420 cms.

Conclusion :

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

Recommended parameters : Y = 2.7 m, V = 1.0 m/s, Q = 25 cms.