

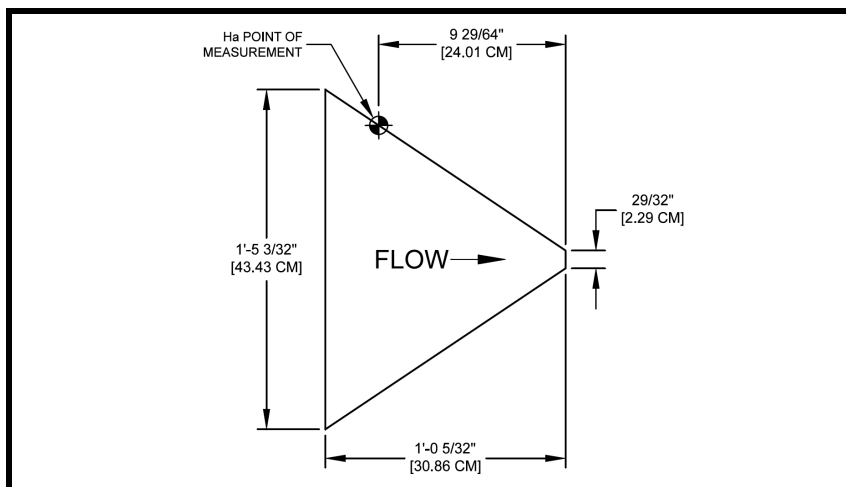


0.75-Foot H Flume Discharge Table

25-30% Submergence Transition ±2-5% Accuracy

Formulas (H in feet): $CFS = 0.000522 - 0.00602 H_{ft}^{0.5} + 0.308582 H_{ft}^{1.5} + 1.615606 H_{ft}^{2.5}$
 Formulas (H in meters): $L/S = 0.014781394 - 0.30876915 H_m^{0.5} + 51.92697619 H_m^{1.5} + 1004.480343 H_m^{2.5}$

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	0.0006	0.2693	0.0004	0.0170	0.0611
0.03	0.36	0.0091	0.0013	0.5834	0.0008	0.0368	0.1325
0.04	0.48	0.0122	0.0022	0.9874	0.0014	0.0623	0.2242
0.05	0.60	0.0152	0.0032	1.436	0.0021	0.0906	0.3261
0.06	0.72	0.0183	0.0046	2.064	0.0030	0.1303	0.4687
0.07	0.84	0.0213	0.0061	2.738	0.0039	0.1728	0.6216
0.08	0.96	0.0244	0.0080	3.590	0.0052	0.2266	0.8152
0.09	1.08	0.0274	0.0101	4.533	0.0065	0.2860	1.029
0.10	1.20	0.0305	0.0126	5.655	0.0081	0.3568	1.284
0.11	1.32	0.0335	0.0151	6.777	0.0098	0.4276	1.539
0.12	1.44	0.0366	0.0179	8.034	0.0116	0.5069	1.824
0.13	1.56	0.0396	0.0210	9.425	0.0136	0.5947	2.140
0.14	1.68	0.0427	0.0242	10.86	0.0156	0.6853	2.466
0.15	1.80	0.0457	0.0278	12.48	0.0180	0.7873	2.833
0.16	1.92	0.0488	0.0317	14.23	0.0205	0.8977	3.230
0.17	2.04	0.0518	0.0358	16.07	0.0231	1.014	3.648
0.18	2.16	0.0549	0.0403	18.09	0.0260	1.141	4.107
0.19	2.28	0.0579	0.0451	20.24	0.0291	1.277	4.596
0.20	2.40	0.0610	0.0501	22.48	0.0324	1.419	5.105
0.21	2.52	0.0640	0.0555	24.91	0.0359	1.572	5.655
0.22	2.64	0.0671	0.0612	27.47	0.0396	1.733	6.236
0.23	2.76	0.0701	0.0672	30.16	0.0434	1.903	6.848
0.24	2.88	0.0732	0.0735	32.99	0.0475	2.082	7.490
0.25	3.00	0.0762	0.0802	35.99	0.0518	2.271	8.172
0.26	3.12	0.0792	0.0872	39.14	0.0564	2.470	8.886
0.27	3.24	0.0823	0.0946	42.46	0.0611	2.679	9.640
0.28	3.36	0.0853	0.1023	45.91	0.0661	2.897	10.42
0.29	3.48	0.0884	0.1104	49.55	0.0714	3.127	11.25
0.30	3.60	0.0914	0.1190	53.41	0.0769	3.370	12.13



