



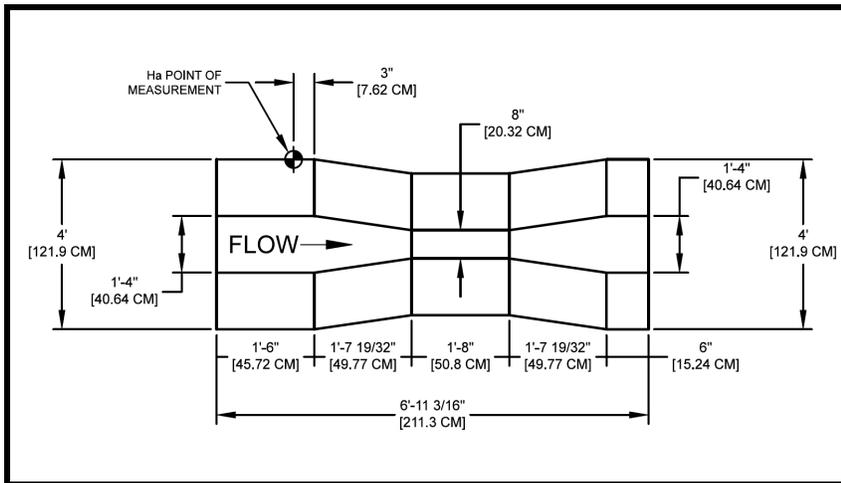
# 8-Inch 60-Degree Trapezoidal Flume Discharge Table

80% Submergence Transition ±3-5% Accuracy

Formulas (H in feet):  $CFS = 2.22 H_{ft}^{1.5} + 1.467 H_{ft}^{2.5}$   
 Formulas (H in meters):  $L/S = 373.6 H_m^{1.5} + 809.9 H_m^{2.5}$

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					
0.11	1.32	0.0335					
0.12	1.44	0.0366					
0.13	1.56	0.0396					
0.14	1.68	0.0427					
0.15	1.80	0.0457					
0.16	1.92	0.0488					
0.17	2.04	0.0518					
0.18	2.16	0.0549					
0.19	2.28	0.0579					
0.20	2.40	0.0610					
0.21	2.52	0.0640	0.2433	109.2	0.1572	6.890	24.79
0.22	2.64	0.0671	0.2624	117.8	0.1696	7.431	26.74
0.23	2.76	0.0701	0.2821	126.6	0.1823	7.989	28.75
0.24	2.88	0.0732	0.3024	135.7	0.1954	8.564	30.82
0.25	3.00	0.0762	0.3233	145.1	0.2090	9.157	32.95
0.26	3.12	0.0792	0.3449	154.8	0.2229	9.767	35.14
0.27	3.24	0.0823	0.3670	164.7	0.2372	10.39	37.40
0.28	3.36	0.0853	0.3898	174.9	0.2519	11.04	39.72
0.29	3.48	0.0884	0.4131	185.4	0.2670	11.70	42.10
0.30	3.60	0.0914	0.4371	196.2	0.2825	12.38	44.54

Excessive error due to fluid-flow properties and boundary conditions



Sources: Water Measurement in Small Irrigation Channels Using Trapezoidal Flumes, *Transactions of the ASAE*, Vol. 9, No. 3, 1966



