

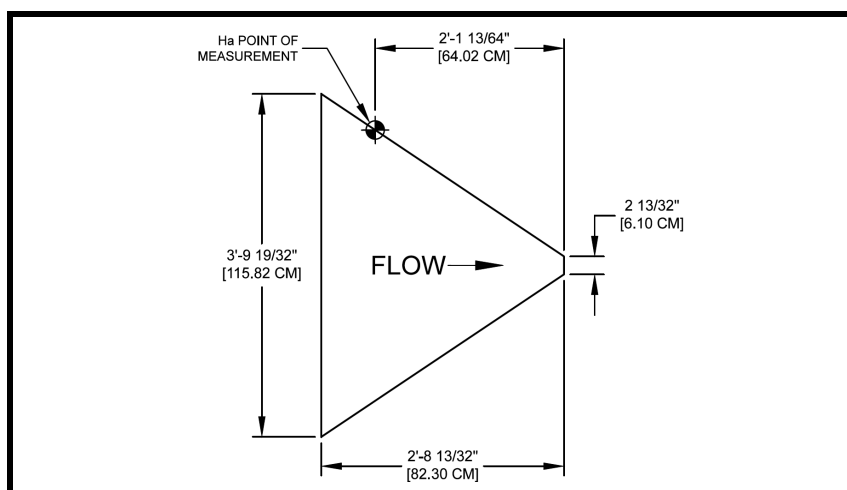


2.0-Foot H Flume Discharge Table

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

Formulas (H in feet): $CFS = 0.00787 - 0.01082 H_{ft}^{0.5} + 0.745962 H_{ft}^{1.5} + 1.511207 H_{ft}^{2.5}$
 Formulas (H in meters): $L/S = 0.022285358 - 0.55496382 H_m^{0.5} + 125.5275778 H_m^{1.5} + 939.5717311 H_m^{2.5}$

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	0.0014	0.6283	0.0009	0.0396	0.1427
0.03	0.36	0.0091	0.0031	1.391	0.0020	0.0878	0.3159
0.04	0.48	0.0122	0.0050	2.244	0.0032	0.1416	0.5095
0.05	0.60	0.0152	0.0073	3.276	0.0047	0.2067	0.7439
0.06	0.72	0.0183	0.0100	4.488	0.0065	0.2832	1.019
0.07	0.84	0.0213	0.0130	5.834	0.0084	0.3682	1.325
0.08	0.96	0.0244	0.0166	7.450	0.0107	0.4701	1.692
0.09	1.08	0.0274	0.0205	9.200	0.0132	0.5806	2.089
0.10	1.20	0.0305	0.0248	11.13	0.0160	0.7023	2.527
0.11	1.32	0.0335	0.0293	13.15	0.0189	0.8298	2.986
0.12	1.44	0.0366	0.0341	15.30	0.0220	0.9657	3.475
0.13	1.56	0.0396	0.0392	17.59	0.0253	1.110	3.994
0.14	1.68	0.0427	0.0447	20.06	0.0289	1.266	4.555
0.15	1.80	0.0457	0.0505	22.66	0.0326	1.430	5.146
0.16	1.92	0.0488	0.0567	25.45	0.0366	1.606	5.778
0.17	2.04	0.0518	0.0632	28.36	0.0408	1.790	6.440
0.18	2.16	0.0549	0.0701	31.46	0.0453	1.985	7.143
0.19	2.28	0.0579	0.0774	34.74	0.0500	2.192	7.887
0.20	2.40	0.0610	0.0850	38.15	0.0549	2.407	8.662
0.21	2.52	0.0640	0.0930	41.74	0.0601	2.634	9.477
0.22	2.64	0.0671	0.1015	45.55	0.0656	2.874	10.34
0.23	2.76	0.0701	0.1103	49.50	0.0713	3.124	11.24
0.24	2.88	0.0732	0.1195	53.63	0.0772	3.384	12.18
0.25	3.00	0.0762	0.1290	57.90	0.0834	3.653	13.15
0.26	3.12	0.0792	0.1390	62.38	0.0898	3.936	14.16
0.27	3.24	0.0823	0.1494	67.05	0.0966	4.231	15.22
0.28	3.36	0.0853	0.1602	71.90	0.1035	4.537	16.32
0.29	3.48	0.0884	0.1714	76.92	0.1108	4.854	17.47
0.30	3.60	0.0914	0.1830	82.13	0.1183	5.183	18.65