Curve fitted equation accurate to within 1.5%

Notes:

Discharge is calculated to top of flume

Source: Field Manual for Research in Agricultural Hydrology, Agriculture Handbook No. 224, U.S. Department of Agriculture, February 1972



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FEET	INCHES	METERS	CFS	GPM	MGD	L/S	M3/HR
0.31	3.72	0.0945	0.1280	57.45	0.0827	3.625	13.04
0.32	3.84	0.0975	0.1370	61.49	0.0885	3.880	13.96
0.33	3.96	0.1006	0.1460	65.52	0.0944	4.135	14.88
0.34	4.08	0.1036	0.1560	70.01	0.1008	4.418	15.90
0.35	4.20	0.1067	0.1670	74.95	0.1079	4.729	17.02
0.36	4.32	0.1097	0.1770	79.44	0.1144	5.013	18.04
0.37	4.44	0.1128	0.1880	84.37	0.1215	5.324	19.16
0.38	4.56	0.1158	0.1990	89.31	0.1286	5.636	20.28
0.39	4.68	0.1189	0.2110	94.70	0.1364	5.976	21.50
0.40	4.80	0.1219	0.2240	100.5	0.1448	6.344	22.83
0.41	4.92	0.1250	0.2370	106.4	0.1532	6.712	24.15
0.42	5.04	0.1280	0.2500	112.2	0.1616	7.080	25.48
0.43	5.16	0.1311	0.2630	118.0	0.1700	7.448	26.80
0.44	5.28	0.1341	0.2770	124.3	0.1790	7.845	28.23
0.45	5.40	0.1372	0.2910	130.6	0.1881	8.241	29.65
0.46	5.52	0.1402	0.3060	137.3	0.1978	8.666	31.18
0.47	5.64	0.1433	0.3210	144.1	0.2075	9.091	32.71
0.48	5.76	0.1463	0.3370	151.2	0.2178	9.544	34.34
0.49	5.88	0.1494	0.3530	158.4	0.2281	9.997	35.97
0.50	6.00	0.1524	0.3700	166.1	0.2391	10.48	37.70
0.51	6.12	0.1554	0.3880	174.1	0.2508	10.99	39.54
0.52	6.24	0.1585	0.4060	182.2	0.2624	11.50	41.37
0.53	6.36	0.1615	0.4240	190.3	0.2740	12.01	43.21
0.54	6.48	0.1646	0.4430	198.8	0.2863	12.55	45.14
0.55	6.60	0.1676	0.4620	207.3	0.2986	13.08	47.08
0.56	6.72	0.1707	0.4820	216.3	0.3115	13.65	49.12
0.57	6.84	0.1737	0.5020	225.3	0.3244	14.22	51.15
0.58	6.96	0.1768	0.5230	234.7	0.3380	14.81	53.29
0.59	7.08	0.1798	0.5440	244.1	0.3516	15.41	55.43
0.60	7.20	0.1829	0.5660	254.0	0.3658	16.03	57.68
0.61	7.32	0.1859	0.5880	263.9	0.3800	16.65	59.92
0.62	7.44	0.1890	0.6110	274.2	0.3949	17.30	62.26
0.63	7.56	0.1920	0.6350	285.0	0.4104	17.98	64.71
0.64	7.68	0.1951	0.6590	295.8	0.4259	18.66	67.15
0.65	7.80	0.1981	0.6830	306.5	0.4414	19.34	69.60
0.66	7.92	0.2012	0.7080	317.8	0.4576	20.05	72.15
0.67	8.04	0.2042	0.7340	329.4	0.4744	20.79	74.79
0.68	8.16	0.2073	0.7600	341.1	0.4912	21.52	77.44
0.69	8.28	0.2103	0.7860	352.8	0.5080	22.26	80.09
0.70	8.40	0.2134	0.8130	364.9	0.5254	23.02	82.84
0.71	8.52	0.2164	0.8410	377.4	0.5435	23.82	85.70
0.72	8.64	0.2195	0.8690	390.0	0.5616	24.61	88.55
0.73	8.76	0.2225	0.8980	403.0	0.5804	25.43	91.51
0.74	8.88	0.2256	0.9270	416.0	0.5991	26.25	94.46
0.75	9.00	0.2286	0.9570	429.5	0.6185	27.10	97.52

Source:

Field Manual for Research in Agricultural Hydrology, Agriculture Handbook No. 224, U.S. Department of Agriculture, February 1972