# BF 00657 Hwy 8 Over Millburn Ck
# Hydrotechnical Summary

**Channel Capacity** :

S = 0.003
B = 4 m, h = 1.5 m, $T_h$ = 8 m
Use n = 0.05

At Bank Height : Y = 1.5 m, V = 1.2 m/s, Q = 10 cms
At Channel Capacity : Y = 2.3 m, V = 1.7 m/s, Q = 25 cms

**Historical Highwater Data :**

Photos from 1986 show stain marks in pipe to 1.7m deep (Y < 1.0m d/s) but likely due to ponding from d/s obstruction, as no velocity is evident. Past designs have been based on HWM with Y = 2m and the design flow for the 1980 structure was Q = 25cms.

There are no WSC gauges on this stream. Nearby gauges suggest large events may have occurred in May 1867, June 1969, May 1990, and June 1995. The storm database indicates that the largest storm was in June 1992 with about 130mm, followed by June 1928, 1932, 1970 with about 105mm.

**Basin Runoff Potential :**

d = 60mm, $T_p$ = 20 hrs, q = 0.83 cms/$km^2$.
Gross DA = 35 $km^2$.
$Q_p$ = 30 cms.

**Conclusion :**

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

Recommended parameters : Y = 2.3 m, V = 1.7 m/s, Q = 25 cms.