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	0.1950	87.52	0.1260	5.522	19.87
0.32	3.84	0.0975	0.2070	92.90	0.1338	5.862	21.09
0.33	3.96	0.1006	0.2200	98.74	0.1422	6.230	22.42
0.34	4.08	0.1036	0.2340	105.0	0.1512	6.627	23.84
0.35	4.20	0.1067	0.2480	111.3	0.1603	7.023	25.27
0.36	4.32	0.1097	0.2620	117.6	0.1693	7.420	26.70
0.37	4.44	0.1128	0.2760	123.9	0.1784	7.816	28.12
0.38	4.56	0.1158	0.2910	130.6	0.1881	8.241	29.65
0.39	4.68	0.1189	0.3070	137.8	0.1984	8.694	31.28
0.40	4.80	0.1219	0.3230	145.0	0.2088	9.147	32.91
0.41	4.92	0.1250	0.3390	152.1	0.2191	9.600	34.54
0.42	5.04	0.1280	0.3560	159.8	0.2301	10.08	36.28
0.43	5.16	0.1311	0.3740	167.9	0.2417	10.59	38.11
0.44	5.28	0.1341	0.3920	175.9	0.2533	11.10	39.94
0.45	5.40	0.1372	0.4100	184.0	0.2650	11.61	41.78
0.46	5.52	0.1402	0.4290	192.5	0.2773	12.15	43.72
0.47	5.64	0.1433	0.4480	201.1	0.2895	12.69	45.65
0.48	5.76	0.1463	0.4680	210.0	0.3025	13.25	47.69
0.49	5.88	0.1494	0.4880	219.0	0.3154	13.82	49.73
0.50	6.00	0.1524	0.5090	228.4	0.3290	14.41	51.87
0.51	6.12	0.1554	0.5300	237.9	0.3425	15.01	54.01
0.52	6.24	0.1585	0.5520	247.7	0.3568	15.63	56.25
0.53	6.36	0.1615	0.5740	257.6	0.3710	16.26	58.49
0.54	6.48	0.1646	0.5970	267.9	0.3858	16.91	60.83
0.55	6.60	0.1676	0.6200	278.3	0.4007	17.56	63.18
0.56	6.72	0.1707	0.6440	289.0	0.4162	18.24	65.62
0.57	6.84	0.1737	0.6680	299.8	0.4317	18.92	68.07
0.58	6.96	0.1768	0.6930	311.0	0.4479	19.63	70.62
0.59	7.08	0.1798	0.7190	322.7	0.4647	20.36	73.27
0.60	7.20	0.1829	0.7450	334.4	0.4815	21.10	75.92
0.61	7.32	0.1859	0.7710	346.0	0.4983	21.83	78.56
0.62	7.44	0.1890	0.7980	358.1	0.5157	22.60	81.32
0.63	7.56	0.1920	0.8260	370.7	0.5338	23.39	84.17
0.64	7.68	0.1951	0.8540	383.3	0.5519	24.19	87.02
0.65	7.80	0.1981	0.8820	395.8	0.5700	24.98	89.88
0.66	7.92	0.2012	0.9110	408.9	0.5888	25.80	92.83
0.67	8.04	0.2042	0.9410	422.3	0.6082	26.65	95.89
0.68	8.16	0.2073	0.9710	435.8	0.6276	27.50	98.94
0.69	8.28	0.2103	1.002	449.7	0.6476	28.38	102.1
0.70	8.40	0.2134	1.030	462.3	0.6657	29.17	105.0
0.71	8.52	0.2164	1.070	480.2	0.6915	30.30	109.0
0.72	8.64	0.2195	1.100	493.7	0.7109	31.15	112.1
0.73	8.76	0.2225	1.130	507.1	0.7303	32.00	115.1
0.74	8.88	0.2256	1.160	520.6	0.7497	32.85	118.2
0.75	9.00	0.2286	1.200	538.6	0.7756	33.98	122.3
0.76	9.12	0.2316	1.230	552.0	0.7949	34.83	125.3
0.77	9.24	0.2347	1.270	570.0	0.8208	35.97	129.4
0.78	9.36	0.2377	1.300	583.4	0.8402	36.82	132.5
0.79	9.48	0.2408	1.340	601.4	0.8660	37.95	136.5
0.80	9.60	0.2438	1.380	619.3	0.8919	39.08	140.6

Source:

