



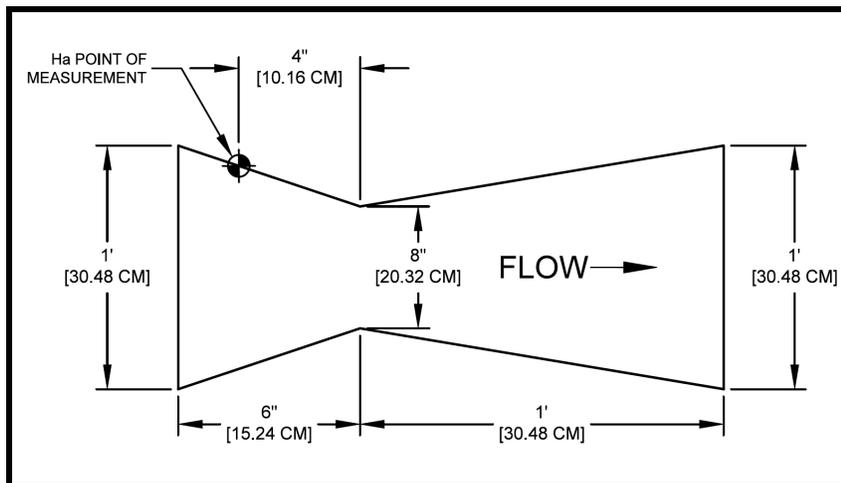
18-Inch L x 8-Inch W Cutthroat Flume Discharge Table

60% Submergence Transition ±3% Accuracy

Formulas (H in feet): CFS = 4.030 $H_{ft}^{2.15}$ GPM = 1,808 $H_{ft}^{2.15}$ MGD = 2.605 $H_{ft}^{2.15}$
 Formulas (H in meters): L/S = 1467 $H_m^{2.15}$ M3/HR = 5282 $H_m^{2.15}$

FEET	INCHES	METERS	CFS	GPM	MGD	L/S	M3/HR
0.01	0.12	0.0030					
0.02	0.24	0.0061					
0.03	0.36	0.0091					
0.04	0.48	0.0122					
0.05	0.60	0.0152					
0.06	0.72	0.0183					
0.07	0.84	0.0213					
0.08	0.96	0.0244					
0.09	1.08	0.0274					
0.10	1.20	0.0305	0.0285	12.80	0.0184	0.8080	2.907
0.11	1.32	0.0335	0.0350	15.72	0.0226	0.9917	3.568
0.12	1.44	0.0366	0.0422	18.95	0.0273	1.196	4.302
0.13	1.56	0.0396	0.0502	22.51	0.0324	1.420	5.110
0.14	1.68	0.0427	0.0588	26.40	0.0380	1.666	5.993
0.15	1.80	0.0457	0.0682	30.62	0.0441	1.932	6.951
0.16	1.92	0.0488	0.0784	35.17	0.0507	2.220	7.986
0.17	2.04	0.0518	0.0893	40.07	0.0577	2.529	9.098
0.18	2.16	0.0549	0.1010	45.31	0.0652	2.859	10.29
0.19	2.28	0.0579	0.1134	50.90	0.0733	3.212	11.56
0.20	2.40	0.0610	0.1266	56.83	0.0818	3.586	12.90
0.21	2.52	0.0640	0.1406	63.11	0.0909	3.983	14.33
0.22	2.64	0.0671	0.1554	69.75	0.1004	4.402	15.84
0.23	2.76	0.0701	0.1710	76.75	0.1105	4.843	17.43
0.24	2.88	0.0732	0.1874	84.10	0.1211	5.307	19.10
0.25	3.00	0.0762	0.2046	91.82	0.1322	5.794	20.85
0.26	3.12	0.0792	0.2226	99.90	0.1439	6.304	22.68
0.27	3.24	0.0823	0.2414	108.3	0.1560	6.836	24.60
0.28	3.36	0.0853	0.2610	117.2	0.1687	7.392	26.60
0.29	3.48	0.0884	0.2815	126.3	0.1819	7.972	28.68
0.30	3.60	0.0914	0.3028	135.9	0.1957	8.575	30.85

Excessive error due to fluid-flow properties and boundary conditions



Note: Discharge is calculated to top of flume

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



18-Inch L x 8-Inch W Cutthroat Flume Discharge Table

60% Submergence Transition ±3% Accuracy

Formulas (H in feet): CFS = 4.030 H_{ft.}^{2.15} GPM = 1,808 H_{ft.}^{2.15} MGD = 2.605 H_{ft.}^{2.15}
 Formulas (H in meters): L/S = 1467 H_m^{2.15} M3/HR = 5282 H_m^{2.15}

FEET	INCHES	METERS	CFS	GPM	MGD	L/S	M3/HR
0.31	3.72	0.0945	0.3249	145.8	0.2100	9.201	33.11
0.32	3.84	0.0975	0.3478	156.1	0.2248	9.851	35.44
0.33	3.96	0.1006	0.3716	166.8	0.2402	10.52	37.87
0.34	4.08	0.1036	0.3963	177.8	0.2561	11.22	40.38
0.35	4.20	0.1067	0.4217	189.3	0.2726	11.94	42.98
0.36	4.32	0.1097	0.4481	201.1	0.2896	12.69	45.66
0.37	4.44	0.1128	0.4753	213.3	0.3072	13.46	48.43
0.38	4.56	0.1158	0.5033	225.9	0.3253	14.25	51.29
0.39	4.68	0.1189	0.5322	238.9	0.3440	15.07	54.23
0.40	4.80	0.1219	0.5620	252.2	0.3632	15.92	57.27
0.41	4.92	0.1250	0.5926	266.0	0.3830	16.78	60.39
0.42	5.04	0.1280	0.6242	280.1	0.4034	17.68	63.60
0.43	5.16	0.1311	0.6565	294.7	0.4243	18.59	66.90
0.44	5.28	0.1341	0.6898	309.6	0.4458	19.54	70.29
0.45	5.40	0.1372	0.7240	324.9	0.4679	20.50	73.77
0.46	5.52	0.1402	0.7590	340.6	0.4905	21.49	77.34
0.47	5.64	0.1433	0.7949	356.8	0.5137	22.51	81.00
0.48	5.76	0.1463	0.8317	373.3	0.5375	23.55	84.75
0.49	5.88	0.1494	0.8694	390.2	0.5619	24.62	88.59
0.50	6.00	0.1524	0.9080	407.5	0.5868	25.71	92.53

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