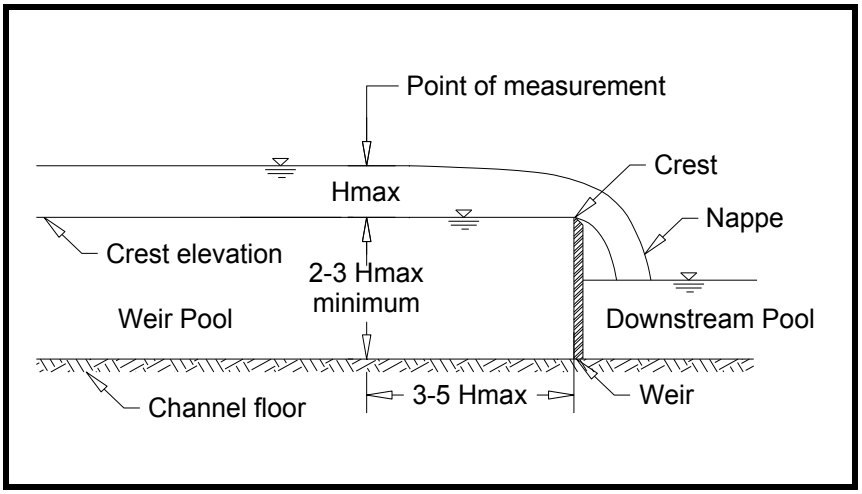
45º V-Notch Weir Discharge Table

±2-5% Accuracy

Formulas (H in feet): CFS = 1.035 $H_{ft.}^{2.5}$ GPM = 464.5 $H_{ft.}^{2.5}$ MGD = 0.6689 $H_{ft.}^{2.5}$

Formulas (H in meters): L/S = 571.4 $H_{m}^{2.5}$ M3/HR = 2057 $H_{m}^{2.5}$

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	Nappe may cling to downstream weir face				
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	0.0185	8.309	0.0120	0.5243	1.887
0.21	2.52	0.0640	0.0209	9.387	0.0135	0.5924	2.131
0.22	2.64	0.0671	0.0235	10.55	0.0152	0.6654	2.394
0.23	2.76	0.0701	0.0263	11.78	0.0170	0.7436	2.676
0.24	2.88	0.0732	0.0292	13.11	0.0189	0.8271	2.976
0.25	3.00	0.0762	0.0323	14.52	0.0209	0.9160	3.296
0.26	3.12	0.0792	0.0357	16.01	0.0231	1.010	3.635
0.27	3.24	0.0823	0.0392	17.60	0.0253	1.110	3.995
0.28	3.36	0.0853	0.0429	19.27	0.0278	1.216	4.375
0.29	3.48	0.0884	0.0469	21.04	0.0303	1.327	4.776
0.30	3.60	0.0914	0.0510	22.90	0.0330	1.445	5.199



Sources: Skrenter, R., Instrumentation Handbook Water and Wastewater Treatment Plants

ASTM D 5242-92 (2001): Standard Test Method for Open Channel Flow Measurement of Water with Thin-Plate Weirs

45º V-Notch Weir Discharge Table

±2-5% Accuracy

Formulas (H in feet): CFS = 1.035 $H_{ft.}^{2.5}$ GPM = 464.5 $H_{ft.}^{2.5}$ MGD = 0.6689 $H_{ft.}^{2.5}$

