BF 07481 Hwy 831 Over Waskatenau Ck
Hydrotechnical Summary

Channel Capacity :

S = 0.0018
B = 6 m, h = 1.8 m, T_h = 12 m
Use n = 0.045

At Bank Height : Y = 1.8 m, V = 1.1 m/s, Q = 20 cms
At Channel Capacity : Y = 2.7 m, V = 1.6 m/s, Q = 45 cms

Historical Highwater Data :

HW was noted in April 1971 (Y ~ 2.7m, flooding u/s and d/s). A 1962 report notes a HWM with Y = 2.1m, and estimates Q = 20cms. The 1983 design was based on Y = 3.5m and Q = 74cms (frequency analysis extrapolation).

Gauge 05EC002 (DA = 312km^2, 1966 – Now) is located near this site. The highest reported flow is in April 1971 with Q = 45cms. Other high flows reported include Q = 34cms in April 1974, and Q ~ 25cms in April of 1972, 1979, and 1997. No storms in the storm database exceed 100mm.

Basin Runoff Potential :

d = 40 mm, T_p = 20 hrs, q = 0.55 cms/km^2.
Gross DA = 325 km^2.
Q_p = 180 cms.

Conclusion :

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

Recommended parameters : Y = 2.7 m, V = 1.6 m/s, Q = 45 cms.