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FEET	INCHES	METERS	CFS	GPM	MGD	L/S	M3/HR
0.31	3.72	0.0945	0.4617	207.2	0.2984	13.07	47.04
0.32	3.84	0.0975	0.4868	218.5	0.3146	13.79	49.61
0.33	3.96	0.1006	0.5126	230.1	0.3313	14.52	52.24
0.34	4.08	0.1036	0.5390	241.9	0.3484	15.26	54.92
0.35	4.20	0.1067	0.5660	254.0	0.3658	16.03	57.67
0.36	4.32	0.1097	0.5936	266.4	0.3836	16.81	60.49
0.37	4.44	0.1128	0.6218	279.1	0.4019	17.61	63.36
0.38	4.56	0.1158	0.6506	292.0	0.4205	18.43	66.30
0.39	4.68	0.1189	0.6800	305.2	0.4395	19.26	69.30
0.40	4.80	0.1219	0.7101	318.7	0.4589	20.11	72.36
0.41	4.92	0.1250	0.7407	332.4	0.4787	20.98	75.48
0.42	5.04	0.1280	0.7720	346.5	0.4989	21.86	78.66
0.43	5.16	0.1311	0.8038	360.8	0.5195	22.76	81.91
0.44	5.28	0.1341	0.8363	375.3	0.5405	23.68	85.22
0.45	5.40	0.1372	0.8694	390.2	0.5619	24.62	88.59
0.46	5.52	0.1402	0.9031	405.3	0.5837	25.58	92.03
0.47	5.64	0.1433	0.9375	420.7	0.6059	26.55	95.53
0.48	5.76	0.1463	0.9724	436.4	0.6285	27.54	99.09
0.49	5.88	0.1494	1.008	452.4	0.6515	28.55	102.7
0.50	6.00	0.1524	1.044	468.6	0.6749	29.57	106.4
0.51	6.12	0.1554	1.081	485.2	0.6987	30.62	110.2
0.52	6.24	0.1585	1.118	502.0	0.7229	31.68	114.0
0.53	6.36	0.1615	1.157	519.1	0.7475	32.75	117.9
0.54	6.48	0.1646	1.195	536.4	0.7725	33.85	121.8
0.55	6.60	0.1676	1.235	554.1	0.7979	34.96	125.8
0.56	6.72	0.1707	1.275	572.0	0.8238	36.10	129.9
0.57	6.84	0.1737	1.315	590.3	0.8500	37.25	134.0
0.58	6.96	0.1768	1.356	608.8	0.8767	38.41	138.2
0.59	7.08	0.1798	1.398	627.6	0.9037	39.60	142.5
0.60	7.20	0.1829	1.441	646.7	0.9312	40.80	146.8
0.61	7.32	0.1859	1.484	666.0	0.9591	42.03	151.2
0.62	7.44	0.1890	1.528	685.7	0.9874	43.27	155.7
0.63	7.56	0.1920	1.572	705.6	1.016	44.53	160.2
0.64	7.68	0.1951	1.617	725.9	1.045	45.80	164.8
0.65	7.80	0.1981	1.663	746.4	1.075	47.10	169.5
0.66	7.92	0.2012	1.709	767.2	1.105	48.41	174.2
0.67	8.04	0.2042	1.757	788.3	1.135	49.74	179.0
0.68	8.16	0.2073	1.804	809.7	1.166	51.10	183.9
0.69	8.28	0.2103	1.853	831.4	1.197	52.46	188.8
0.70	8.40	0.2134	1.902	853.4	1.229	53.85	193.8
0.71	8.52	0.2164	1.951	875.7	1.261	55.26	198.8
0.72	8.64	0.2195	2.002	898.3	1.294	56.68	204.0
0.73	8.76	0.2225	2.053	921.2	1.327	58.13	209.2
0.74	8.88	0.2256	2.104	944.4	1.360	59.59	214.4
0.75	9.00	0.2286	2.157	967.9	1.394	61.07	219.8
0.76	9.12	0.2316	2.210	991.7	1.428	62.57	225.2
0.77	9.24	0.2347	2.263	1016	1.463	64.09	230.6
0.78	9.36	0.2377	2.318	1040	1.498	65.63	236.2
0.79	9.48	0.2408	2.373	1065	1.533	67.19	241.8
0.80	9.60	0.2438	2.428	1090	1.569	68.77	247.4



