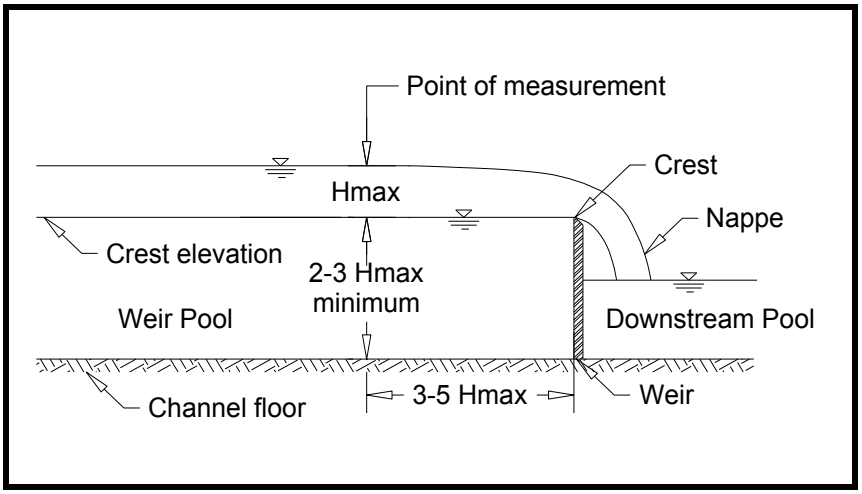
22 ½° V-Notch Weir Discharge Table

±2-5% Accuracy

Formulas (H in feet): CFS = 0.4970 $H_{ft.}^{2.5}$ GPM = 223.1 $H_{ft.}^{2.5}$ MGD = 0.3212 $H_{ft.}^{2.5}$

Formulas (H in meters): L/S = 274.4 $H_{m}^{2.5}$ M3/HR = 987.8 $H_{m}^{2.5}$

FEET	INCHES	METERS	CFS	GPM	MGD	L/S	M3/HR
0.01	0.12	0.0030	Nappe may cling to downstream weir face				
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	0.0457					
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	0.0089	3.990	0.0057	0.2518	0.9060
0.21	2.52	0.0640	0.0100	4.508	0.0065	0.2844	1.023
0.22	2.64	0.0671	0.0113	5.064	0.0073	0.3195	1.150
0.23	2.76	0.0701	0.0126	5.659	0.0081	0.3571	1.285
0.24	2.88	0.0732	0.0140	6.294	0.0091	0.3972	1.429
0.25	3.00	0.0762	0.0155	6.970	0.0100	0.4398	1.583
0.26	3.12	0.0792	0.0171	7.689	0.0111	0.4852	1.746
0.27	3.24	0.0823	0.0188	8.449	0.0122	0.5332	1.918
0.28	3.36	0.0853	0.0206	9.253	0.0133	0.5839	2.101
0.29	3.48	0.0884	0.0225	10.10	0.0145	0.6374	2.294
0.30	3.60	0.0914	0.0245	11.00	0.0158	0.6938	2.497



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

22 ½° V-Notch Weir Discharge Table

±2-5% Accuracy

Formulas (H in feet): CFS = 0.4970 $H_{ft.}^{2.5}$ GPM = 223.1 $H_{ft.}^{2.5}$ MGD = 0.3212 $H_{ft.}^{2.5}$

