BF 75835 Hwy 616 Over Pipestone Ck
Hydrotechnical Summary

Channel Capacity :

S = 0.0022
B = 3 m, h = 1.4 m, T = 6 m
Use n = 0.05

At Bank Height : Y = 1.4 m, V = 0.9 m/s, Q = 6 cms
At Channel Capacity : Y = 2.1 m, V = 1.3 m/s, Q = 14 cms

Historical Highwater Data :

A 1963 report estimates Q = 11cms. A 1999 design note suggests Q = 5 – 10cms.

WSC Gauges 05FA012 and 05FA022 (DA = 1020km^2, 1972 - Now) reports Q = 98cms in April 1974 (gauged at Q = 96cms, stage rise = 2.7m) and Q = 40cms in July 1991. The largest storms in the storm database are June 1944 with 160mm of rainfall, and July 1982 and 1990 with about 125mm.

Basin Runoff Potential :

d = 40mm, T_p = 20hrs, q = 0.55 cms/km^2.
DA = 42 km^2.
Q_p = 23 cms.

Conclusion :

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

Recommended parameters : Y = 2.1 m, V = 1.3 m/s, Q = 14 cms.