BF 73720 Local Road Over Heart River
Hydrotechnical Summary

Channel Capacity :

S = 0.0019
B = 2 m, h = 1.2 m, T_h = 5 m
Use n = 0.05

At Bank Height : Y = 1.2 m, V = 0.7 m/s, Q = 3 cms
At Channel Capacity : Y = 1.8 m, V = 1.0 m/s, Q = 8 cms

Historical Highwater Data :

A 1986 report notes a HWM over the grade ay a culvert crossing (Y = 1.2m d/s) and estimates Q = 6cms.

WSC gauge 07HA003 (DA = 1960km^2, 1963 – Now), reports Q = 168cms in April 1997, with other high runoff events in August 1964, April 1965, and April 1974. The largest gauging was for Q = 139cms with a stage rise of 2.6m. There are no storms in the database that exceed 100mm of rainfall for this area.

Basin Runoff Potential :

d = 50 mm, T_p = 20 hrs, q = 0.7 cms/km^2.
Gross DA = 39 km^2.
Q_p = 27 cms.

Conclusion :

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

Recommended parameters : Y = 1.8 m, V = 1.0 m/s, Q = 8 cms.