Formulas (H in meters): L/S = 274.4 $H_{m}^{2.5}$ M3/HR = 987.8 $H_{m}^{2.5}$

FEET	INCHES	METERS	CFS	GPM	MGD	L/S	M3/HR
0.31	3.72	0.0945	0.0266	11.93	0.0172	0.7531	2.710
0.32	3.84	0.0975	0.0288	12.92	0.0186	0.8153	2.934
0.33	3.96	0.1006	0.0311	13.95	0.0201	0.8805	3.168
0.34	4.08	0.1036	0.0335	15.04	0.0217	0.9487	3.414
0.35	4.20	0.1067	0.0360	16.17	0.0233	1.020	3.670
0.36	4.32	0.1097	0.0386	17.34	0.0250	1.094	3.938
0.37	4.44	0.1128	0.0414	18.57	0.0267	1.172	4.217
0.38	4.56	0.1158	0.0442	19.85	0.0286	1.253	4.508
0.39	4.68	0.1189	0.0472	21.19	0.0305	1.337	4.811
0.40	4.80	0.1219	0.0503	22.57	0.0325	1.424	5.125
0.41	4.92	0.1250	0.0535	24.01	0.0346	1.515	5.451
0.42	5.04	0.1280	0.0568	25.50	0.0367	1.609	5.790
0.43	5.16	0.1311	0.0603	27.04	0.0389	1.707	6.140
0.44	5.28	0.1341	0.0638	28.64	0.0412	1.808	6.504
0.45	5.40	0.1372	0.0675	30.30	0.0436	1.912	6.880
0.46	5.52	0.1402	0.0713	32.01	0.0461	2.020	7.268
0.47	5.64	0.1433	0.0753	33.78	0.0486	2.132	7.670
0.48	5.76	0.1463	0.0793	35.61	0.0513	2.247	8.084
0.49	5.88	0.1494	0.0835	37.49	0.0540	2.366	8.512
0.50	6.00	0.1524	0.0879	39.43	0.0568	2.488	8.953
0.51	6.12	0.1554	0.0923	41.43	0.0597	2.614	9.407
0.52	6.24	0.1585	0.0969	43.49	0.0626	2.744	9.875
0.53	6.36	0.1615	0.1016	45.61	0.0657	2.878	10.36
0.54	6.48	0.1646	0.1065	47.80	0.0688	3.016	10.85
0.55	6.60	0.1676	0.1115	50.04	0.0721	3.158	11.36
0.56	6.72	0.1707	0.1166	52.35	0.0754	3.303	11.89
0.57	6.84	0.1737	0.1219	54.71	0.0788	3.453	12.42
0.58	6.96	0.1768	0.1273	57.15	0.0823	3.606	12.97
0.59	7.08	0.1798	0.1329	59.64	0.0859	3.763	13.54
0.60	7.20	0.1829	0.1386	62.20	0.0896	3.925	14.12
0.61	7.32	0.1859	0.1444	64.82	0.0934	4.090	14.72
0.62	7.44	0.1890	0.1504	67.51	0.0972	4.260	15.33
0.63	7.56	0.1920	0.1566	70.27	0.1012	4.434	15.95
0.64	7.68	0.1951	0.1629	73.09	0.1053	4.612	16.60
0.65	7.80	0.1981	0.1693	75.98	0.1094	4.794	17.25
0.66	7.92	0.2012	0.1759	78.93	0.1137	4.981	17.92
0.67	8.04	0.2042	0.1826	81.96	0.1180	5.172	18.61
0.68	8.16	0.2073	0.1895	85.05	0.1225	5.367	19.31
0.69	8.28	0.2103	0.1966	88.21	0.1270	5.566	20.03
0.70	8.40	0.2134	0.2038	91.44	0.1317	5.770	20.76
0.71	8.52	0.2164	0.2111	94.74	0.1364	5.979	21.51
0.72	8.64	0.2195	0.2186	98.12	0.1413	6.191	22.28
0.73	8.76	0.2225	0.2263	101.6	0.1463	6.409	23.06
0.74	8.88	0.2256	0.2341	105.1	0.1513	6.630	23.86
0.75	9.00	0.2286	0.2421	108.7	0.1565	6.857	24.67
0.76	9.12	0.2316	0.2503	112.3	0.1617	7.087	25.50
0.77	9.24	0.2347	0.2586	116.0	0.1671	7.323	26.35
0.78	9.36	0.2377	0.2671	119.9	0.1726	7.563	27.21
0.79	9.48	0.2408	0.2757	123.7	0.1782	7.808	28.09
0.80	9.60	0.2438	0.2845	127.7	0.1839	8.057	28.99

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

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±2-5% Accuracy

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Formulas (H in meters): L/S = 274.4 $H_{m}^{2.5}$ M3/HR = 987.8 $H_{m}^{2.5}$

