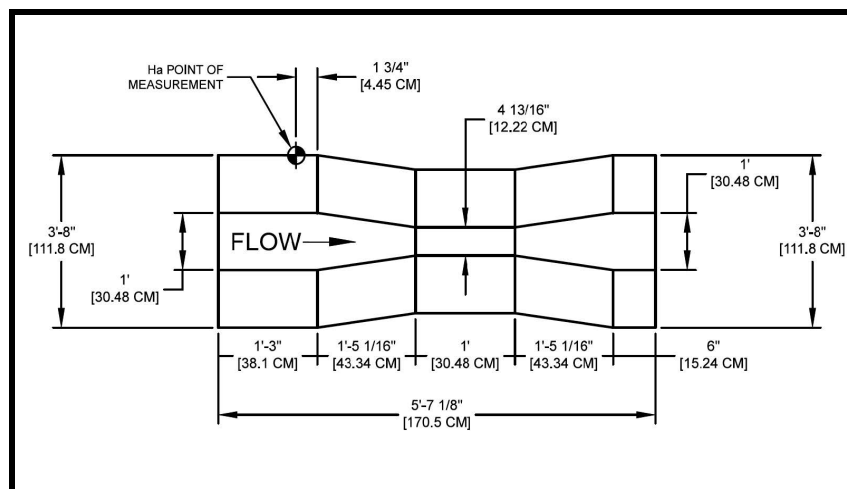


12 Inch 45-Degree SRCRC (No. 1) Trapezoidal Flume Discharge Table

80% Submergence Transition ±2-5% Accuracy

Formulas (H in feet): $CFS = 0.05 + 0.63 H_{ft}^{1.5} + 3.23 H_{ft}^{2.5}$

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					
0.03	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	0.04572					
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	0.1641	73.66	0.1061	4.648	16.72
0.21	2.52	0.0640	0.1759	78.95	0.1137	4.982	17.92
0.22	2.64	0.0671	0.1883	84.52	0.1217	5.334	19.19
0.23	2.76	0.0701	0.2014	90.40	0.1302	5.705	20.53
0.24	2.88	0.0732	0.2152	96.59	0.1391	6.095	21.93
0.25	3.00	0.0762	0.2297	103.1	0.1484	6.505	23.41
0.26	3.12	0.0792	0.2449	109.9	0.1583	6.934	24.95
0.27	3.24	0.0823	0.2607	117.0	0.1685	7.384	26.57
0.28	3.36	0.0853	0.2773	124.5	0.1792	7.854	28.26
0.29	3.48	0.0884	0.2947	132.2	0.1904	8.345	30.03
0.30	3.60	0.0914	0.3127	140.4	0.2021	8.857	31.87





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Formulas (H in feet): $CFS = 0.05 + 0.63 H_{ft}^{1.5} + 3.23 H_{ft}^{2.5}$

