# BF 13617 Local Road Over Poplar Ck
# Hydrotechnical Summary

**Channel Capacity** :

S = 0.007
B = 2 m, h = 1.0 m, T = 4 m
Use n = 0.05

At Bank Height : Y = 1.0 m, V = 1.2 m/s, Q = 4 cms
At Channel Capacity : Y = 1.5 m, V = 1.8 m/s, Q = 9 cms

**Historical Highwater Data :**

A 1967 report notes that the single pipe does not handle spring flows due to ice. A 1990 photo shows drift deposited above the u/s crown.

WSC gauge 05DE008 (DA = 374km$^2$) has no flow records. Gauge 05DE911 (DA = 1170km$^2$, 1996 – Now) reports the highest flow at Q = 300cms in July 2001. Other gauges in the area have noted HW in June 1965, April 1974, and July of 1982, 1986, and 1990. The largest storms in the storm database are July 1982, 1986 and 1990 with about 130 – 140mm of rainfall.

**Basin Runoff Potential :**

d = 70mm, $T_p$ = 20hrs, q = 1.0 cms/km$^2$.
Gross DA = 8 km$^2$.
$Q_p$ = 8 cms.

**Conclusion :**

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

Recommended parameters : Y = 1.5 m, V = 1.8 m/s, Q = 9 cms.