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FEET	INCHES	METERS	CFS	GPM	MGD	L/S	M3/HR
0.81	9.72	0.2469	1.420	637.3	0.9177	40.21	144.7
0.82	9.84	0.2499	1.460	655.2	0.9436	41.35	148.8
0.83	9.96	0.2530	1.490	668.7	0.9630	42.20	151.8
0.84	10.08	0.2560	1.530	686.7	0.9888	43.33	155.9
0.85	10.20	0.2591	1.570	704.6	1.015	44.46	160.0
0.86	10.32	0.2621	1.620	727.1	1.047	45.88	165.1
0.87	10.44	0.2652	1.660	745.0	1.073	47.01	169.2
0.88	10.56	0.2682	1.700	763.0	1.099	48.14	173.2
0.89	10.68	0.2713	1.740	780.9	1.125	49.28	177.3
0.90	10.80	0.2743	1.780	798.9	1.150	50.41	181.4
0.91	10.92	0.2774	1.830	821.3	1.183	51.83	186.5
0.92	11.04	0.2804	1.870	839.3	1.209	52.96	190.6
0.93	11.16	0.2835	1.920	861.7	1.241	54.37	195.6
0.94	11.28	0.2865	1.960	879.6	1.267	55.51	199.7
0.95	11.40	0.2896	2.010	902.1	1.299	56.92	204.8
0.96	11.52	0.2926	2.060	924.5	1.331	58.34	209.9
0.97	11.64	0.2957	2.100	942.5	1.357	59.47	214.0
0.98	11.76	0.2987	2.150	964.9	1.390	60.89	219.1
0.99	11.88	0.3018	2.200	987.4	1.422	62.30	224.2
1.00	12.00	0.3048	2.250	1010	1.454	63.72	229.3
1.01	12.12	0.3078	2.300	1032	1.486	65.14	234.4
1.02	12.24	0.3109	2.350	1055	1.519	66.55	239.5
1.03	12.36	0.3139	2.400	1077	1.551	67.97	244.6
1.04	12.48	0.3170	2.450	1100	1.583	69.38	249.7
1.05	12.60	0.3200	2.510	1126	1.622	71.08	255.8
1.06	12.72	0.3231	2.560	1149	1.655	72.50	260.9
1.07	12.84	0.3261	2.620	1176	1.693	74.20	267.0
1.08	12.96	0.3292	2.670	1198	1.726	75.61	272.1
1.09	13.08	0.3322	2.730	1225	1.764	77.31	278.2
1.10	13.20	0.3353	2.780	1248	1.797	78.73	283.3
1.11	13.32	0.3383	2.840	1275	1.835	80.43	289.4
1.12	13.44	0.3414	2.900	1302	1.874	82.13	295.5
1.13	13.56	0.3444	2.960	1328	1.913	83.83	301.6
1.14	13.68	0.3475	3.020	1355	1.952	85.53	307.7
1.15	13.80	0.3505	3.080	1382	1.991	87.23	313.9
1.16	13.92	0.3536	3.140	1409	2.029	88.92	320.0
1.17	14.04	0.3566	3.200	1436	2.068	90.62	326.1
1.18	14.16	0.3597	3.260	1463	2.107	92.32	332.2
1.19	14.28	0.3627	3.320	1490	2.146	94.02	338.3
1.20	14.40	0.3658	3.380	1517	2.184	95.72	344.4
1.21	14.52	0.3688	3.450	1548	2.230	97.70	351.6
1.22	14.64	0.3719	3.510	1575	2.269	99.40	357.7
1.23	14.76	0.3749	3.580	1607	2.314	101.4	364.8
1.24	14.88	0.3780	3.650	1638	2.359	103.4	371.9
1.25	15.00	0.3810	3.710	1665	2.398	105.1	378.0
1.26	15.12	0.3840	3.780	1696	2.443	107.0	385.2
1.27	15.24	0.3871	3.850	1728	2.488	109.0	392.3
1.28	15.36	0.3901	3.920	1759	2.533	111.0	399.4
1.29	15.48	0.3932	3.990	1791	2.579	113.0	406.6
1.30	15.60	0.3962	4.060	1822	2.624	115.0	413.7

