BF 13084 Local Road Over North Saskatchewan River Tributary Hydrotechnical Summary

Channel Capacity :

S = 0.014
B = 3 m, h = 0.8 m, T_h = 6 m
Use n = 0.055

At Bank Height : Y = 0.8 m, V = 1.5 m/s, Q = 5 cms
At Channel Capacity : Y = 1.3 m, V = 2.5 m/s, Q = 15 cms

Historical Highwater Data :

A 1958 report notes a HWM with Y = 1.0m and estimates Q = 6cms. A 1963 report estimates Q = 6 – 7cms.

There are no WSC gauges on this stream. Gauges in the area suggest runoff events in April 1974, July 1982, July 1986, and July 1990. The storm database indicates 165mm of rainfall for this area in June 1944, with about 145mm in July 1982, and 125mm in July 1990.

Basin Runoff Potential :

d = 50mm, T_p = 20hrs, q = 0.7 cms/km^2.
Gross DA = 14 km^2.
Q_p = 10 cms.

Conclusion :

Basin runoff potential governs for this site and is consistent with historic observations.

Recommended parameters : Y = 1.1 m, V = 1.9 m/s, Q = 10 cms