BF 01462 Hwy 41 Over Ross Ck Tributary
Hydrotechnical Summary

Channel Capacity :

S = 0.015
B = 2 m, h = 1.0 m, T_h = 5 m
Use n = 0.055

At Bank Height : Y = 1.0 m, V = 1.6 m/s, Q = 6 cms
At Channel Capacity : Y = 1.5 m, V = 2.4 m/s, Q = 14 cms

Historical Highwater Data :

A HWM was noted in the 1994 BIM report (Y = 1.0m), with a large scour hole noted d/s.

WSC gauge 05AH003 (1911 – Now, 647 km^2) located on Ross Ck d/s reports Q = 90cms in April 1955, and shows several high volume events in the 1950's and a low volume high peak response in spring 1994. Gauge 05AH037 (1944 – Now, 215 km^2) on Gros Ventre Ck reports Q = 36cms in April 1955 and also shows a high runoff event in June 2002. The largest storms in the database are June 2002 with 180mm of rainfall and June 1998 with 140mm.

Basin Runoff Potential :

d = 35mm, T_p = 40hrs, use q = 0.35 cms/km^2 (Cypress Hills)
Gross DA = 5 km^2.
Q_p = 2cms.

Conclusion :

Basin runoff potential governs for this site and is consistent with historic observations.

Recommended parameters : Y = 0.6 m, V = 1.2 m/s, Q = 2 cms. Higher depths may occur due to blockage etc.