BF 76350 Hwy 734 Over Clearwater River
Hydrotechnical Summary

Channel Capacity :

S = 0.0048
B = 50 m, h = 2.0 m, T_h = 70 m
Use AT equation

At Bank Height : Y = 2.0 m, V = 2.4 m/s, Q = 300 cms
At Channel Capacity : Y = 3.0 m, V = 3.2 m/s, Q = 600 cms

Historical Highwater Data :

HW was noted in June 1965 (EL. 4153' on DD437, Y ~ 3m) and June 1972 (EL. 4151.5', Y ~ 2.5m), July 1986 (not significant), and June 1990 (damage to auxiliary channel plugs).

WSC gauges 05DB003 (DA = 1200km^2, 1959 – 1992) reports Q = 510cms in June 1965 (gauged at Q = 180cms, 1.7m stage rise) and Q = 270cms in June 1990. Gauge 05DB006 (DA = 2230km^2, 1976 – Now) reports Q = 340cms in June 1990 (gauged at Q = 295cms with 3m stage rise). Gauge 05DB001 (DA = 3220km^2, 1914-1931, 1944 – 1975) reports Q = 1370cms in June 1915, Q = 520cms in June 1965 and Q = 470cms in June 1972 (gauged at Q = 456cms, 3.3m stage rise). There are no events in the storm database that exceed 100mm of rainfall.

Basin Runoff Potential :

d = 70 - 80mm, T_p = 20 hrs, q = 1.0 cms/km^2.
Gross DA = 1621 km^2.
Q_p = 1620 cms.

Conclusion :

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

Recommended parameters : Y = 3.0 m, V = 3.2 m/s, Q = 600 cms.