



1-Inch Parshall Flume Discharge Table

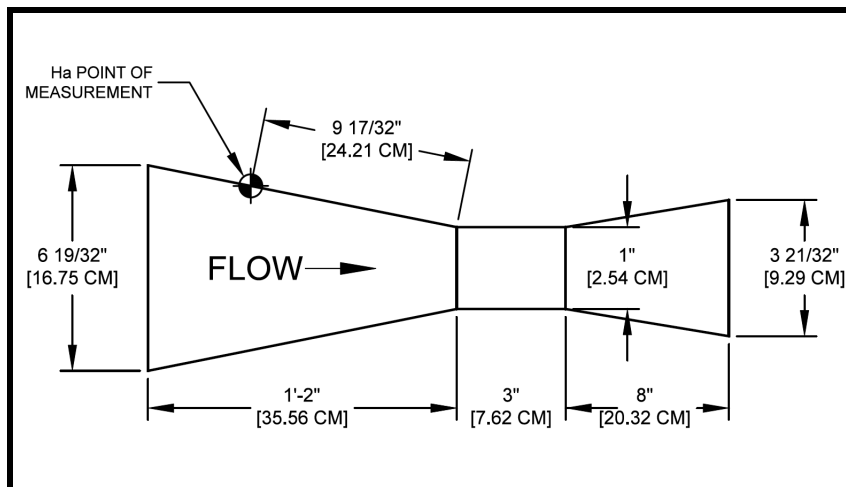
50% Submergence Transition

±3-5% Accuracy

Formulas (H in feet): CFS = 0.338 $H_{ft}^{1.55}$
 Formulas (H in meters): L/S = 60.36 $H_m^{1.55}$

GPM = 151.7 $H_{ft}^{1.55}$ MGD = 0.2184 $H_{ft}^{1.55}$
 M3/HR = 217.3 $H_m^{1.55}$

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	0.0033	1.460	0.0021	0.0921	0.3315
0.06	0.72	0.0183	0.0043	1.937	0.0028	0.1222	0.4398
0.07	0.84	0.0213	0.0055	2.460	0.0035	0.1552	0.5585
0.08	0.96	0.0244	0.0067	3.025	0.0044	0.1909	0.6869
0.09	1.08	0.0274	0.0081	3.631	0.0052	0.2291	0.8245
0.10	1.20	0.0305	0.0095	4.275	0.0062	0.2698	0.9707
0.11	1.32	0.0335	0.0110	4.956	0.0071	0.3127	1.125
0.12	1.44	0.0366	0.0126	5.672	0.0082	0.3579	1.288
0.13	1.56	0.0396	0.0143	6.421	0.0092	0.4052	1.458
0.14	1.68	0.0427	0.0160	7.202	0.0104	0.4545	1.635
0.15	1.80	0.0457	0.0179	8.015	0.0115	0.5058	1.820
0.16	1.92	0.0488	0.0197	8.858	0.0128	0.5590	2.011
0.17	2.04	0.0518	0.0217	9.731	0.0140	0.6141	2.209
0.18	2.16	0.0549	0.0237	10.63	0.0153	0.6709	2.414
0.19	2.28	0.0579	0.0258	11.56	0.0167	0.7296	2.625
0.20	2.40	0.0610	0.0279	12.52	0.0180	0.7900	2.842
0.21	2.52	0.0640	0.0301	13.50	0.0194	0.8520	3.066
0.22	2.64	0.0671	0.0323	14.51	0.0209	0.9157	3.295
0.23	2.76	0.0701	0.0346	15.55	0.0224	0.9810	3.530
0.24	2.88	0.0732	0.0370	16.61	0.0239	1.048	3.771
0.25	3.00	0.0762	0.0394	17.69	0.0255	1.116	4.017
0.26	3.12	0.0792	0.0419	18.80	0.0271	1.186	4.269
0.27	3.24	0.0823	0.0444	19.93	0.0287	1.258	4.526
0.28	3.36	0.0853	0.0470	21.09	0.0304	1.331	4.788
0.29	3.48	0.0884	0.0496	22.27	0.0321	1.405	5.056
0.30	3.60	0.0914	0.0523	23.47	0.0338	1.481	5.329



