BF 72306 Local Road 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 1946 (Y = 3.0m), April 1958 (Y = 3.0m), April 1963 (0.6m < u/s crown, Qest = 30cms), June 1964 (2.5m < u/s crown), and June 1990 (Y = 1.5m u/s). The 1960 design was based on Y = 3.0m and Q = 40cms. Class 2 rock was placed at both ends in 1969, a concrete collar was added in 1985 following an uplift, and a large scour hole was repaired with class 3 rock in 1986. 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 = 415 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.