BF 09474 Hwy 876 Over Berry Ck
Hydrotechnical Summary

Channel Capacity :

S = 0.002
B = 12 m, h = 2.0 m, T_h = 20 m
Use AT equation

At Bank Height : Y = 2.0 m, V = 1.6 m/s, Q = 50 cms
At Channel Capacity : Y = 3.0 m, V = 2.2 m/s, Q = 115 cms

Historical Highwater Data :

A 1920 report notes a HWM with Y ~ 3m, and a 1970 report notes that Y has not exceeded 1.8m since a dam was built at the Berry Ck Reservoir (DA = 1900km^2) in 1964. A 1971 design was based on Y = 2.5m and Q = 200cms.

WSC Gauge 05CH002 (DA = 2790km^2, 1921 – 1953 non-continuous) reports Q = 160cms in April 1948 and Q = 130cms in April 1952 and March 1928. Gauge 05CH008 (DA = 1550km^2, 1969 – Now) reports Q = 85cms and gauge 05CH007 (DA = 3720km^2, 1964 – Now) reports Q = 53cms in April 1974. The storm database shows the largest storms for this basin to be about 110m of rainfall in July 1962 and June 1973.

Basin Runoff Potential :

d = 35 mm, T_p = 40 hrs, q = 0.25 cms/km^2.
Gross DA = 2734 km^2.
Q_p = 680 cms.

Conclusion :

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

Recommended parameters : Y = 3.0 m, V = 2.2 m/s, Q = 115 cms.