Note: Not suitable for use on unscreened sanitary flows

Sources: [Water Measurement Manual](#), 3rd Edition, United States Department of the Interior, Bureau of Reclamation
 ASTM D 1941-91 (2007): Standard Test Method for Open Channel Flow Measurement of Water with Parshall Flume



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Formulas (H in feet): CFS = $0.338 H_{ft}^{1.55}$
 Formulas (H in meters): L/S = $60.36 H_m^{1.55}$

GPM = $151.7 H_{ft}^{1.55}$
 M3/HR = $217.3 H_m^{1.55}$

FEET	INCHES	METERS	CFS	GPM	MGD	L/S	M3/HR
0.31	3.72	0.0945	0.0550	24.69	0.0356	1.558	5.607
0.32	3.84	0.0975	0.0578	25.94	0.0374	1.637	5.889
0.33	3.96	0.1006	0.0606	27.21	0.0392	1.717	6.177
0.34	4.08	0.1036	0.0635	28.49	0.0410	1.798	6.470
0.35	4.20	0.1067	0.0664	29.80	0.0429	1.881	6.767
0.36	4.32	0.1097	0.0694	31.13	0.0448	1.965	7.069
0.37	4.44	0.1128	0.0724	32.48	0.0468	2.050	7.376
0.38	4.56	0.1158	0.0754	33.86	0.0488	2.136	7.687
0.39	4.68	0.1189	0.0785	35.25	0.0508	2.224	8.003
0.40	4.80	0.1219	0.0817	36.66	0.0528	2.313	8.323
0.41	4.92	0.1250	0.0849	38.09	0.0548	2.403	8.648
0.42	5.04	0.1280	0.0881	39.54	0.0569	2.495	8.977
0.43	5.16	0.1311	0.0914	41.01	0.0591	2.588	9.310
0.44	5.28	0.1341	0.0947	42.49	0.0612	2.681	9.648
0.45	5.40	0.1372	0.0980	44.00	0.0634	2.776	9.990
0.46	5.52	0.1402	0.1014	45.52	0.0656	2.873	10.34
0.47	5.64	0.1433	0.1049	47.07	0.0678	2.970	10.69
0.48	5.76	0.1463	0.1084	48.63	0.0700	3.069	11.04
0.49	5.88	0.1494	0.1119	50.21	0.0723	3.168	11.40
0.50	6.00	0.1524	0.1154	51.81	0.0746	3.269	11.76
0.51	6.12	0.1554	0.1190	53.42	0.0769	3.371	12.13
0.52	6.24	0.1585	0.1227	55.05	0.0793	3.474	12.50
0.53	6.36	0.1615	0.1263	56.70	0.0817	3.578	12.87
0.54	6.48	0.1646	0.1301	58.37	0.0841	3.683	13.25
0.55	6.60	0.1676	0.1338	60.05	0.0865	3.789	13.63
0.56	6.72	0.1707	0.1376	61.75	0.0889	3.897	14.02
0.57	6.84	0.1737	0.1414	63.47	0.0914	4.005	14.41
0.58	6.96	0.1768	0.1453	65.21	0.0939	4.115	14.80
0.59	7.08	0.1798	0.1492	66.96	0.0964	4.225	15.20
0.60	7.20	0.1829	0.1531	68.72	0.0990	4.337	15.60
0.61	7.32	0.1859	0.1571	70.51	0.1015	4.449	16.01
0.62	7.44	0.1890	0.1611	72.31	0.1041	4.563	16.42
0.63	7.56	0.1920	0.1652	74.12	0.1067	4.677	16.83
0.64	7.68	0.1951	0.1692	75.95	0.1094	4.793	17.25
0.65	7.80	0.1981	0.1734	77.80	0.1120	4.909	17.66
0.66	7.92	0.2012	0.1775	79.66	0.1147	5.027	18.09
0.67	8.04	0.2042	0.1817	81.54	0.1174	5.145	18.51
0.68	8.16	0.2073	0.1859	83.44	0.1202	5.265	18.94
0.69	8.28	0.2103	0.1902	85.35	0.1229	5.386	19.38
0.70	8.40	0.2134	0.1945	87.27	0.1257	5.507	19.81

Sources: [Water Measurement Manual](#), 3rd Edition, United States Department of the Interior, Bureau of Reclamation

ASTM D 1941-91 (2007): Standard Test Method for Open Channel Flow Measurement of Water with Parshall Flume