

# MORPHOLOGICAL MEASUREMENTS TABLE

## UT TO MUDDY CREEK -R1- Sta. 9+20.00 to Sta. 18+00.00

Variables	Existing Channel	Proposed Reach	USGS Station	Reference Reach
1. Stream type	C/E5	C5		CE 4/1
2. Drainage area	0.49 SQ MI (316 ACRES)	0.49 SQ MI (316 ACRES)		0.55 SQ MI (355 ACRES)
3. Bankfull width	Mean: 11.36 Range: 8.86-14.80	Mean: 13.96 Range:		Mean: 15.48 Range: 11.90-17.70
4. Bankfull mean depth	Mean: 0.72 Range: 0.58-0.85	Mean: 1.07 Range:		Mean: 1.29 Range: 1.23-1.41
5. Width/depth ratio	Mean: 15.56 Range: 13.65-17.48	Mean: 13.00 Range:		Mean: 12.97 Range: 11.42-14.37
6. Bankfull cross-sectional area	Mean: 10.77 Range: 5.93-14.00	Mean: 15.00 Range:		Mean: 21.33 Range: 20.00-22.70
7. Bankfull mean velocity	Mean: 5.38 Range:	Mean: 3.53 Range:		Mean: 2.90 Range:
8. Bankfull discharge, cfs	Mean: 53 Range:	Mean: 53 Range:		Mean: 58 Range:
9. Bankfull max depth	Mean: 1.60 Range: 0.96-2.37	Mean: 1.75 Range: 1.61-1.76		Mean: 1.94 Range: 1.60-2.12
10. Width of floodprone area	Mean: 118.67 Range: 48.69-180.00	Mean: >100.00 Range:		Mean: 171.25 Range: 162.00-186.00
11. Entrenchment ratio	Mean: 11.41 Range: 3.29-17.68	Mean: >2.2 Range:		Mean: 11.30 Range: 10.06-14.45
12. Meander length	Mean: 50.92 Range: 31.09-73.07	Mean: 97.48 Range: 91.07-120.51		Mean: 80.30 Range: 64.32-114.00
13. Ratio of meander length to bankfull width	Mean: 4.48 Range: 2.47-6.43	Mean: 6.96 Range: 6.51-8.61		Mean: 5.19 Range: 4.16-7.37
14. Radius of curvature	Mean: 22.22 Range: 10.01-32.89	Mean: 33.88 Range: 28.00-49.00		Mean: 18.44 Range: 11.73-25.30
15. Ratio of radius of curvature to bankfull width	Mean: 1.96 Range: 0.88-2.90	Mean: 2.42 Range: 2.0-3.5		Mean: 1.19 Range: 0.76-1.63
16. Belt width	Mean: 6.38 Range: 1.28-14.48	Mean: 23.20 Range: 12.00-44.00		Mean: 31.92 Range: 12.54-54.25
17. Meander width ratio	Mean: 0.56 Range: 0.11-1.27	Mean: 1.66 Range: 0.86-3.14		Mean: 2.06 Range: 0.81-3.51
18. Sinuosity (stream length/valley length)	Mean: 1.06 Range:	Mean: 1.13 Range:		Mean: 1.41 Range:
19. Valley slope	Mean: 0.00670 Range:	Mean: 0.00498 Range:		Mean: 0.01230 Range:
20. Average slope	Mean: 0.00632 Range:	Mean: 0.0044 Range: 0.0044-0.0044		Mean: 0.00872 Range:
21. Pool slope	Mean: 0.00606 Range: 0.00081-0.01136	Mean: 0.00117 Range: 0.00110-0.00130		Mean: 0.00221 Range: 0.00175-0.00267
22. Ratio of pool slope to average slope	Mean: 0.96 Range: 0.13-1.80	Mean: 0.27 Range: 0.25-0.30		Mean: 0.25 Range: 0.20-0.31
23. Maximum pool depth	Mean: 1.94 Range: 1.40-2.47	Mean: 2.40 Range: 2.40-2.40		Mean: 2.87 Range: 2.85-2.89
24. Ratio of pool depth to average bankfull depth	Mean: 2.71 Range: 1.95-3.45	Mean: 2.40 Range: 2.40-2.40		Mean: 2.22 Range: 2.21-2.23
25. Pool width	Mean: 11.69 Range: 9.16-14.22	Mean: 14.00 Range:		Mean: 16.30 Range: 12.60-20.00
26. Ratio of pool width to bankfull width	Mean: 1.03 Range: 0.81-1.25	Mean: 1.0 Range:		Mean: 1.05 Range: 0.81-1.29
27. Pool to pool spacing	Mean: 61.22 Range: 29.34-78.63	Mean: 56.20 Range: 50.00-71.00		Mean: 51.98 Range: 35.73-68.22
28. Ratio of pool to pool spacing to bankfull width	Mean: 5.39 Range: 2.58-6.92	Mean: 4.01 Range: 3.57-5.07		Mean: 3.36 Range: 2.31-4.41
29. Ratio of lowest bank height to bankfull height (or max bankfull depth)	Mean: N/A Range: N/A	Mean: 1.0 Range:		Mean: 1.06 Range: 1.0-1.15

PROJECT REFERENCE NO. U-2707	SHEET NO. NS-2
RW SHEET NO.	

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UNLESS ALL SIGNATURES COMPLETED