BF 76754 Highway 40 over Fred Creek
Hydrotechnical Summary

Channel Capacity :

S = 0.011
B = 1.5 m, h = 0.8 m, T_h = 3 m (est. from air photos, consultants)
Use n = 0.055

At Bank Height : Y = 0.8 m, V = 1.2 m/s, Q = 2 cms
At Channel Capacity : Y = 1.3 m, V = 1.9 m/s, Q = 6 cms

Historical Highwater Data :

HWM recorded in 1971 to be 3.5' (100 mm) below bridge deck (deck elev. 4474.2 m). Icing noted in lower culvert in 1992.

There are no WSC Gauges on this stream. Gauges in the area (07AC001 on Wildhay River near Hinton) suggest HW events in June 1971, June 1980, July 1990, June 1997.

Basin Runoff Potential :

d = 80 mm, T_p = 20 hrs, q = 1.1 cms/km^2.
Gross DA = 12 km^2.
Q_p = 13 cms.

Conclusion :

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

Recommended parameters : Y = 1.3 m, V = 1.9 m/s, Q = 6 cms.