01/13/05

BF 00223 Hwy 547 Over Highwood River
Hydrotechnical Summary

Channel Capacity :

S = 0.0017
B = 40 m, h = 3.5 m, T_h = 60 m
Use AT equation

At Bank Height : Y = 3.5 m, V = 2.2 m/s, Q = 400 cms
At Channel Capacity : Y = 4.5 m, V = 2.7 m/s, Q = 650 cms

Historical Highwater Data :

HW was observed in June 1963, May 1967, May 1990 (EL. 1017 both u/s and d/s, Y ~ 2.5m), and June 1995 (~ EL. 1019.5m, Y ~ 5m) based on photo and estimated to be close to top of concrete protection.

Gauge 05BL004 (DA = 1980km^2, 1909 – 1915, 1986 – Now) reports Q ~ 800cms (June 1995, max gauging at Q ~ 70cms, 3.5m stage increase), and Q ~ 290 - 320cms (1990, 1998). Gauge 05BL009 (DA = 2340km^2, 1912 – 1993 (missing 1932)) reports Q = 710cms (June 1942) and Q = 640cms (June 1923).

Basin Runoff Potential :

Gross DA = 2175 km^2 (beyond range of technique)

Conclusion :

Historical observations govern. Recommended parameters :

Y = 5 m, V = 2.9 m/s, Q = 700 cms.
EL 1019.5 m (3460-P)