



2 Inch 30-Degree WSC (No. 5) Trapezoidal Flume Discharge Table

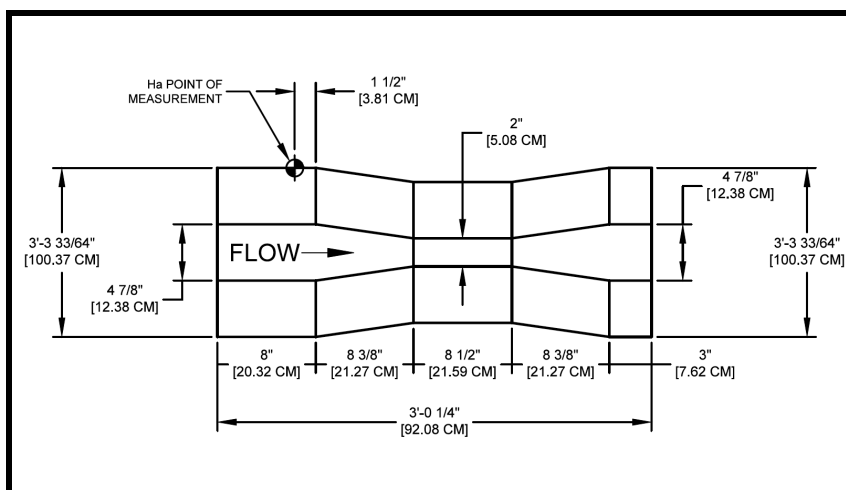
80% Submergence Transition

Formulas (H in feet): CFS = $5.92 H_{ft}^{2.28}$

GPM = $2657 H_{ft}^{2.28}$

MGD = $3.826 H_{ft}^{2.28}$

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	0.0311	13.94	0.0201	0.8799	3.166
0.11	1.32	0.0335	0.0386	17.33	0.0250	1.093	3.934
0.12	1.44	0.0366	0.0471	21.13	0.0304	1.333	4.798
0.13	1.56	0.0396	0.0565	25.36	0.0365	1.600	5.758
0.14	1.68	0.0427	0.0669	30.03	0.0432	1.895	6.818
0.15	1.80	0.04572	0.0783	35.14	0.0506	2.218	7.980
0.16	1.92	0.0488	0.0907	40.72	0.0586	2.569	9.245
0.17	2.04	0.0518	0.1042	46.75	0.0673	2.950	10.61
0.18	2.16	0.0549	0.1187	53.26	0.0767	3.361	12.09
0.19	2.28	0.0579	0.1342	60.25	0.0868	3.802	13.68
0.20	2.40	0.0610	0.1509	67.72	0.0975	4.273	15.38
0.21	2.52	0.0640	0.1686	75.69	0.1090	4.776	17.19
0.22	2.64	0.0671	0.1875	84.16	0.1212	5.311	19.11
0.23	2.76	0.0701	0.2075	93.14	0.1341	5.877	21.15
0.24	2.88	0.0732	0.2287	102.6	0.1478	6.476	23.30
0.25	3.00	0.0762	0.2510	112.6	0.1622	7.108	25.57
0.26	3.12	0.0792	0.2744	123.2	0.1774	7.772	27.97
0.27	3.24	0.0823	0.2991	134.2	0.1933	8.471	30.48
0.28	3.36	0.0853	0.3250	145.8	0.2100	9.203	33.11
0.29	3.48	0.0884	0.3520	158.0	0.2275	9.970	35.87
0.30	3.60	0.0914	0.3803	170.7	0.2458	10.77	38.76



