BF 79746 Local Road Over Fourth Ck Tributary
Hydrotechnical Summary

Channel Capacity :

S = 0.009
B = 2 m, h = 1.2 m, T_h = 4 m
Use n = 0.05

At Bank Height : Y = 1.2 m, V = 1.5 m/s, Q = 5 cms
At Channel Capacity : Y = 1.8 m, V = 2.3 m/s, Q = 12 cms

Historical Highwater Data :

A 1997 photo shows erosion at the u/s end with a portion of the barrel exposed and the d/s end submerged with no apparent velocity. The BIM report notes Y = 2.5m based on drift deposited 0.3m above the u/s crown. A 2003 photo shows water ponded to about 0.5m below the d/s crown and some drift above the u/s crown. The 1982 design was based on Q = 10cms.

There are no WSC gauges on this stream. Gauges in the area suggest HW events in May 1984, July 1988, June 1990, and April 1997. The largest storms in the storm database are 100mm of rainfall in June 1990 and June 1993.

Basin Runoff Potential :

d = 60mm, T_p = 20hrs, q = 0.83 cms/km^2.
Gross DA = 28 km^2.
Q_p = 25 cms.

Conclusion :

The channel capacity estimate is consistent with historic observations and is within the basin runoff potential. Higher depths may occur due to backwater from d/s.

Recommended parameters : Y = 2.0 m, V = 2.3 m/s, Q = 12 cms.