Formulas (H in meters): L/S = 571.4 $H_{m}^{2.5}$ M3/HR = 2057 $H_{m}^{2.5}$

FEET	INCHES	METERS	CFS	GPM	MGD	L/S	M3/HR
0.31	3.72	0.0945	0.0554	24.85	0.0358	1.568	5.643
0.32	3.84	0.0975	0.0600	26.91	0.0387	1.698	6.109
0.33	3.96	0.1006	0.0647	29.06	0.0418	1.834	6.598
0.34	4.08	0.1036	0.0698	31.31	0.0451	1.976	7.109
0.35	4.20	0.1067	0.0750	33.66	0.0485	2.124	7.643
0.36	4.32	0.1097	0.0805	36.12	0.0520	2.279	8.201
0.37	4.44	0.1128	0.0862	38.68	0.0557	2.441	8.783
0.38	4.56	0.1158	0.0921	41.35	0.0595	2.609	9.388
0.39	4.68	0.1189	0.0983	44.12	0.0635	2.784	10.02
0.40	4.80	0.1219	0.1047	47.00	0.0677	2.966	10.67
0.41	4.92	0.1250	0.1114	50.00	0.0720	3.155	11.35
0.42	5.04	0.1280	0.1183	53.10	0.0765	3.351	12.06
0.43	5.16	0.1311	0.1255	56.32	0.0811	3.554	12.79
0.44	5.28	0.1341	0.1329	59.65	0.0859	3.764	13.54
0.45	5.40	0.1372	0.1406	63.10	0.0909	3.982	14.33
0.46	5.52	0.1402	0.1485	66.66	0.0960	4.207	15.14
0.47	5.64	0.1433	0.1567	70.35	0.1013	4.439	15.97
0.48	5.76	0.1463	0.1652	74.15	0.1068	4.679	16.84
0.49	5.88	0.1494	0.1740	78.07	0.1124	4.926	17.73
0.50	6.00	0.1524	0.1830	82.11	0.1182	5.182	18.64
0.51	6.12	0.1554	0.1922	86.28	0.1243	5.445	19.59
0.52	6.24	0.1585	0.2018	90.57	0.1304	5.715	20.56
0.53	6.36	0.1615	0.2117	94.99	0.1368	5.994	21.57
0.54	6.48	0.1646	0.2218	99.54	0.1433	6.281	22.60
0.55	6.60	0.1676	0.2322	104.2	0.1501	6.576	23.66
0.56	6.72	0.1707	0.2429	109.0	0.1570	6.879	24.75
0.57	6.84	0.1737	0.2539	113.9	0.1641	7.190	25.87
0.58	6.96	0.1768	0.2652	119.0	0.1714	7.509	27.02
0.59	7.08	0.1798	0.2767	124.2	0.1789	7.837	28.20
0.60	7.20	0.1829	0.2886	129.5	0.1865	8.174	29.41
0.61	7.32	0.1859	0.3008	135.0	0.1944	8.518	30.65
0.62	7.44	0.1890	0.3133	140.6	0.2025	8.872	31.92
0.63	7.56	0.1920	0.3261	146.3	0.2107	9.234	33.23
0.64	7.68	0.1951	0.3391	152.2	0.2192	9.605	34.56
0.65	7.80	0.1981	0.3526	158.2	0.2279	9.984	35.93
0.66	7.92	0.2012	0.3663	164.4	0.2367	10.37	37.32
0.67	8.04	0.2042	0.3803	170.7	0.2458	10.77	38.75
0.68	8.16	0.2073	0.3947	177.1	0.2551	11.18	40.21
0.69	8.28	0.2103	0.4093	183.7	0.2645	11.59	41.71
0.70	8.40	0.2134	0.4243	190.4	0.2742	12.02	43.24
0.71	8.52	0.2164	0.4396	197.3	0.2841	12.45	44.80
0.72	8.64	0.2195	0.4553	204.3	0.2942	12.89	46.39
0.73	8.76	0.2225	0.4712	211.5	0.3046	13.35	48.02
0.74	8.88	0.2256	0.4876	218.8	0.3151	13.81	49.68
0.75	9.00	0.2286	0.5042	226.3	0.3259	14.28	51.38
0.76	9.12	0.2316	0.5212	233.9	0.3368	14.76	53.11
0.77	9.24	0.2347	0.5385	241.7	0.3480	15.25	54.87
0.78	9.36	0.2377	0.5561	249.6	0.3594	15.75	56.67
0.79	9.48	0.2408	0.5741	257.7	0.3711	16.26	58.50
0.80	9.60	0.2438	0.5925	265.9	0.3829	16.78	60.37