FEET	INCHES	METERS	CFS	GPM	MGD	L/S	M3/HR
0.81	9.72	0.2469	0.2935	131.7	0.1897	8.311	29.90
0.82	9.84	0.2499	0.3026	135.8	0.1956	8.570	30.84
0.83	9.96	0.2530	0.3119	140.0	0.2016	8.834	31.79
0.84	10.08	0.2560	0.3214	144.2	0.2077	9.102	32.75
0.85	10.20	0.2591	0.3311	148.6	0.2140	9.376	33.73
0.86	10.32	0.2621	0.3409	153.0	0.2203	9.654	34.74
0.87	10.44	0.2652	0.3509	157.5	0.2268	9.937	35.75
0.88	10.56	0.2682	0.3610	162.0	0.2333	10.22	36.79
0.89	10.68	0.2713	0.3714	166.7	0.2400	10.52	37.84
0.90	10.80	0.2743	0.3819	171.4	0.2468	10.82	38.92
0.91	10.92	0.2774	0.3926	176.2	0.2537	11.12	40.01
0.92	11.04	0.2804	0.4035	181.1	0.2608	11.43	41.11
0.93	11.16	0.2835	0.4145	186.0	0.2679	11.74	42.24
0.94	11.28	0.2865	0.4258	191.1	0.2752	12.06	43.39
0.95	11.40	0.2896	0.4372	196.2	0.2826	12.38	44.55
0.96	11.52	0.2926	0.4488	201.4	0.2900	12.71	45.73
0.97	11.64	0.2957	0.4606	206.7	0.2977	13.04	46.93
0.98	11.76	0.2987	0.4725	212.1	0.3054	13.38	48.15
0.99	11.88	0.3018	0.4847	217.5	0.3132	13.73	49.39
1.00	12.00	0.3048	0.4970	223.1	0.3212	14.08	50.64
1.01	12.12	0.3078	0.5095	228.7	0.3293	14.43	51.92
1.02	12.24	0.3109	0.5222	234.4	0.3375	14.79	53.21
1.03	12.36	0.3139	0.5351	240.2	0.3458	15.15	54.53
1.04	12.48	0.3170	0.5482	246.0	0.3543	15.53	55.86
1.05	12.60	0.3200	0.5615	252.0	0.3629	15.90	57.21
1.06	12.72	0.3231	0.5749	258.0	0.3716	16.28	58.59
1.07	12.84	0.3261	0.5886	264.2	0.3804	16.67	59.98
1.08	12.96	0.3292	0.6024	270.4	0.3894	17.06	61.39
1.09	13.08	0.3322	0.6165	276.7	0.3984	17.46	62.82
1.10	13.20	0.3353	0.6307	283.1	0.4076	17.86	64.27
1.11	13.32	0.3383	0.6452	289.5	0.4170	18.27	65.74
1.12	13.44	0.3414	0.6598	296.1	0.4264	18.69	67.23
1.13	13.56	0.3444	0.6746	302.8	0.4360	19.10	68.74
1.14	13.68	0.3475	0.6896	309.5	0.4457	19.53	70.27
1.15	13.80	0.3505	0.7049	316.3	0.4555	19.96	71.82
1.16	13.92	0.3536	0.7203	323.3	0.4655	20.40	73.40
1.17	14.04	0.3566	0.7359	330.3	0.4756	20.84	74.99
1.18	14.16	0.3597	0.7517	337.4	0.4858	21.29	76.60
1.19	14.28	0.3627	0.7678	344.6	0.4962	21.74	78.23
1.20	14.40	0.3658	0.7840	351.9	0.5067	22.20	79.89
1.21	14.52	0.3688	0.8004	359.2	0.5173	22.67	81.56
1.22	14.64	0.3719	0.8171	366.7	0.5281	23.14	83.26
1.23	14.76	0.3749	0.8339	374.3	0.5390	23.62	84.98
1.24	14.88	0.3780	0.8510	381.9	0.5500	24.10	86.71
1.25	15.00	0.3810	0.8682	389.7	0.5611	24.59	88.47
1.26	15.12	0.3840	0.8857	397.5	0.5724	25.08	90.25
1.27	15.24	0.3871	0.9034	405.4	0.5838	25.58	92.05
1.28	15.36	0.3901	0.9213	413.5	0.5954	26.09	93.88
1.29	15.48	0.3932	0.9394	421.6	0.6071	26.60	95.72
1.30	15.60	0.3962	0.9577	429.8	0.6189	27.12	97.59

