BF 71981 Local Road Over Sundance Ck
Hydrotechnical Summary

Channel Capacity :

S = 0.0025
B = 7 m, h = 2.0 m, T_h = 12 m
Use n = 0.04

At Bank Height : Y = 2.0 m, V = 1.6 m/s, Q = 30 cms
At Channel Capacity : Y = 3.0 m, V = 2.3 m/s, Q = 70 cms

Historical Highwater Data :

HW was noted in July 1965 (inlets submerged, flooding u/s and d/s), and July 1986 (1.5m below u/s crown, 1.1m below d/s crown, Y ~ 2.1m). A 1950 report notes a HWM with Y = 2.7m, and the 1962 design was based on Y = 2.4m and Q = 57cms.

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 = 213 km^2.
Q_p = 175 cms.

Conclusion :

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

Recommended parameters : Y = 3.0 m, V = 2.3 m/s, Q = 70 cms.