Sources: Skrenter, R., Instrumentation Handbook Water and Wastewater Treatment Plants

ASTM D 5242-92 (2001): Standard Test Method for Open Channel Flow Measurement of Water with Thin-Plate Weirs

OPENCHANNELFLOW

45º V-Notch Weir Discharge Table

±2-5% Accuracy

Formulas (H in feet): CFS = 1.035 $H_{ft.}^{2.5}$ GPM = 464.5 $H_{ft.}^{2.5}$ MGD = 0.6689 $H_{ft.}^{2.5}$

Formulas (H in meters): L/S = 571.4 $H_{m}^{2.5}$ M3/HR = 2057 $H_{m}^{2.5}$

FEET	INCHES	METERS	CFS	GPM	MGD	L/S	M3/HR
0.81	9.72	0.2469	0.6112	274.3	0.3950	17.31	62.28
0.82	9.84	0.2499	0.6302	282.8	0.4073	17.85	64.22
0.83	9.96	0.2530	0.6496	291.5	0.4198	18.40	66.19
0.84	10.08	0.2560	0.6693	300.4	0.4326	18.96	68.20
0.85	10.20	0.2591	0.6894	309.4	0.4456	19.52	70.25
0.86	10.32	0.2621	0.7099	318.6	0.4588	20.10	72.34
0.87	10.44	0.2652	0.7307	327.9	0.4723	20.69	74.46
0.88	10.56	0.2682	0.7519	337.4	0.4859	21.29	76.62
0.89	10.68	0.2713	0.7734	347.1	0.4999	21.90	78.81
0.90	10.80	0.2743	0.7953	356.9	0.5140	22.52	81.04
0.91	10.92	0.2774	0.8176	366.9	0.5284	23.15	83.31
0.92	11.04	0.2804	0.8403	377.1	0.5431	23.80	85.62
0.93	11.16	0.2835	0.8633	387.4	0.5579	24.45	87.97
0.94	11.28	0.2865	0.8867	397.9	0.5731	25.11	90.35
0.95	11.40	0.2896	0.9104	408.6	0.5884	25.78	92.77
0.96	11.52	0.2926	0.9346	419.4	0.6040	26.47	95.23
0.97	11.64	0.2957	0.9591	430.4	0.6199	27.16	97.73
0.98	11.76	0.2987	0.9840	441.6	0.6360	27.87	100.3
0.99	11.88	0.3018	1.009	453.0	0.6523	28.58	102.8
1.00	12.00	0.3048	1.035	464.5	0.6689	29.31	105.5
1.01	12.12	0.3078	1.061	476.2	0.6858	30.05	108.1
1.02	12.24	0.3109	1.088	488.1	0.7029	30.80	110.8
1.03	12.36	0.3139	1.114	500.1	0.7202	31.56	113.6
1.04	12.48	0.3170	1.142	512.4	0.7378	32.33	116.3
1.05	12.60	0.3200	1.169	524.8	0.7557	33.11	119.1
1.06	12.72	0.3231	1.197	537.4	0.7738	33.91	122.0
1.07	12.84	0.3261	1.226	550.1	0.7922	34.71	124.9
1.08	12.96	0.3292	1.255	563.1	0.8108	35.53	127.8
1.09	13.08	0.3322	1.284	576.2	0.8297	36.36	130.8
1.10	13.20	0.3353	1.313	589.5	0.8489	37.20	133.8
1.11	13.32	0.3383	1.344	603.0	0.8683	38.05	136.9
1.12	13.44	0.3414	1.374	616.6	0.8880	38.91	140.0
1.13	13.56	0.3444	1.405	630.5	0.9080	39.79	143.2
1.14	13.68	0.3475	1.436	644.5	0.9282	40.67	146.3
1.15	13.80	0.3505	1.468	658.8	0.9487	41.57	149.6
1.16	13.92	0.3536	1.500	673.2	0.9694	42.48	152.8
1.17	14.04	0.3566	1.533	687.8	0.9905	43.40	156.2
1.18	14.16	0.3597	1.565	702.6	1.012	44.33	159.5
1.19	14.28	0.3627	1.599	717.6	1.033	45.28	162.9
1.20	14.40	0.3658	1.633	732.7	1.055	46.24	166.4
1.21	14.52	0.3688	1.667	748.1	1.077	47.21	169.9
1.22	14.64	0.3719	1.702	763.6	1.100	48.19	173.4
1.23	14.76	0.3749	1.737	779.4	1.122	49.18	177.0
1.24	14.88	0.3780	1.772	795.3	1.145	50.19	180.6
1.25	15.00	0.3810	1.808	811.5	1.169	51.20	184.2
1.26	15.12	0.3840	1.844	827.8	1.192	52.23	187.9
1.27	15.24	0.3871	1.881	844.3	1.216	53.28	191.7
1.28	15.36	0.3901	1.919	861.0	1.240	54.33	195.5
1.29	15.48	0.3932	1.956	877.9	1.264	55.40	199.3
1.30	15.60	0.3962	1.994	895.1	1.289	56.48	203.2

