

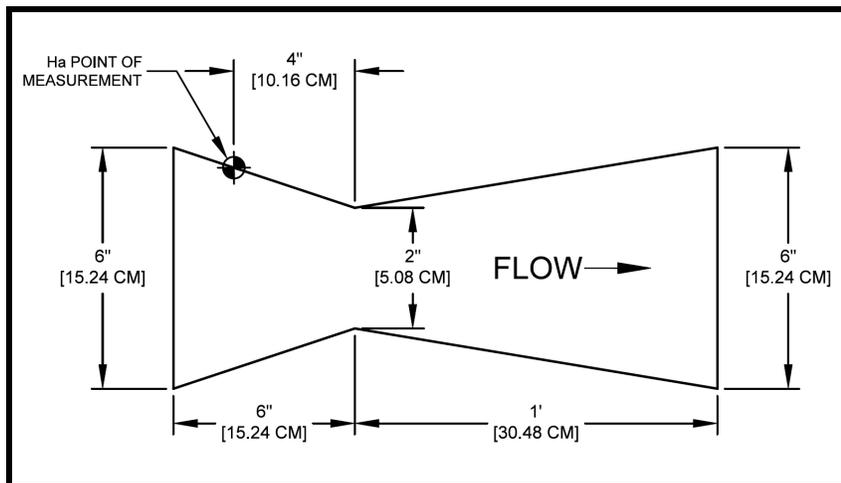


# 18-Inch L x 2-Inch W Cutthroat Flume Discharge Table

60% Submergence Transition ±3% Accuracy

Formulas (H in feet): CFS = 0.947 H<sub>ft</sub><sup>2.15</sup> GPM = 425.0 H<sub>ft</sub><sup>2.15</sup> MGD = 0.6120 H<sub>ft</sub><sup>2.15</sup>  
 Formulas (H in meters): L/S = 344.8 H<sub>m</sub><sup>2.15</sup> M3/HR = 1,241 H<sub>m</sub><sup>2.15</sup>

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	0.0015	0.6779	0.0010	0.0428	0.1539	
0.06	0.72	0.0183	0.0022	1.003	0.0014	0.0633	0.2278	
0.07	0.84	0.0213	0.0031	1.398	0.0020	0.0882	0.3173	
0.08	0.96	0.0244	0.0041	1.862	0.0027	0.1175	0.4228	
0.09	1.08	0.0274	0.0053	2.399	0.0035	0.1514	0.5447	
0.10	1.20	0.0305	0.0067	3.009	0.0043	0.1899	0.6832	
0.11	1.32	0.0335	0.0082	3.693	0.0053	0.2330	0.8385	
0.12	1.44	0.0366	0.0099	4.453	0.0064	0.2810	1.011	
0.13	1.56	0.0396	0.0118	5.289	0.0076	0.3338	1.201	
0.14	1.68	0.0427	0.0138	6.203	0.0089	0.3914	1.408	
0.15	1.80	0.0457	0.0160	7.194	0.0104	0.4540	1.634	
0.16	1.92	0.0488	0.0184	8.265	0.0119	0.5216	1.877	
0.17	2.04	0.0518	0.0210	9.416	0.0136	0.5942	2.138	
0.18	2.16	0.0549	0.0237	10.65	0.0153	0.6719	2.417	
0.19	2.28	0.0579	0.0266	11.96	0.0172	0.7547	2.715	
0.20	2.40	0.0610	0.0298	13.35	0.0192	0.8427	3.032	
0.21	2.52	0.0640	0.0330	14.83	0.0214	0.9359	3.367	
0.22	2.64	0.0671	0.0365	16.39	0.0236	1.034	3.722	
0.23	2.76	0.0701	0.0402	18.04	0.0260	1.138	4.095	
0.24	2.88	0.0732	0.0440	19.76	0.0285	1.247	4.487	
0.25	3.00	0.0762	0.0481	21.58	0.0311	1.361	4.899	
0.26	3.12	0.0792	0.0523	23.47	0.0338	1.481	5.330	
0.27	3.24	0.0823	0.0567	25.46	0.0367	1.606	5.780	
0.28	3.36	0.0853	0.0613	27.53	0.0396	1.737	6.250	
0.29	3.48	0.0884	0.0661	29.69	0.0428	1.873	6.740	
0.30	3.60	0.0914	0.0711	31.93	0.0460	2.015	7.250	



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	0.0763	34.26	0.0493	2.162	7.780
0.32	3.84	0.0975	0.0817	36.68	0.0528	2.315	8.329
0.33	3.96	0.1006	0.0873	39.19	0.0564	2.473	8.899
0.34	4.08	0.1036	0.0931	41.79	0.0602	2.637	9.489
0.35	4.20	0.1067	0.0991	44.48	0.0641	2.807	10.10
0.36	4.32	0.1097	0.1053	47.26	0.0681	2.982	10.73
0.37	4.44	0.1128	0.1117	50.12	0.0722	3.163	11.38
0.38	4.56	0.1158	0.1183	53.08	0.0764	3.349	12.05
0.39	4.68	0.1189	0.1251	56.13	0.0808	3.542	12.74
0.40	4.80	0.1219	0.1321	59.27	0.0854	3.740	13.46
0.41	4.92	0.1250	0.1393	62.50	0.0900	3.944	14.19
0.42	5.04	0.1280	0.1467	65.82	0.0948	4.154	14.95
0.43	5.16	0.1311	0.1543	69.24	0.0997	4.369	15.72
0.44	5.28	0.1341	0.1621	72.75	0.1048	4.591	16.52
0.45	5.40	0.1372	0.1701	76.35	0.1099	4.818	17.34
0.46	5.52	0.1402	0.1784	80.04	0.1153	5.051	18.17
0.47	5.64	0.1433	0.1868	83.83	0.1207	5.290	19.03
0.48	5.76	0.1463	0.1954	87.71	0.1263	5.535	19.92
0.49	5.88	0.1494	0.2043	91.69	0.1320	5.786	20.82
0.50	6.00	0.1524	0.2134	95.76	0.1379	6.043	21.74

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