

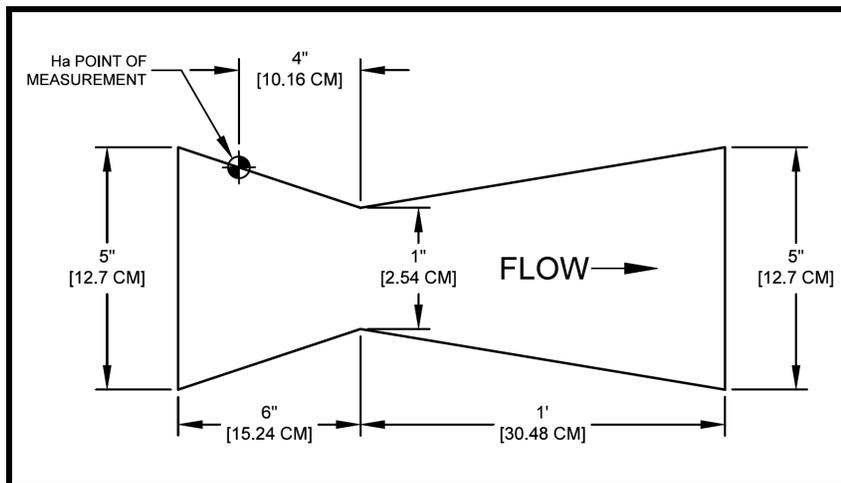


18-Inch L x 1-Inch W Cutthroat Flume Discharge Table

60% Submergence Transition ±3% Accuracy

Formulas (H in feet): CFS = 0.494 $H_{ft}^{2.15}$ GPM = 221.7 $H_{ft}^{2.15}$ MGD = 0.3103 $H_{ft}^{2.15}$
 Formulas (H in meters): L/S = 179.9 $H_m^{2.15}$ M3/HR = 647.5 $H_m^{2.15}$

FEET	INCHES	METERS	CFS	GPM	MGD	L/S	M3/HR	
0.01	0.12	0.0030	Excessive error due to fluid-flow properties and boundary conditions					
0.02	0.24	0.0061						
0.03	0.36	0.0091						
0.04	0.48	0.0122						
0.05	0.60	0.0152	0.0008	0.3536	0.0005	0.0223	0.0803	
0.06	0.72	0.0183	0.0012	0.5234	0.0008	0.0330	0.1188	
0.07	0.84	0.0213	0.0016	0.7290	0.0010	0.0460	0.1655	
0.08	0.96	0.0244	0.0022	0.9715	0.0014	0.0613	0.2206	
0.09	1.08	0.0274	0.0028	1.251	0.0018	0.0790	0.2841	
0.10	1.20	0.0305	0.0035	1.570	0.0023	0.0990	0.3564	
0.11	1.32	0.0335	0.0043	1.927	0.0028	0.1216	0.4374	
0.12	1.44	0.0366	0.0052	2.323	0.0033	0.1466	0.5274	
0.13	1.56	0.0396	0.0061	2.759	0.0040	0.1741	0.6264	
0.14	1.68	0.0427	0.0072	3.236	0.0047	0.2042	0.7346	
0.15	1.80	0.0457	0.0084	3.753	0.0054	0.2368	0.8521	
0.16	1.92	0.0488	0.0096	4.312	0.0062	0.2721	0.9789	
0.17	2.04	0.0518	0.0109	4.912	0.0071	0.3099	1.115	
0.18	2.16	0.0549	0.0124	5.554	0.0080	0.3505	1.261	
0.19	2.28	0.0579	0.0139	6.239	0.0090	0.3937	1.417	
0.20	2.40	0.0610	0.0155	6.966	0.0100	0.4396	1.582	
0.21	2.52	0.0640	0.0172	7.737	0.0111	0.4882	1.757	
0.22	2.64	0.0671	0.0191	8.550	0.0123	0.5395	1.941	
0.23	2.76	0.0701	0.0210	9.408	0.0135	0.5937	2.136	
0.24	2.88	0.0732	0.0230	10.31	0.0148	0.6505	2.341	
0.25	3.00	0.0762	0.0251	11.26	0.0162	0.7102	2.555	
0.26	3.12	0.0792	0.0273	12.25	0.0176	0.7727	2.780	
0.27	3.24	0.0823	0.0296	13.28	0.0191	0.8380	3.015	
0.28	3.36	0.0853	0.0320	14.36	0.0207	0.9062	3.261	
0.29	3.48	0.0884	0.0345	15.49	0.0223	0.9772	3.516	
0.30	3.60	0.0914	0.0371	16.66	0.0240	1.051	3.782	



Notes: Discharge is calculated to top of flume
 Not suitable for use on unscreened sanitary flows

Sources: Cutthroat Flume Discharge Relations, Water Management Technical Paper No. 16, Colorado State University, AER71-72RSB6, March 1972
 Generalized Discharge Relations for Cutthroat Flumes, *Journal of the Irrigation and Drainage Division*, ASCE, Vol. 98, No. IR4, December 1974



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FEET	INCHES	METERS	CFS	GPM	MGD	L/S	M3/HR
0.31	3.72	0.0945	0.0398	17.87	0.0257	1.128	4.058
0.32	3.84	0.0975	0.0426	19.14	0.0276	1.208	4.345
0.33	3.96	0.1006	0.0456	20.44	0.0294	1.290	4.642
0.34	4.08	0.1036	0.0486	21.80	0.0314	1.376	4.950
0.35	4.20	0.1067	0.0517	23.20	0.0334	1.464	5.268
0.36	4.32	0.1097	0.0549	24.65	0.0355	1.556	5.597
0.37	4.44	0.1128	0.0583	26.15	0.0377	1.650	5.937
0.38	4.56	0.1158	0.0617	27.69	0.0399	1.747	6.287
0.39	4.68	0.1189	0.0652	29.28	0.0422	1.848	6.648
0.40	4.80	0.1219	0.0689	30.92	0.0445	1.951	7.020
0.41	4.92	0.1250	0.0726	32.60	0.0470	2.057	7.403
0.42	5.04	0.1280	0.0765	34.34	0.0494	2.167	7.796
0.43	5.16	0.1311	0.0805	36.12	0.0520	2.279	8.201
0.44	5.28	0.1341	0.0846	37.95	0.0546	2.395	8.616
0.45	5.40	0.1372	0.0887	39.83	0.0574	2.513	9.043
0.46	5.52	0.1402	0.0930	41.76	0.0601	2.635	9.480
0.47	5.64	0.1433	0.0974	43.73	0.0630	2.760	9.929
0.48	5.76	0.1463	0.1020	45.76	0.0659	2.887	10.39
0.49	5.88	0.1494	0.1066	47.83	0.0689	3.018	10.86
0.50	6.00	0.1524	0.1113	49.95	0.0719	3.152	11.34

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