# BF 08036 Hwy 722 Over Redwillow River
# Hydrotechnical Summary

**Channel Capacity** :

S = 0.0016
B = 25 m, h = 5.0 m, $T_h$ = 50 m
Use AT equation

At Bank Height : Y = 5.0 m, V = 2.6 m/s, Q = 480 cms
At Channel Capacity : Y = 6.0 m, V = 3.0 m/s, Q = 720 cms

**Historical Highwater Data :**

HW was noted in 1968 (abutment scour, Y = 6.0m), June 1972 (Y = 5.5m), July 1982 (Y = 5.2m), and June 1990 (Y = 5.6m). A 1917 cross section notes a HWM with Y = 6.6m, and the 1990 design was based on Q = 850cms.

WSC Gauge 07GD004 (DA = 1249km$^2$, 1993 – Now) reports Q = 190cms in July 2001 (gauged at Q = 171cms, stage rise = 2.2m). Gauge 07GD003 (DA = 1610km$^2$, 1983 – 1993) reports Q = 660cms (stage rise = 4.7m, gauging info not available). Storm database coverage is limited for this basin as much of it is located in BC.

**Basin Runoff Potential :**

d = 60 – 70 mm, $T_p$ = 20 hrs, q = 0.9 cms/km$^2$.
Gross DA = 1610 km$^2$.
$Q_p$ = 1450 cms.

**Conclusion :**

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

Recommended parameters : Y = 6.0 m, V = 3.0 m/s, Q = 720 cms.