BF 78105 Hwy 63 Over Beaver River Tributary
Hydrotechnical Summary

Channel Capacity :

S = 0.012
B = 3 m, h = 1.5 m, T_h = 6 m
Use n = 0.055

At Bank Height : Y = 1.5 m, V = 1.9 m/s, Q = 12 cms
At Channel Capacity : Y = 2.3 m, V = 2.8 m/s, Q = 30 cms

Historical Highwater Data :

HW was noted in August 1988 to 0.7m below the u/s crown (drift blockage in pipe, struts lost, rock lost). Icing was noted in 1979, 1990, 1991, and 2002 with complete blockage of pipe. The 1975 design was based on Q = 23 – 28cms due to increased flow from Beaver Ck diversion. Channel changes have been observed due to the increased flows including a hanging outlet in 1979 and d/s slumping.

There are no WSC gauges on this stream. Gauges in the area suggest HW events in July 1970, August 1976, May 1985, July 1988, and June 1991. The largest storm in the database for this area is 105mm in September 1960.

Basin Runoff Potential :

d = 40mm, T_p = 20hrs, q = 0.55 cms/km^2.
Gross DA = 134 km^2 (18km^2 + Beaver Ck diversion).
Q_p = 75 cms.

Conclusion :

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

Recommended parameters : Y = 2.3 m, V = 2.8 m/s, Q = 30 cms.