Sources: Skrenter, R., Instrumentation Handbook Water and Wastewater Treatment Plants

ASTM D 5242-92 (2001): Standard Test Method for Open Channel Flow Measurement of Water with Thin-Plate Weirs

45º V-Notch Weir Discharge Table

±2-5% Accuracy

Formulas (H in feet): CFS = 1.035 $H_{ft.}^{2.5}$ GPM = 464.5 $H_{ft.}^{2.5}$ MGD = 0.6689 $H_{ft.}^{2.5}$

Formulas (H in meters): L/S = 571.4 $H_{m}^{2.5}$ M3/HR = 2057 $H_{m}^{2.5}$

FEET	INCHES	METERS	CFS	GPM	MGD	L/S	M3/HR
1.31	15.72	0.3993	2.033	912.4	1.314	57.57	207.2
1.32	15.84	0.4023	2.072	929.9	1.339	58.68	211.1
1.33	15.96	0.4054	2.111	947.6	1.365	59.79	215.2
1.34	16.08	0.4084	2.151	965.5	1.390	60.93	219.2
1.35	16.20	0.4115	2.192	983.6	1.416	62.07	223.3
1.36	16.32	0.4145	2.232	1002	1.443	63.22	227.5
1.37	16.44	0.4176	2.274	1020	1.470	64.39	231.7
1.38	16.56	0.4206	2.315	1039	1.496	65.57	235.9
1.39	16.68	0.4237	2.358	1058	1.524	66.77	240.2
1.40	16.80	0.4267	2.400	1077	1.551	67.98	244.6
1.41	16.92	0.4298	2.443	1097	1.579	69.20	249.0
1.42	17.04	0.4328	2.487	1116	1.607	70.43	253.4
1.43	17.16	0.4359	2.531	1136	1.636	71.68	257.9
1.44	17.28	0.4389	2.575	1156	1.664	72.94	262.4
1.45	17.40	0.4420	2.620	1176	1.694	74.21	267.0
1.46	17.52	0.4450	2.666	1196	1.723	75.49	271.6
1.47	17.64	0.4481	2.712	1217	1.753	76.79	276.3
1.48	17.76	0.4511	2.758	1238	1.782	78.11	281.0
1.49	17.88	0.4542	2.805	1259	1.813	79.43	285.8
1.50	18.00	0.4572	2.852	1280	1.843	80.77	290.6
1.51	18.12	0.4602	2.900	1301	1.874	82.13	295.5
1.52	18.24	0.4633	2.948	1323	1.905	83.49	300.4
1.53	18.36	0.4663	2.997	1345	1.937	84.87	305.4
1.54	18.48	0.4694	3.046	1367	1.969	86.27	310.4
1.55	18.60	0.4724	3.096	1389	2.001	87.67	315.5
1.56	18.72	0.4755	3.146	1412	2.033	89.09	320.6
1.57	18.84	0.4785	3.197	1435	2.066	90.53	325.7
1.58	18.96	0.4816	3.248	1458	2.099	91.98	330.9
1.59	19.08	0.4846	3.299	1481	2.132	93.44	336.2
1.60	19.20	0.4877	3.352	1504	2.166	94.91	341.5
1.61	19.32	0.4907	3.404	1528	2.200	96.40	346.9
1.62	19.44	0.4938	3.457	1552	2.234	97.91	352.3
1.63	19.56	0.4968	3.511	1576	2.269	99.43	357.8
1.64	19.68	0.4999	3.565	1600	2.304	101.0	363.3
1.65	19.80	0.5029	3.620	1624	2.339	102.5	368.8
1.66	19.92	0.5060	3.675	1649	2.375	104.1	374.4
1.67	20.04	0.5090	3.730	1674	2.411	105.6	380.1
1.68	20.16	0.5121	3.786	1699	2.447	107.2	385.8
1.69	20.28	0.5151	3.843	1725	2.484	108.8	391.6
1.70	20.40	0.5182	3.900	1750	2.521	110.4	397.4
1.71	20.52	0.5212	3.958	1776	2.558	112.1	403.3
1.72	20.64	0.5243	4.016	1802	2.595	113.7	409.2
1.73	20.76	0.5273	4.074	1829	2.633	115.4	415.2
1.74	20.88	0.5304	4.133	1855	2.671	117.1	421.2
1.75	21.00	0.5334	4.193	1882	2.710	118.7	427.3
1.76	21.12	0.5364	4.253	1909	2.749	120.5	433.4
1.77	21.24	0.5395	4.314	1936	2.788	122.2	439.6
1.78	21.36	0.5425	4.375	1964	2.828	123.9	445.8
1.79	21.48	0.5456	4.437	1991	2.868	125.7	452.1
1.80	21.60	0.5486	4.499	2019	2.908	127.4	458.5

