BF 75605 Hwy 16 Over Sundance Ck
Hydrotechnical Summary

Channel Capacity :

S = 0.001
B = 7 m, h = 2.0 m, T_h = 12 m
Use n = 0.04

At Bank Height : Y = 2.0 m, V = 1.0 m/s, Q = 20 cms
At Channel Capacity : Y = 3.0 m, V = 1.4 m/s, Q = 45 cms

Historical Highwater Data :

HW was noted in July 1971 (about ½ full, Y ~ 2m), July 1986 (1.5m below u/s crown, Y ~ 2.2m), and July 1997 (2m below u/s crown, Y ~ 1.7m). The 1990 design was based on Y = 2.2m and Q = 40cms.

WSC gauge 07AF012 (DA = 174km^2, 1973 – Now) reports Q = 17cms in July 1982 and 1997. The largest storms in the database for this area are June 1958 and July 1965 with about 110mm of rainfall.

Basin Runoff Potential :

d = 60mm, T_p = 20hrs, q = 0.83 cms/km^2.
Gross DA = 181 km^2.
Q_p = 150 cms.

Conclusion :

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

Recommended parameters : Y = 3.0 m, V = 1.4 m/s, Q = 45 cms.