BF 76134 Local Road Over East Prairie River
Hydrotechnical Summary

Channel Capacity :

S = 0.0005
B = 30 m, h = 6.0 m, T_h = 45 m
Use AT equation

At Bank Height : Y = 6.0 m, V = 2.0 m/s, Q = 450 cms
At Channel Capacity : Y = 7.0 m, V = 2.2 m/s, Q = 600 cms

Historical Highwater Data :

HW was noted in 1964 (washout, Y = 4.3m), 1989 (Y = 4.6m), and June 1996 (EL. 633.2m on DD1575, Y ~ 7m, Q = 570cms). A 1967 report notes a HWM with Y = 5.8m and estimates Q = 280cms.

WSC Gauge 07BF001 (DA = 1460km^2, 1921 – 1930, 1959 – Now) reports Q = 780cms in June 1996 (gauged at Q = 330cms, 3.3m stage rise). The storm database notes 130mm in June 1993, 120mm in June 1996, and 110mm in June 1971 and June 1975.

Basin Runoff Potential :

d = 70 mm, T_p = 20 hrs, q = 1.0 cms/km^2.
Gross DA = 1134 km^2.
Q_p = 1134 cms.

Conclusion :

The channel capacity values are consistent with historic observations, and are within the range of basin runoff supply.

Recommended parameters : Y = 7.0 m, V = 2.2 m/s, Q = 600 cms.