BF 76439 Hwy 681 Over Josephine Ck Tributary
Hydrotechnical Summary

Channel Capacity :

S = 0.004
B = 3 m, h = 1.0 m, T_h = 6 m
Use n = 0.05

At Bank Height : Y = 1.0 m, V = 1.0 m/s, Q = 5 cms
At Channel Capacity : Y = 1.5 m, V = 1.4 m/s, Q = 10 cms

Historical Highwater Data :

The 1966 report notes a HWM 0.3m over the grade at the two small culverts (Q ~ 4cms). A photo from 1997 shows water in the NW ditch and relatively high velocity in the d/s channel (Y ~ 0.3 – 0.5m). HW was noted at BF75765 d/s in Apr 1974 (Q ~ 15cms at that site, assuming no blockage).

There are no WSC Gauges on this stream. Gauges in the area suggest HW events in April 1974, June 1990, April 1997 and April 2003. The largest storms in the storm database are about 100mm of rainfall in June 1990 and June 1993.

Basin Runoff Potential :

d = 60 mm, T_p = 20 hrs, q = 0.8 cms/km^2.
Gross DA = 27 km^2.
Q_p = 22 cms.

Conclusion :

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

Recommended parameters : Y = 1.5 m, V = 1.4 m/s, Q = 10 cms.