

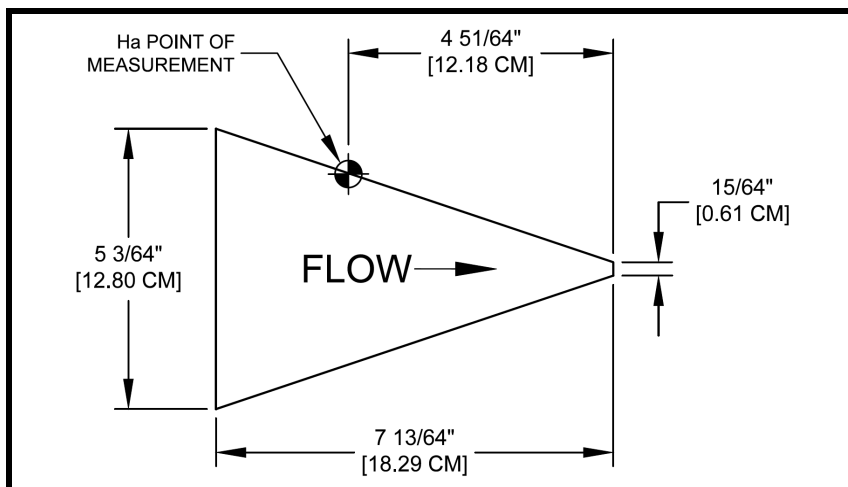


0.4-Foot HS Flume Discharge Table

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

Formulas (H in feet): $CFS = 0.000109 - 0.001305 H_{ft}^{0.5} + 0.0732846 H_{ft}^{1.5} + 0.6645462 H_{ft}^{2.5}$
 Formulas (H in meters): $L/S = 0.003086536 - 0.06693418 H_m^{0.5} + 12.33204684 H_m^{1.5} + 366.8872845 H_m^{2.5}$

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	0.00016	0.0718	0.0001	0.0045	0.0163
0.03	0.36	0.0091	0.00037	0.1661	0.0002	0.0105	0.0377
0.04	0.48	0.0122	0.00064	0.2872	0.0004	0.0181	0.0652
0.05	0.60	0.0152	0.00098	0.4398	0.0006	0.0278	0.0999
0.06	0.72	0.0183	0.00141	0.6328	0.0009	0.0399	0.1437
0.07	0.84	0.0213	0.00194	0.8707	0.0013	0.0549	0.1977
0.08	0.96	0.0244	0.00258	1.158	0.0017	0.0731	0.2629
0.09	1.08	0.0274	0.00332	1.490	0.0021	0.0940	0.3383
0.10	1.20	0.0305	0.00417	1.871	0.0027	0.1181	0.4249
0.11	1.32	0.0335	0.00509	2.284	0.0033	0.1441	0.5187
0.12	1.44	0.0366	0.00608	2.729	0.0039	0.1722	0.6196
0.13	1.56	0.0396	0.00717	3.218	0.0046	0.2031	0.7306
0.14	1.68	0.0427	0.00837	3.756	0.0054	0.2370	0.8529
0.15	1.80	0.0457	0.00968	4.344	0.0063	0.2741	0.9864
0.16	1.92	0.0488	0.0111	4.982	0.0072	0.3144	1.131
0.17	2.04	0.0518	0.0126	5.655	0.0081	0.3568	1.284
0.18	2.16	0.0549	0.0143	6.418	0.0092	0.4050	1.457
0.19	2.28	0.0579	0.0161	7.226	0.0104	0.4560	1.641
0.20	2.40	0.0610	0.0179	8.034	0.0116	0.5069	1.824
0.21	2.52	0.0640	0.0200	8.976	0.0129	0.5664	2.038
0.22	2.64	0.0671	0.0221	9.918	0.0143	0.6259	2.252
0.23	2.76	0.0701	0.0244	10.95	0.0158	0.6910	2.486
0.24	2.88	0.0732	0.0268	12.03	0.0173	0.7590	2.731
0.25	3.00	0.0762	0.0293	13.15	0.0189	0.8298	2.986
0.26	3.12	0.0792	0.0320	14.36	0.0207	0.9062	3.261
0.27	3.24	0.0823	0.0348	15.62	0.0225	0.9855	3.546
0.28	3.36	0.0853	0.0378	16.96	0.0244	1.070	3.852
0.29	3.48	0.0884	0.0409	18.36	0.0264	1.158	4.168
0.30	3.60	0.0914	0.0441	19.79	0.0285	1.249	4.494



Curve fitted equation accurate to within 1.5%

Notes:

Discharge is calculated to top of flume

Not suitable for use with unscreened sanitary flows

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	0.0475	21.32	0.0307	1.345	4.840
0.32	3.84	0.0975	0.0511	22.93	0.0330	1.447	5.207
0.33	3.96	0.1006	0.0548	24.59	0.0354	1.552	5.584
0.34	4.08	0.1036	0.0586	26.30	0.0379	1.660	5.971
0.35	4.20	0.1067	0.0626	28.09	0.0405	1.773	6.379
0.36	4.32	0.1097	0.0668	29.98	0.0432	1.892	6.807
0.37	4.44	0.1128	0.0711	31.91	0.0460	2.014	7.245
0.38	4.56	0.1158	0.0756	33.93	0.0489	2.141	7.704
0.39	4.68	0.1189	0.0803	36.04	0.0519	2.274	8.183

Source:

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