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FEET	INCHES	METERS	CFS	GPM	MGD	L/S	M3/HR
0.81	9.72	0.2469	2.485	1115	1.606	70.36	253.2
0.82	9.84	0.2499	2.542	1141	1.643	71.98	259.0
0.83	9.96	0.2530	2.599	1167	1.680	73.62	264.9
0.84	10.08	0.2560	2.658	1193	1.718	75.27	270.8
0.85	10.20	0.2591	2.717	1219	1.756	76.94	276.9
0.86	10.32	0.2621	2.777	1246	1.795	78.64	282.9
0.87	10.44	0.2652	2.837	1273	1.834	80.35	289.1
0.88	10.56	0.2682	2.898	1301	1.873	82.08	295.3
0.89	10.68	0.2713	2.960	1329	1.913	83.83	301.6
0.90	10.80	0.2743	3.023	1357	1.954	85.60	308.0
0.91	10.92	0.2774	3.086	1385	1.994	87.40	314.5
0.92	11.04	0.2804	3.150	1414	2.036	89.21	321.0
0.93	11.16	0.2835	3.215	1443	2.078	91.04	327.6
0.94	11.28	0.2865	3.280	1472	2.120	92.89	334.2
0.95	11.40	0.2896	3.346	1502	2.163	94.76	341.0
0.96	11.52	0.2926	3.413	1532	2.206	96.65	347.8
0.97	11.64	0.2957	3.480	1562	2.249	98.56	354.6
0.98	11.76	0.2987	3.548	1593	2.293	100.5	361.6
0.99	11.88	0.3018	3.617	1623	2.338	102.4	368.6
1.00	12.00	0.3048	3.687	1655	2.383	104.4	375.7
1.01	12.12	0.3078	3.757	1686	2.428	106.4	382.9
1.02	12.24	0.3109	3.828	1718	2.474	108.4	390.1
1.03	12.36	0.3139	3.900	1750	2.521	110.5	397.4
1.04	12.48	0.3170	3.973	1783	2.568	112.5	404.8
1.05	12.60	0.3200	4.046	1816	2.615	114.6	412.3
1.06	12.72	0.3231	4.120	1849	2.663	116.7	419.8
1.07	12.84	0.3261	4.194	1882	2.711	118.8	427.4
1.08	12.96	0.3292	4.270	1916	2.760	120.9	435.1
1.09	13.08	0.3322	4.346	1950	2.809	123.1	442.9
1.10	13.20	0.3353	4.423	1985	2.859	125.3	450.7
1.11	13.32	0.3383	4.501	2020	2.909	127.5	458.6
1.12	13.44	0.3414	4.579	2055	2.959	129.7	466.6
1.13	13.56	0.3444	4.658	2090	3.010	131.9	474.6
1.14	13.68	0.3475	4.738	2126	3.062	134.2	482.8
1.15	13.80	0.3505	4.818	2162	3.114	136.5	491.0
1.16	13.92	0.3536	4.900	2199	3.167	138.8	499.3
1.17	14.04	0.3566	4.982	2236	3.220	141.1	507.6
1.18	14.16	0.3597	5.065	2273	3.273	143.4	516.1
1.19	14.28	0.3627	5.148	2310	3.327	145.8	524.6
1.20	14.40	0.3658	5.232	2348	3.382	148.2	533.2
1.21	14.52	0.3688	5.317	2386	3.437	150.6	541.8
1.22	14.64	0.3719	5.403	2425	3.492	153.0	550.6
1.23	14.76	0.3749	5.490	2464	3.548	155.5	559.4
1.24	14.88	0.3780	5.577	2503	3.605	157.9	568.3
1.25	15.00	0.3810	5.665	2543	3.661	160.4	577.3
1.26	15.12	0.3840	5.754	2582	3.719	163.0	586.3
1.27	15.24	0.3871	5.844	2623	3.777	165.5	595.5
1.28	15.36	0.3901	5.934	2663	3.835	168.1	604.7
1.29	15.48	0.3932	6.025	2704	3.894	170.6	614.0
1.30	15.60	0.3962	6.117	2745	3.954	173.2	623.4

Sources: Water Measurement in Small Irrigation Channels Using Trapezoidal Flumes, Transactions of the ASAE, Vol. 9, No. 3, 1966



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FEET	INCHES	METERS	CFS	GPM	MGD	L/S	M3/HR
1.31	15.72	0.3993	6.210	2787	4.014	175.9	632.8
1.32	15.84	0.4023	6.304	2829	4.074	178.5	642.3
1.33	15.96	0.4054	6.398	2871	4.135	181.2	651.9
1.34	16.08	0.4084	6.493	2914	4.196	183.9	661.6
1.35	16.20	0.4115	6.589	2957	4.258	186.6	671.4
1.36	16.32	0.4145	6.685	3000	4.321	189.3	681.2
1.37	16.44	0.4176	6.783	3044	4.384	192.1	691.2
1.38	16.56	0.4206	6.881	3088	4.447	194.9	701.2
1.39	16.68	0.4237	6.980	3133	4.511	197.7	711.2
1.40	16.80	0.4267	7.080	3177	4.576	200.5	721.4
1.41	16.92	0.4298	7.180	3222	4.641	203.3	731.7
1.42	17.04	0.4328	7.281	3268	4.706	206.2	742.0
1.43	17.16	0.4359	7.384	3314	4.772	209.1	752.4
1.44	17.28	0.4389	7.487	3360	4.839	212.0	762.9
1.45	17.40	0.4420	7.590	3407	4.906	215.0	773.4
1.46	17.52	0.4450	7.695	3453	4.973	217.9	784.1
1.47	17.64	0.4481	7.800	3501	5.041	220.9	794.8
1.48	17.76	0.4511	7.906	3548	5.110	223.9	805.6
1.49	17.88	0.4542	8.013	3596	5.179	226.9	816.5
1.50	18.00	0.4572	8.121	3645	5.249	230.0	827.5
1.51	18.12	0.4602	8.230	3693	5.319	233.1	838.6
1.52	18.24	0.4633	8.339	3743	5.389	236.2	849.7
1.53	18.36	0.4663	8.449	3792	5.461	239.3	861.0
1.54	18.48	0.4694	8.560	3842	5.532	242.4	872.3
1.55	18.60	0.4724	8.672	3892	5.605	245.6	883.7
1.56	18.72	0.4755	8.785	3943	5.677	248.8	895.1
1.57	18.84	0.4785	8.898	3993	5.751	252.0	906.7
1.58	18.96	0.4816	9.012	4045	5.825	255.2	918.4
1.59	19.08	0.4846	9.127	4096	5.899	258.5	930.1
1.60	19.20	0.4877	9.243	4148	5.974	261.8	941.9
1.61	19.32	0.4907	9.360	4201	6.049	265.1	953.8
1.62	19.44	0.4938	9.478	4254	6.125	268.4	965.8
1.63	19.56	0.4968	9.596	4307	6.202	271.8	977.8
1.64	19.68	0.4999	9.715	4360	6.279	275.1	990.0
1.65	19.80	0.5029	9.835	4414	6.357	278.5	1002
1.66	19.92	0.5060	9.956	4468	6.435	282.0	1015
1.67	20.04	0.5090	10.08	4523	6.514	285.4	1027
1.68	20.16	0.5121	10.20	4578	6.593	288.9	1039
1.69	20.28	0.5151	10.32	4634	6.673	292.4	1052
1.70	20.40	0.5182	10.45	4689	6.753	295.9	1065
1.71	20.52	0.5212	10.57	4745	6.834	299.4	1077
1.72	20.64	0.5243	10.70	4802	6.915	303.0	1090
1.73	20.76	0.5273	10.83	4859	6.997	306.6	1103
1.74	20.88	0.5304	10.95	4916	7.080	310.2	1116
1.75	21.00	0.5334	11.08	4974	7.163	313.9	1129
1.76	21.12	0.5364	11.21	5032	7.246	317.5	1143
1.77	21.24	0.5395	11.34	5090	7.331	321.2	1156
1.78	21.36	0.5425	11.47	5149	7.415	324.9	1169
1.79	21.48	0.5456	11.61	5208	7.501	328.7	1183
1.80	21.60	0.5486	11.74	5268	7.586	332.4	1196

