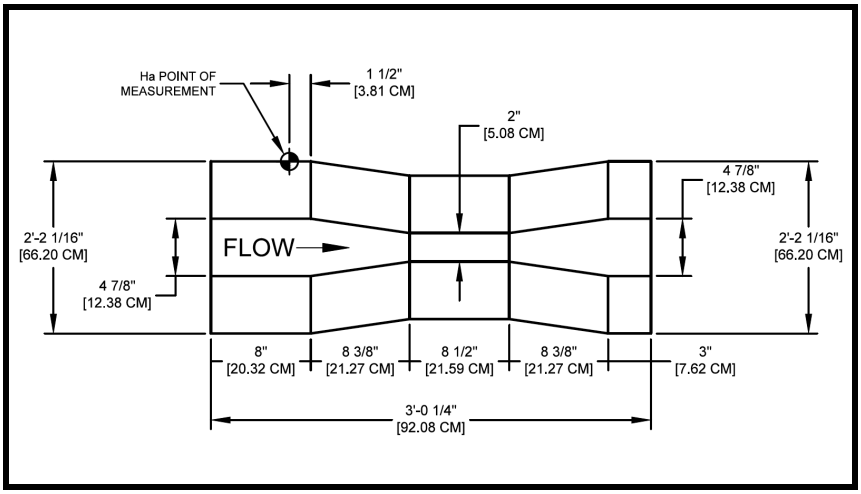
2 Inch 45-Degree WSC (No. 4) Trapezoidal Flume Discharge Table

80% Submergence Transition

Formulas (H in feet): CFS = 3.32 $H_{ft.}^{2.18}$ GPM = 1490 $H_{ft.}^{2.18}$ MGD = 2.146 $H_{ft.}^{2.18}$

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	0.0270	12.12	0.0175	0.7647	2.751
0.12	1.44	0.0366	0.0326	14.65	0.0211	0.9244	3.326
0.13	1.56	0.0396	0.0389	17.44	0.0251	1.101	3.960
0.14	1.68	0.0427	0.0457	20.50	0.0295	1.294	4.654
0.15	1.80	0.04572	0.0531	23.83	0.0343	1.504	5.410
0.16	1.92	0.0488	0.0611	27.43	0.0395	1.731	6.227
0.17	2.04	0.0518	0.0697	31.30	0.0451	1.975	7.107
0.18	2.16	0.0549	0.0790	35.46	0.0511	2.237	8.050
0.19	2.28	0.0579	0.0889	39.89	0.0574	2.517	9.057
0.20	2.40	0.0610	0.0994	44.61	0.0642	2.815	10.13
0.21	2.52	0.0640	0.1106	49.62	0.0715	3.131	11.27
0.22	2.64	0.0671	0.1224	54.91	0.0791	3.465	12.47
0.23	2.76	0.0701	0.1348	60.50	0.0871	3.818	13.74
0.24	2.88	0.0732	0.1479	66.38	0.0956	4.189	15.07
0.25	3.00	0.0762	0.1617	72.56	0.1045	4.579	16.47
0.26	3.12	0.0792	0.1761	79.04	0.1138	4.987	17.95
0.27	3.24	0.0823	0.1912	85.82	0.1236	5.415	19.48
0.28	3.36	0.0853	0.2070	92.90	0.1338	5.862	21.09
0.29	3.48	0.0884	0.2234	100.3	0.1444	6.328	22.77
0.30	3.60	0.0914	0.2406	108.0	0.1555	6.813	24.52



