# BF 08260 Hwy 752 Over Prairie Ck
# Hydrotechnical Summary

**Channel Capacity** :

S = 0.0008
B = 10 m, h = 4.0 m, $T_h$ = 18 m
Use AT equation

At Bank Height : Y = 4.0 m, V = 1.7 m/s, Q = 100 cms
At Channel Capacity : Y = 5.0 m, V = 2.1 m/s, Q = 150 cms

**Historical Highwater Data :**

HW was noted in May 1964 (over road, drift blockage, Y ~ 4.6m), June 1972 (Y = 4.8m, drift blockage), July 1986 (Y = 4.9m, drift blockage), June 1990 (Y = 3.8m), and July 1999 (Y = 4.3m). The 1960 design was based on Y = 3.6m. The 1999 design was based on Y = 5.5m and Q = 143cms.

WSC Gauge 05DB002 (DA = 859km$^2$, 1922 - 1925, 1952 - Now) reports Q = 130cms in July 1999 (gauged at Q = 110cms, stage rise = 2m), with other HW events in July 1986, June 1972, August 1954, and May 1964. The largest storms in the database for this area are about 110 - 120mm in August 1925, June 1970, June 1972, and July 1986.

**Basin Runoff Potential :**

d = 70mm, $T_p$ = 20 hrs, q = 1 cms/km$^2$.
Gross DA = 382 km$^2$.
$Q_p$ = 380 cms.

**Conclusion :**

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

Recommended parameters : Y = 5.0 m, V = 2.1 m/s, Q = 150 cms.