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FEET	INCHES	METERS	CFS	GPM	MGD	L/S	M3/HR
1.81	21.72	0.5517	11.87	5328	7.673	336.2	1210
1.82	21.84	0.5547	12.01	5388	7.760	340.0	1223
1.83	21.96	0.5578	12.14	5449	7.847	343.9	1237
1.84	22.08	0.5608	12.28	5510	7.935	347.7	1251
1.85	22.20	0.5639	12.42	5572	8.024	351.6	1265
1.86	22.32	0.5669	12.55	5634	8.113	355.5	1279
1.87	22.44	0.5700	12.69	5696	8.203	359.4	1293
1.88	22.56	0.5730	12.83	5759	8.293	363.4	1308
1.89	22.68	0.5761	12.97	5822	8.384	367.4	1322
1.90	22.80	0.5791	13.11	5886	8.476	371.4	1336
1.91	22.92	0.5822	13.26	5949	8.568	375.4	1351
1.92	23.04	0.5852	13.40	6014	8.660	379.5	1365
1.93	23.16	0.5883	13.54	6078	8.753	383.6	1380
1.94	23.28	0.5913	13.69	6144	8.847	387.7	1395
1.95	23.40	0.5944	13.83	6209	8.941	391.8	1410
1.96	23.52	0.5974	13.98	6275	9.036	396.0	1425
1.97	23.64	0.6005	14.13	6341	9.132	400.1	1440
1.98	23.76	0.6035	14.28	6408	9.228	404.3	1455
1.99	23.88	0.6066	14.43	6475	9.324	408.6	1470
2.00	24.00	0.6096	14.58	6542	9.422	412.8	1485
2.01	24.12	0.6126	14.73	6610	9.519	417.1	1501
2.02	24.24	0.6157	14.88	6679	9.618	421.4	1516
2.03	24.36	0.6187	15.03	6747	9.717	425.8	1532
2.04	24.48	0.6218	15.19	6816	9.816	430.1	1548
2.05	24.60	0.6248	15.34	6886	9.916	434.5	1563
2.06	24.72	0.6279	15.50	6956	10.02	438.9	1579
2.07	24.84	0.6309	15.66	7026	10.12	443.4	1595
2.08	24.96	0.6340	15.81	7097	10.22	447.8	1611
2.09	25.08	0.6370	15.97	7168	10.32	452.3	1628
2.10	25.20	0.6401	16.13	7240	10.43	456.8	1644
2.11	25.32	0.6431	16.29	7312	10.53	461.4	1660
2.12	25.44	0.6462	16.45	7384	10.63	465.9	1677
2.13	25.56	0.6492	16.61	7457	10.74	470.5	1693
2.14	25.68	0.6523	16.78	7530	10.84	475.1	1710
2.15	25.80	0.6553	16.94	7603	10.95	479.8	1726
2.16	25.92	0.6584	17.11	7677	11.06	484.5	1743
2.17	26.04	0.6614	17.27	7752	11.16	489.2	1760
2.18	26.16	0.6645	17.44	7827	11.27	493.9	1777