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FEET	INCHES	METERS	CFS	GPM	MGD	L/S	M3/HR
1.31	15.72	0.3993	4.130	1854	2.669	117.0	420.8
1.32	15.84	0.4023	4.200	1885	2.714	118.9	428.0
1.33	15.96	0.4054	4.280	1921	2.766	121.2	436.1
1.34	16.08	0.4084	4.350	1952	2.811	123.2	443.3
1.35	16.20	0.4115	4.430	1988	2.863	125.5	451.4
1.36	16.32	0.4145	4.500	2020	2.908	127.4	458.6
1.37	16.44	0.4176	4.580	2056	2.960	129.7	466.7
1.38	16.56	0.4206	4.660	2091	3.012	132.0	474.9
1.39	16.68	0.4237	4.740	2127	3.063	134.2	483.0
1.40	16.80	0.4267	4.820	2163	3.115	136.5	491.2
1.41	16.92	0.4298	4.900	2199	3.167	138.8	499.3
1.42	17.04	0.4328	4.980	2235	3.219	141.0	507.5
1.43	17.16	0.4359	5.060	2271	3.270	143.3	515.6
1.44	17.28	0.4389	5.140	2307	3.322	145.6	523.8
1.45	17.40	0.4420	5.230	2347	3.380	148.1	532.9
1.46	17.52	0.4450	5.310	2383	3.432	150.4	541.1
1.47	17.64	0.4481	5.400	2424	3.490	152.9	550.3
1.48	17.76	0.4511	5.480	2459	3.542	155.2	558.4
1.49	17.88	0.4542	5.570	2500	3.600	157.7	567.6
1.50	18.00	0.4572	5.650	2536	3.652	160.0	575.7
1.51	18.12	0.4602	5.740	2576	3.710	162.6	584.9
1.52	18.24	0.4633	5.830	2617	3.768	165.1	594.1
1.53	18.36	0.4663	5.920	2657	3.826	167.7	603.2
1.54	18.48	0.4694	6.010	2697	3.884	170.2	612.4
1.55	18.60	0.4724	6.110	2742	3.949	173.0	622.6
1.56	18.72	0.4755	6.200	2783	4.007	175.6	631.8
1.57	18.84	0.4785	6.290	2823	4.065	178.1	641.0
1.58	18.96	0.4816	6.380	2863	4.123	180.7	650.1
1.59	19.08	0.4846	6.480	2908	4.188	183.5	660.3
1.60	19.20	0.4877	6.580	2953	4.253	186.3	670.5
1.61	19.32	0.4907	6.670	2993	4.311	188.9	679.7
1.62	19.44	0.4938	6.770	3038	4.375	191.7	689.9
1.63	19.56	0.4968	6.870	3083	4.440	194.6	700.1
1.64	19.68	0.4999	6.970	3128	4.505	197.4	710.2
1.65	19.80	0.5029	7.070	3173	4.569	200.2	720.4
1.66	19.92	0.5060	7.170	3218	4.634	203.1	730.6
1.67	20.04	0.5090	7.270	3263	4.699	205.9	740.8
1.68	20.16	0.5121	7.370	3308	4.763	208.7	751.0
1.69	20.28	0.5151	7.470	3353	4.828	211.6	761.2
1.70	20.40	0.5182	7.580	3402	4.899	214.7	772.4
1.71	20.52	0.5212	7.680	3447	4.964	217.5	782.6
1.72	20.64	0.5243	7.790	3496	5.035	220.6	793.8
1.73	20.76	0.5273	7.900	3546	5.106	223.7	805.0
1.74	20.88	0.5304	8.000	3590	5.170	226.6	815.2
1.75	21.00	0.5334	8.110	3640	5.241	229.7	826.4
1.76	21.12	0.5364	8.220	3689	5.313	232.8	837.6
1.77	21.24	0.5395	8.330	3739	5.384	235.9	848.8
1.78	21.36	0.5425	8.440	3788	5.455	239.0	860.0
1.79	21.48	0.5456	8.560	3842	5.532	242.4	872.3
1.80	21.60	0.5486	8.670	3891	5.603	245.5	883.5

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FEET	INCHES	METERS	CFS	GPM	MGD	L/S	M3/HR
1.81	21.72	0.5517	8.780	3940	5.675	248.6	894.7
1.82	21.84	0.5547	8.900	3994	5.752	252.0	906.9
1.83	21.96	0.5578	9.010	4044	5.823	255.2	918.1
1.84	22.08	0.5608	9.130	4098	5.901	258.6	930.3
1.85	22.20	0.5639	9.240	4147	5.972	261.7	941.6
1.86	22.32	0.5669	9.360	4201	6.049	265.1	953.8
1.87	22.44	0.5700	9.480	4255	6.127	268.5	966.0
1.88	22.56	0.5730	9.600	4308	6.204	271.9	978.2
1.89	22.68	0.5761	9.720	4362	6.282	275.3	990.5
1.90	22.80	0.5791	9.850	4421	6.366	279.0	1004
1.91	22.92	0.5822	9.970	4475	6.444	282.4	1016
1.92	23.04	0.5852	10.09	4528	6.521	285.7	1028
1.93	23.16	0.5883	10.21	4582	6.599	289.1	1040
1.94	23.28	0.5913	10.34	4641	6.683	292.8	1054
1.95	23.40	0.5944	10.47	4699	6.767	296.5	1067
1.96	23.52	0.5974	10.60	4757	6.851	300.2	1080
1.97	23.64	0.6005	10.72	4811	6.928	303.6	1092
1.98	23.76	0.6035	10.85	4869	7.012	307.3	1106
1.99	23.88	0.6066	10.98	4928	7.096	311.0	1119

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