FEET	INCHES	METERS	CFS	GPM	MGD	L/S	M3/HR
0.31	3.72	0.0945	0.3316	148.8	0.2143	9.390	33.79
0.32	3.84	0.0975	0.3511	157.6	0.2269	9.944	35.78
0.33	3.96	0.1006	0.3715	166.7	0.2401	10.52	37.86
0.34	4.08	0.1036	0.3926	176.2	0.2538	11.12	40.01
0.35	4.20	0.1067	0.4145	186.0	0.2679	11.74	42.24
0.36	4.32	0.1097	0.4372	196.2	0.2826	12.38	44.56
0.37	4.44	0.1128	0.4608	206.8	0.2978	13.05	46.95
0.38	4.56	0.1158	0.4851	217.7	0.3135	13.74	49.43
0.39	4.68	0.1189	0.5102	229.0	0.3298	14.45	51.99
0.40	4.80	0.1219	0.5362	240.7	0.3466	15.19	54.64
0.41	4.92	0.1250	0.5631	252.7	0.3639	15.95	57.38
0.42	5.04	0.1280	0.5907	265.1	0.3818	16.73	60.20
0.43	5.16	0.1311	0.6193	277.9	0.4002	17.54	63.10
0.44	5.28	0.1341	0.6487	291.1	0.4192	18.37	66.10
0.45	5.40	0.1372	0.6789	304.7	0.4388	19.23	69.18
0.46	5.52	0.1402	0.7101	318.7	0.4589	20.11	72.36
0.47	5.64	0.1433	0.7422	333.1	0.4797	21.02	75.63
0.48	5.76	0.1463	0.7751	347.9	0.5009	21.95	78.98
0.49	5.88	0.1494	0.8090	363.1	0.5228	22.91	82.43
0.50	6.00	0.1524	0.8437	378.7	0.5453	23.89	85.98
0.51	6.12	0.1554	0.8794	394.7	0.5684	24.91	89.61
0.52	6.24	0.1585	0.9160	411.1	0.5920	25.94	93.35
0.53	6.36	0.1615	0.9536	428.0	0.6163	27.01	97.17
0.54	6.48	0.1646	0.9921	445.3	0.6412	28.10	101.1
0.55	6.60	0.1676	1.032	463.0	0.6667	29.21	105.1
0.56	6.72	0.1707	1.072	481.1	0.6928	30.36	109.2
0.57	6.84	0.1737	1.113	499.7	0.7196	31.53	113.5
0.58	6.96	0.1768	1.156	518.7	0.7470	32.73	117.8
0.59	7.08	0.1798	1.199	538.2	0.7750	33.96	122.2
0.60	7.20	0.1829	1.243	558.1	0.8037	35.22	126.7
0.61	7.32	0.1859	1.289	578.4	0.8330	36.50	131.3
0.62	7.44	0.1890	1.335	599.2	0.8629	37.81	136.1
0.63	7.56	0.1920	1.383	620.5	0.8936	39.15	140.9
0.64	7.68	0.1951	1.431	642.2	0.9248	40.52	145.8
0.65	7.80	0.1981	1.480	664.4	0.9568	41.92	150.9
0.66	7.92	0.2012	1.531	687.0	0.9894	43.35	156.0
0.67	8.04	0.2042	1.582	710.2	1.023	44.81	161.2
0.68	8.16	0.2073	1.635	733.7	1.057	46.30	166.6
0.69	8.28	0.2103	1.688	757.8	1.091	47.82	172.1
0.70	8.40	0.2134	1.743	782.3	1.127	49.37	177.6
0.71	8.52	0.2164	1.799	807.3	1.163	50.94	183.3
0.72	8.64	0.2195	1.856	832.8	1.199	52.55	189.1
0.73	8.76	0.2225	1.914	858.8	1.237	54.19	195.0
0.74	8.88	0.2256	1.973	885.3	1.275	55.86	201.0
0.75	9.00	0.2286	2.033	912.3	1.314	57.56	207.1
0.76	9.12	0.2316	2.094	939.7	1.353	59.30	213.4
0.77	9.24	0.2347	2.156	967.7	1.394	61.06	219.7
0.78	9.36	0.2377	2.220	996.1	1.434	62.86	226.2
0.79	9.48	0.2408	2.284	1025	1.476	64.69	232.7
0.80	9.60	0.2438	2.350	1055	1.519	66.54	239.4

Source: *Trapezoidal Flumes for Measuring Flow in Irrigation Channels*, USDA-ARS 41-140, March 1968



