BF 75921 Hwy 733 Over Kleskun Ck
Hydrotechnical Summary

Channel Capacity :

S = 0.006
B = 5 m, h = 2.0 m, T_h = 10 m
Use n = 0.05

At Bank Height : Y = 2.0 m, V = 1.9 m/s, Q = 30 cms
At Channel Capacity : Y = 3.0 m, V = 2.7 m/s, Q = 70 cms

Historical Highwater Data :

HW was noted in June 1990 (Y = 3m u/s, Y = 1m d/s, concrete protection settlement). A 2003 photo shows a d/s scour hole and erosion of the opposite bank. BIM HWM were noted in 1992 (Y = 2.2m) and 1999 (Y = 3.0m). HW was noted in at BF 75921 u/s in 1946 (Y = 3.0m), April 1958 (Y = 3.0m), April 1963 (0.6m < u/s crown, Q_{est} = 30cms), June 1964 (2.5m < u/s crown), and June 1990 (Y = 1.5m u/s). Drainage improvement studies u/s (near Kleskun Lake, DA ~ 300km^2) have been based on Q = 40 – 50cms.

There are no gauges on this stream. Gauges in the area suggest HW events in June 1968, April 1974, June 1990, and April 1997. The largest storms in the storm database are about 120mm of rainfall in June 1990, and about 100mm in July 1935, July 1955, June 1964, and June 1965.

Basin Runoff Potential :

d = 60 mm, T_p = 20 hrs, q = 0.85 cms/km^2.
Gross DA = 420 km^2.
Q_p = 350 cms.

Conclusion :

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

Recommended parameters : Y = 3.0 m, V = 2.7 m/s, Q = 70 cms.