

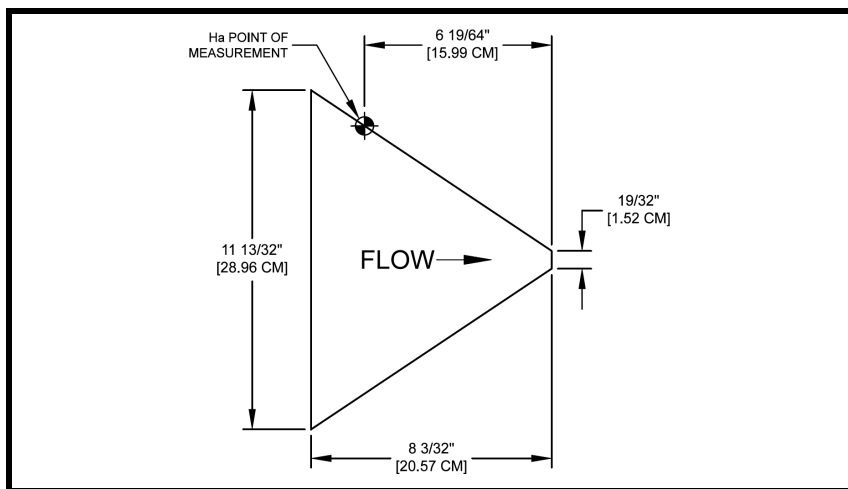


0.5-Foot H Flume Discharge Table

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

Formulas (H in feet): $CFS = 0.000112 - 0.00195 H_{ft}^{0.5} + 0.167309 H_{ft}^{1.5} + 1.62001 H_{ft}^{2.5}$
 Formulas (H in meters): $L/S = 0.003171487 - 0.10001658 H_m^{0.5} + 28.15410639 H_m^{1.5} + 894.3863793 H_m^{2.5}$

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	0.0004	0.1795	0.0003	0.0113	0.0408
0.03	0.36	0.0091	0.0009	0.4039	0.0006	0.0255	0.0917
0.04	0.48	0.0122	0.0016	0.7181	0.0010	0.0453	0.1630
0.05	0.60	0.0152	0.0024	1.077	0.0016	0.0680	0.2446
0.06	0.72	0.0183	0.0035	1.571	0.0023	0.0991	0.3567
0.07	0.84	0.0213	0.0047	2.109	0.0030	0.1331	0.4789
0.08	0.96	0.0244	0.0063	2.827	0.0041	0.1784	0.6420
0.09	1.08	0.0274	0.0080	3.590	0.0052	0.2266	0.8152
0.10	1.20	0.0305	0.0101	4.533	0.0065	0.2860	1.029
0.11	1.32	0.0335	0.0122	5.475	0.0079	0.3455	1.243
0.12	1.44	0.0366	0.0146	6.552	0.0094	0.4135	1.488
0.13	1.56	0.0396	0.0173	7.764	0.0112	0.4899	1.763
0.14	1.68	0.0427	0.0202	9.066	0.0131	0.5721	2.058
0.15	1.80	0.0457	0.0233	10.46	0.0151	0.6599	2.374
0.16	1.92	0.0488	0.0267	11.98	0.0173	0.7561	2.721
0.17	2.04	0.0518	0.0304	13.64	0.0196	0.8609	3.098
0.18	2.16	0.0549	0.0343	15.39	0.0222	0.9714	3.495
0.19	2.28	0.0579	0.0385	17.28	0.0249	1.090	3.923
0.20	2.40	0.0610	0.0431	19.34	0.0279	1.221	4.392
0.21	2.52	0.0640	0.0479	21.50	0.0310	1.357	4.881
0.22	2.64	0.0671	0.0530	23.79	0.0343	1.501	5.401
0.23	2.76	0.0701	0.0585	26.25	0.0378	1.657	5.961
0.24	2.88	0.0732	0.0643	28.86	0.0416	1.821	6.552
0.25	3.00	0.0762	0.0704	31.60	0.0455	1.994	7.174
0.26	3.12	0.0792	0.0767	34.42	0.0496	2.172	7.816
0.27	3.24	0.0823	0.0834	37.43	0.0539	2.362	8.498
0.28	3.36	0.0853	0.0905	40.62	0.0585	2.563	9.222
0.29	3.48	0.0884	0.0979	43.94	0.0633	2.773	9.976
0.30	3.60	0.0914	0.1057	47.44	0.0683	2.993	10.77



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	0.1139	51.12	0.0736	3.226	11.61
0.32	3.84	0.0975	0.1224	54.93	0.0791	3.466	12.47
0.33	3.96	0.1006	0.1314	58.97	0.0849	3.721	13.39
0.34	4.08	0.1036	0.1407	63.15	0.0909	3.985	14.34
0.35	4.20	0.1067	0.1505	67.54	0.0973	4.262	15.34
0.36	4.32	0.1097	0.1607	72.12	0.1039	4.551	16.38
0.37	4.44	0.1128	0.1713	76.88	0.1107	4.851	17.46
0.38	4.56	0.1158	0.1823	81.82	0.1178	5.163	18.58
0.39	4.68	0.1189	0.1938	86.98	0.1253	5.488	19.75
0.40	4.80	0.1219	0.2050	92.00	0.1325	5.806	20.89
0.41	4.92	0.1250	0.2170	97.39	0.1402	6.145	22.11
0.42	5.04	0.1280	0.2300	103.2	0.1486	6.514	23.44
0.43	5.16	0.1311	0.2440	109.5	0.1577	6.910	24.86
0.44	5.28	0.1341	0.2570	115.3	0.1661	7.278	26.19
0.45	5.40	0.1372	0.2710	121.6	0.1751	7.675	27.61
0.46	5.52	0.1402	0.2850	127.9	0.1842	8.071	29.04
0.47	5.64	0.1433	0.3000	134.6	0.1939	8.496	30.57
0.48	5.76	0.1463	0.3150	141.4	0.2036	8.921	32.10
0.49	5.88	0.1494	0.3310	148.6	0.2139	9.374	33.73

Source:

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