12 Inch 45-Degree SRCRC (No. 1) Trapezoidal Flume Discharge Table

80% Submergence Transition ±2-5% Accuracy

Formulas (H in feet): $CFS = 0.05 + 0.63 H_{ft}^{1.5} + 3.23 H_{ft}^{2.5}$

FEET	INCHES	METERS	CFS	GPM	MGD	L/S	M3/HR
0.81	9.72	0.2469	2.4166	1085	1.5618	68.44	246.2
0.82	9.84	0.2499	2.4845	1115	1.6057	70.36	253.2
0.83	9.96	0.2530	2.5536	1146	1.6504	72.32	260.2
0.84	10.08	0.2560	2.6238	1178	1.6958	74.31	267.4
0.85	10.20	0.2591	2.6952	1210	1.7419	76.33	274.6
0.86	10.32	0.2621	2.7678	1242	1.7888	78.38	282.0
0.87	10.44	0.2652	2.8416	1275	1.8365	80.47	289.6
0.88	10.56	0.2682	2.9165	1309	1.8849	82.60	297.2
0.89	10.68	0.2713	2.9926	1343	1.9341	84.75	304.9
0.90	10.80	0.2743	3.0699	1378	1.9841	86.94	312.8
0.91	10.92	0.2774	3.1485	1413	2.0348	89.16	320.8
0.92	11.04	0.2804	3.2282	1449	2.0864	91.42	329.0
0.93	11.16	0.2835	3.3091	1485	2.1387	93.71	337.2
0.94	11.28	0.2865	3.3912	1522	2.1918	96.04	345.6
0.95	11.40	0.2896	3.4746	1559	2.2456	98.40	354.1
0.96	11.52	0.2926	3.5592	1597	2.3003	100.8	362.7
0.97	11.64	0.2957	3.6450	1636	2.3558	103.2	371.4
0.98	11.76	0.2987	3.7321	1675	2.4121	105.7	380.3
0.99	11.88	0.3018	3.8204	1715	2.4691	108.2	389.3
1.00	12.00	0.3048	3.9100	1755	2.5270	110.7	398.4
1.01	12.12	0.3078	4.0008	1796	2.5857	113.3	407.7
1.02	12.24	0.3109	4.0929	1837	2.6453	115.9	417.1
1.03	12.36	0.3139	4.1863	1879	2.7056	118.6	426.6
1.04	12.48	0.3170	4.2809	1921	2.7668	121.2	436.2
1.05	12.60	0.3200	4.377	1964	2.8288	124.0	446.0
1.06	12.72	0.3231	4.474	2008	2.8916	126.7	455.9
1.07	12.84	0.3261	4.573	2052	2.9552	129.5	465.9
1.08	12.96	0.3292	4.672	2097	3.0197	132.3	476.1
1.09	13.08	0.3322	4.773	2142	3.0851	135.2	486.4
1.10	13.20	0.3353	4.876	2188	3.1513	138.1	496.9
1.11	13.32	0.3383	4.980	2235	3.2183	141.0	507.4
1.12	13.44	0.3414	5.085	2282	3.2862	144.0	518.1
1.13	13.56	0.3444	5.191	2330	3.3550	147.0	529.0
1.14	13.68	0.3475	5.299	2378	3.4246	150.1	539.9
1.15	13.80	0.3505	5.408	2427	3.4951	153.1	551.1
1.16	13.92	0.3536	5.518	2477	3.5664	156.3	562.3
1.17	14.04	0.3566	5.630	2527	3.639	159.4	573.7
1.18	14.16	0.3597	5.743	2577	3.712	162.6	585.2
1.19	14.28	0.3627	5.857	2629	3.786	165.9	596.9
1.20	14.40	0.3658	5.973	2681	3.861	169.2	608.7
1.21	14.52	0.3688	6.090	2733	3.936	172.5	620.6
1.22	14.64	0.3719	6.209	2787	4.013	175.8	632.7
1.23	14.76	0.3749	6.329	2840	4.090	179.2	644.9
1.24	14.88	0.3780	6.450	2895	4.169	182.7	657.3
1.25	15.00	0.3810	6.573	2950	4.248	186.1	669.8
1.26	15.12	0.3840	6.697	3006	4.328	189.7	682.4
1.27	15.24	0.3871	6.823	3062	4.409	193.2	695.2
1.28	15.36	0.3901	6.950	3119	4.492	196.8	708.2
1.29	15.48	0.3932	7.078	3177	4.574	200.4	721.2