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Formulas (H in meters): L/S = 571.4 $H_{m}^{2.5}$ M3/HR = 2057 $H_{m}^{2.5}$

FEET	INCHES	METERS	CFS	GPM	MGD	L/S	M3/HR
1.81	21.72	0.5517	4.562	2047	2.948	129.2	464.8
1.82	21.84	0.5547	4.625	2076	2.989	131.0	471.3
1.83	21.96	0.5578	4.689	2104	3.030	132.8	477.8
1.84	22.08	0.5608	4.753	2133	3.072	134.6	484.3
1.85	22.20	0.5639	4.818	2162	3.114	136.4	491.0
1.86	22.32	0.5669	4.883	2192	3.156	138.3	497.6
1.87	22.44	0.5700	4.949	2221	3.199	140.2	504.3
1.88	22.56	0.5730	5.016	2251	3.242	142.0	511.1
1.89	22.68	0.5761	5.083	2281	3.285	143.9	517.9
1.90	22.80	0.5791	5.150	2311	3.329	145.9	524.8
1.91	22.92	0.5822	5.218	2342	3.373	147.8	531.7
1.92	23.04	0.5852	5.287	2373	3.417	149.7	538.7
1.93	23.16	0.5883	5.356	2404	3.462	151.7	545.8
1.94	23.28	0.5913	5.426	2435	3.507	153.7	552.9
1.95	23.40	0.5944	5.496	2466	3.552	155.6	560.0
1.96	23.52	0.5974	5.566	2498	3.598	157.6	567.2
1.97	23.64	0.6005	5.638	2530	3.644	159.7	574.5
1.98	23.76	0.6035	5.710	2562	3.690	161.7	581.8
1.99	23.88	0.6066	5.782	2595	3.737	163.7	589.2
2.00	24.00	0.6096	5.855	2628	3.784	165.8	596.6

Sources: Skrenter, R., Instrumentation Handbook Water and Wastewater Treatment Plants

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