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	0.4099	183.9	0.2649	11.607	41.76
0.32	3.84	0.0975	0.4406	197.8	0.2848	12.478	44.90
0.33	3.96	0.1006	0.4726	212.1	0.3055	13.385	48.16
0.34	4.08	0.1036	0.5059	227.1	0.3270	14.328	51.55
0.35	4.20	0.1067	0.5405	242.6	0.3493	15.307	55.08
0.36	4.32	0.1097	0.5764	258.7	0.3725	16.322	58.73
0.37	4.44	0.1128	0.6135	275.3	0.3965	17.375	62.52
0.38	4.56	0.1158	0.6520	292.6	0.4214	18.46	66.44
0.39	4.68	0.1189	0.6917	310.5	0.4471	19.59	70.49
0.40	4.80	0.1219	0.7329	328.9	0.4736	20.75	74.68
0.41	4.92	0.1250	0.7753	348.0	0.5011	21.96	79.00
0.42	5.04	0.1280	0.8191	367.6	0.5294	23.20	83.46
0.43	5.16	0.1311	0.8642	387.9	0.5586	24.48	88.07
0.44	5.28	0.1341	0.9107	408.7	0.5886	25.79	92.80
0.45	5.40	0.1372	0.9586	430.2	0.6196	27.15	97.68
0.46	5.52	0.1402	1.008	452.3	0.6514	28.54	102.7
0.47	5.64	0.1433	1.059	475.1	0.6841	29.98	107.9
0.48	5.76	0.1463	1.111	498.4	0.7178	31.45	113.2
0.49	5.88	0.1494	1.164	522.4	0.7523	32.97	118.6
0.50	6.00	0.1524	1.219	547.0	0.7878	34.52	124.2
0.51	6.12	0.1554	1.275	572.3	0.8242	36.11	129.9
0.52	6.24	0.1585	1.333	598.2	0.8615	37.75	135.8
0.53	6.36	0.1615	1.392	624.8	0.8997	39.42	141.9
0.54	6.48	0.1646	1.453	652.0	0.9389	41.14	148.0
0.55	6.60	0.1676	1.515	679.8	0.9790	42.90	154.4
0.56	6.72	0.1707	1.578	708.3	1.020	44.70	160.8
0.57	6.84	0.1737	1.643	737.5	1.062	46.54	167.5
0.58	6.96	0.1768	1.710	767.3	1.105	48.42	174.2
0.59	7.08	0.1798	1.778	797.8	1.149	50.35	181.2
0.60	7.20	0.1829	1.847	829.0	1.194	52.31	188.2
0.61	7.32	0.1859	1.918	860.8	1.240	54.32	195.5
0.62	7.44	0.1890	1.991	893.4	1.286	56.37	202.8
0.63	7.56	0.1920	2.065	926.6	1.334	58.47	210.4
0.64	7.68	0.1951	2.140	960.4	1.383	60.60	218.1
0.65	7.80	0.1981	2.217	995.0	1.433	62.79	225.9
0.66	7.92	0.2012	2.296	1030	1.484	65.01	233.9
0.67	8.04	0.2042	2.376	1066	1.535	67.28	242.1
0.68	8.16	0.2073	2.457	1103	1.588	69.59	250.4
0.69	8.28	0.2103	2.540	1140	1.642	71.94	258.9
0.70	8.40	0.2134	2.625	1178	1.697	74.34	267.5
0.71	8.52	0.2164	2.711	1217	1.752	76.79	276.3
0.72	8.64	0.2195	2.799	1256	1.809	79.27	285.2
0.73	8.76	0.2225	2.889	1296	1.867	81.81	294.4
0.74	8.88	0.2256	2.980	1337	1.926	84.38	303.6
0.75	9.00	0.2286	3.072	1379	1.986	87.01	313.1
0.76	9.12	0.2316	3.166	1421	2.046	89.67	322.7
0.77	9.24	0.2347	3.262	1464	2.108	92.39	332.4
0.78	9.36	0.2377	3.360	1508	2.171	95.15	342.4
0.79	9.48	0.2408	3.459	1552	2.235	97.95	352.4
0.80	9.60	0.2438	3.559	1597	2.300	100.8	362.7

Source:

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FEET	INCHES	METERS	CFS	GPM	MGD	L/S	M3/HR
0.81	9.72	0.2469	3.662	1643	2.366	103.7	373.1
0.82	9.84	0.2499	3.765	1690	2.434	106.6	383.7
0.83	9.96	0.2530	3.871	1737	2.502	109.6	394.5

Source:

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