BF 70314 Local Road Over Lesser Slave Lake Tributary
Hydrotechnical Summary

Channel Capacity :

S = 0.004
B = 5 m, h = 2.5 m, T_h = 9 m
Use n = 0.045

At Bank Height : Y = 2.5 m, V = 1.9 m/s, Q = 33 cms
At Channel Capacity : Y = 3.5 m, V = 2.6 m/s, Q = 70 cms

Historical Highwater Data :

HW was noted in 1955 (Y = 2.5m), July 1961 (Y = 3.3m), April 1963 (Y = 3.3m, east headslope damage), July 1988 (Y = 3.3m), and June 1996 (Y = 3.3m, west headslope washed out, drift removed during flood). Reports from 1926, 1955, and 1958 note HWM with Y = 2.4m. A 2000 BIM report notes a HWM with Y = 2.2m.

There are no gauges on this stream. Gauges in the area suggest HW events in June 1983, July 1988, and June 1996. The largest storms in the storm database are June 1970, July 1979, and June 1983 with about 95mm of rainfall.

Basin Runoff Potential :

d = 90 mm, T_p = 20 hrs, q = 1.25 cms/km^2.
Gross DA = 52 km^2.
Q_p = 65 cms.

Conclusion :

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

Recommended parameters : Y = 3.5 m, V = 2.6 m/s, Q = 70 cms.