BF 73440 Hwy 35 Over Parma Creek
Hydrotechnical Summary

Channel Capacity :

S = 0.0008
B = 5.0 m, h = 2.0 m, T_h = 12 m
Use n = 0.045

At Bank Height : Y = 2.0 m, V = 0.7 m/s, Q = 13 cms
At Channel Capacity : Y = 3.0 m, V = 1.1 m/s, Q = 30 cms

Historical Highwater Data :

HW was noted in Spring 1957 (Y = 2.7m, estimated Q = 11cms), summer 1957 (Y = 2.1m), 1963 (Y = 3.3m u/s, Y = 2.5m d/s), and 1968 (Y = 2m d/s). A 1955 report notes a HWM with Y = 2.4m and estimates Q = 10cms. A 1999 BIM report notes a HWM with Y = 1.8m. Scour d/s was noted in 1985. An MPA report (2004) states that maintenance personnel reported that water went over the highway in 1974 and came close to the shoulder several times between 1974 and 1994 (modelling suggests Q ~ 20cms if no blockage).

There are no gauges on this stream. Gauges in the area suggest HW events in May 1974, June 1977, and May 1979, and April 1997. The storm database indicates that the largest rainfall events are June 1991 and July 1987 (140mm).

Basin Runoff Potential :

d = 40mm, T_p = 20 hrs, q = 0.55 cms/km^2.
Gross DA = 474 km^2.
Q_p = 260 cms.

Conclusion :

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

Recommended parameters : Y = 3.0m, V = 1.1 m/s, Q = 30 cms.