BF 74295 Hwy 43 Over Harold (Camp?) Ck
Hydrotechnical Summary

Channel Capacity :
S = 0.008
B = 2 m, h = 1.2 m, T_h = 5 m
Use n = 0.055

At Bank Height : Y = 1.2 m, V = 1.3 m/s, Q = 6 cms
At Channel Capacity : Y = 1.8 m, V = 2 m/s, Q = 14 cms

*channel capacity is difficult to apply in a ravine

Historical Highwater Data :

There .is a railway bridge immediately d/s; a sketch from it reports HW at a max depth of 7'. Note to file records HW of 15' above crown (22' -23' above stream bed) from1964 flood. BIM notes drift at u/s bank slopes suggesting a HW of 4.8 m above stream bed in 1995 (beaver activity was significant and there are evidences of at least one beaver dam u/s at this time). An upstream BF 76389 has HW recorded at 0.8 m from stream bed from the 1997 flood.

There are no WSC Gauges on this stream. The largest storms in the storm database are 123mm of rainfall in Aug 1982, and about 110mm in July 1963.

Basin Runoff Potential :
d = 60 mm, T_p = 20 hrs, q = 0.83 cms/km^2.
Gross DA = 35 km^2.
Q_p = 29 cms.

This basin is a combination of a valley and a ravine. DA contributing to the ravine is approximately 5 – 7 km^2. Contributing flow (Q_p) from the ravine portion of the basin is approximately 5 cms.

Conclusion :

Since channel capacity is difficult to apply in a ravine, it's been applied upstream of the ravine – BF 76389 (Q = 9cms; DA 20; q = 0.5 cms/km2) . Applying this unit discharge to the entire basin upstream of the ravine, results in 14 cms.

Then the drainage area that feeds directly into the ravine is found to be approximately 4 km^2 . Runoff may be near full basin runoff potential, however peaks would not be coincident. As a conservative assumption, add the full basin runoff (3 cms) and the contributing upstream portion (14cms).

Recommended parameters : Y = 2 m, V = 2.1 m/s, Q = 17 cms.