BF 77252 Hwy 734 Over Blackstone River
Hydrotechnical Summary

Channel Capacity :

S = 0.006
B = 35 m, h = 2.0 m, T_h = 60 m
Use AT equation

At Bank Height : Y = 2.0 m, V = 2.5 m/s, Q = 230 cms
At Channel Capacity : Y = 3.0 m, V = 3.4 m/s, Q = 530 cms

Historical Highwater Data :

HW has been observed at this site in June 1980 (damage to north headslope), July 1986 (EL. 1233.0m, Y = 2.0m), and July 1999 (EL. 1233.3m d/s (Y = 2.3m), EL. 1234.0m u/s, damage to headslope and u/s guidebank). The current bridge was designed for EL. 1234.4m (Y ~ 3.4m). The 1994 BIM report notes a HWM with Y ~ 4m, but there is no description and this is likely referenced to the bottom of the scour hole near the north headslope toe.

WSC gauge 05DD002 (DA = 780km^2, no flow records) is located close to this site. Gauges in the area suggest HW events in June 1980, July 1986, and July 1999.

Basin Runoff Potential :

d = 75mm, T_p = 20hrs, q = 1.05cms/km^2
Gross DA = 970 km^2.
Q_p = 1000 cms.

Conclusion :

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

Recommended parameters : Y = 3.0 m, V = 3.4 m/s, Q = 530 cms.
EL 1234.0 m (DD585)