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

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FEET	INCHES	METERS	CFS	GPM	MGD	L/S	M3/HR
0.31	3.72	0.0945	0.2584	116.0	0.1670	7.318	26.33
0.32	3.84	0.0975	0.2769	124.3	0.1790	7.843	28.22
0.33	3.96	0.1006	0.2961	132.9	0.1914	8.387	30.18
0.34	4.08	0.1036	0.3161	141.8	0.2043	8.951	32.21
0.35	4.20	0.1067	0.3367	151.1	0.2176	9.535	34.31
0.36	4.32	0.1097	0.3580	160.7	0.2314	10.14	36.48
0.37	4.44	0.1128	0.3800	170.6	0.2456	10.76	38.73
0.38	4.56	0.1158	0.4028	180.8	0.2603	11.41	41.04
0.39	4.68	0.1189	0.4262	191.3	0.2755	12.07	43.43
0.40	4.80	0.1219	0.4504	202.2	0.2911	12.76	45.90
0.41	4.92	0.1250	0.4753	213.3	0.3072	13.46	48.44
0.42	5.04	0.1280	0.5010	224.8	0.3238	14.19	51.05
0.43	5.16	0.1311	0.5274	236.7	0.3408	14.93	53.74
0.44	5.28	0.1341	0.5545	248.8	0.3583	15.70	56.50
0.45	5.40	0.1372	0.5823	261.3	0.3763	16.49	59.34
0.46	5.52	0.1402	0.6109	274.2	0.3948	17.30	62.25
0.47	5.64	0.1433	0.6402	287.3	0.4138	18.13	65.24
0.48	5.76	0.1463	0.6703	300.8	0.4332	18.98	68.30
0.49	5.88	0.1494	0.7011	314.6	0.4531	19.85	71.44
0.50	6.00	0.1524	0.7326	328.8	0.4735	20.75	74.66
0.51	6.12	0.1554	0.7650	343.3	0.4944	21.66	77.95
0.52	6.24	0.1585	0.7980	358.2	0.5158	22.60	81.32
0.53	6.36	0.1615	0.8319	373.3	0.5376	23.56	84.77
0.54	6.48	0.1646	0.8665	388.9	0.5600	24.54	88.29
0.55	6.60	0.1676	0.9018	404.7	0.5829	25.54	91.90
0.56	6.72	0.1707	0.9380	421.0	0.6062	26.56	95.58
0.57	6.84	0.1737	0.9749	437.5	0.6301	27.61	99.34
0.58	6.96	0.1768	1.013	454.4	0.6544	28.68	103.2
0.59	7.08	0.1798	1.051	471.7	0.6792	29.76	107.1
0.60	7.20	0.1829	1.090	489.3	0.7046	30.87	111.1
0.61	7.32	0.1859	1.130	507.2	0.7305	32.01	115.2
0.62	7.44	0.1890	1.171	525.5	0.7568	33.16	119.3
0.63	7.56	0.1920	1.213	544.2	0.7837	34.34	123.6
0.64	7.68	0.1951	1.255	563.2	0.8110	35.54	127.9
0.65	7.80	0.1981	1.298	582.6	0.8389	36.76	132.3
0.66	7.92	0.2012	1.342	602.3	0.8673	38.00	136.7
0.67	8.04	0.2042	1.387	622.3	0.8962	39.27	141.3
0.68	8.16	0.2073	1.432	642.8	0.9256	40.56	145.9
0.69	8.28	0.2103	1.479	663.6	0.9556	41.87	150.7
0.70	8.40	0.2134	1.526	684.7	0.9860	43.21	155.5
0.71	8.52	0.2164	1.574	706.2	1.017	44.56	160.3
0.72	8.64	0.2195	1.622	728.1	1.048	45.94	165.3
0.73	8.76	0.2225	1.672	750.3	1.080	47.35	170.4
0.74	8.88	0.2256	1.722	772.9	1.113	48.77	175.5
0.75	9.00	0.2286	1.773	795.8	1.146	50.22	180.7
0.76	9.12	0.2316	1.825	819.2	1.180	51.69	186.0
0.77	9.24	0.2347	1.878	842.8	1.214	53.18	191.4
0.78	9.36	0.2377	1.932	866.9	1.248	54.70	196.8
0.79	9.48	0.2408	1.986	891.3	1.284	56.24	202.4
0.80	9.60	0.2438	2.041	916.1	1.319	57.81	208.0

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

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FEET	INCHES	METERS	CFS	GPM	MGD	L/S	M3/HR
0.81	9.72	0.2469	2.097	941.2	1.355	59.39	213.7
0.82	9.84	0.2499	2.154	966.7	1.392	61.00	219.5
0.83	9.96	0.2530	2.212	992.6	1.429	62.64	225.4
0.84	10.08	0.2560	2.270	1019	1.467	64.29	231.3
0.85	10.20	0.2591	2.330	1046	1.506	65.97	237.4
0.86	10.32	0.2621	2.390	1073	1.544	67.68	243.5
0.87	10.44	0.2652	2.451	1100	1.584	69.40	249.7
0.88	10.56	0.2682	2.513	1128	1.624	71.15	256.0

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