BF 72565 Highway 659 Over Muriel Creek
Hydrotechnical Summary

Channel Capacity :

S = 0.0001
B = 5 m, h = 2.5 m, T_h = 15 m
Use AT equation

At Bank Height : Y = 2.5 m, V = 0.3 m/s, Q = 7.5 cms
At Channel Capacity : Y = 3.5 m, V = 0.4 m/s, Q = 15 cms

Historical Highwater Data :

The 2002 design was based on Q ~ 15cms (V ~ 1.34m/s). This site is at the outlet of Charlotte Lake. This lake has been gauged (1972 – present) with the highest reported gauging in May 1975 (elevation 549.88m).

The storm on basin tool reports large events in June 1962 (130mm), June 1988 (110mm), and June 1970 (100mm).

Basin Runoff Potential :

d=40mm, Tp = 20 hrs, q = 0.56 cms/km^2
Gross DA= 670km^2
Qp= 375 cms

Conclusion :

The design is governed by lake levels.
Recommended parameters correspond to the highest observed lake elevation :

Y = 2.3 m, V = 0.3 m/s, Q = 6 cms.
Elev. 549.88m