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

22 ½° V-Notch Weir Discharge Table

±2-5% Accuracy

Formulas (H in feet): CFS = 0.4970 $H_{ft.}^{2.5}$ GPM = 223.1 $H_{ft.}^{2.5}$ MGD = 0.3212 $H_{ft.}^{2.5}$

Formulas (H in meters): L/S = 274.4 $H_{m}^{2.5}$ M3/HR = 987.8 $H_{m}^{2.5}$

FEET	INCHES	METERS	CFS	GPM	MGD	L/S	M3/HR
1.31	15.72	0.3993	0.9762	438.1	0.6309	27.65	99.47
1.32	15.84	0.4023	0.9949	446.5	0.6430	28.18	101.4
1.33	15.96	0.4054	1.014	455.0	0.6553	28.71	103.3
1.34	16.08	0.4084	1.033	463.6	0.6677	29.26	105.3
1.35	16.20	0.4115	1.052	472.3	0.6802	29.80	107.2
1.36	16.32	0.4145	1.072	481.1	0.6928	30.36	109.2
1.37	16.44	0.4176	1.092	490.0	0.7057	30.92	111.3
1.38	16.56	0.4206	1.112	499.0	0.7186	31.49	113.3
1.39	16.68	0.4237	1.132	508.1	0.7317	32.06	115.4
1.40	16.80	0.4267	1.153	517.3	0.7449	32.64	117.4
1.41	16.92	0.4298	1.173	526.6	0.7583	33.23	119.6
1.42	17.04	0.4328	1.194	536.0	0.7718	33.82	121.7
1.43	17.16	0.4359	1.215	545.4	0.7855	34.42	123.8
1.44	17.28	0.4389	1.237	555.0	0.7993	35.02	126.0
1.45	17.40	0.4420	1.258	564.7	0.8132	35.63	128.2
1.46	17.52	0.4450	1.280	574.5	0.8273	36.25	130.4
1.47	17.64	0.4481	1.302	584.4	0.8416	36.88	132.7
1.48	17.76	0.4511	1.324	594.4	0.8559	37.51	135.0
1.49	17.88	0.4542	1.347	604.5	0.8705	38.14	137.2
1.50	18.00	0.4572	1.370	614.7	0.8852	38.79	139.6
1.51	18.12	0.4602	1.393	625.0	0.9000	39.44	141.9
1.52	18.24	0.4633	1.416	635.4	0.9150	40.09	144.3
1.53	18.36	0.4663	1.439	645.9	0.9301	40.75	146.6
1.54	18.48	0.4694	1.463	656.5	0.9453	41.42	149.1
1.55	18.60	0.4724	1.487	667.2	0.9608	42.10	151.5
1.56	18.72	0.4755	1.511	678.0	0.9763	42.78	153.9
1.57	18.84	0.4785	1.535	688.9	0.9921	43.47	156.4
1.58	18.96	0.4816	1.560	699.9	1.008	44.17	158.9
1.59	19.08	0.4846	1.584	711.1	1.024	44.87	161.4
1.60	19.20	0.4877	1.609	722.3	1.040	45.58	164.0
1.61	19.32	0.4907	1.635	733.6	1.056	46.29	166.6
1.62	19.44	0.4938	1.660	745.1	1.073	47.02	169.2
1.63	19.56	0.4968	1.686	756.6	1.090	47.74	171.8
1.64	19.68	0.4999	1.712	768.3	1.106	48.48	174.4
1.65	19.80	0.5029	1.738	780.0	1.123	49.22	177.1
1.66	19.92	0.5060	1.765	791.9	1.140	49.97	179.8
1.67	20.04	0.5090	1.791	803.9	1.158	50.73	182.5
1.68	20.16	0.5121	1.818	816.0	1.175	51.49	185.3
1.69	20.28	0.5151	1.845	828.2	1.193	52.26	188.0
1.70	20.40	0.5182	1.873	840.5	1.210	53.04	190.8
1.71	20.52	0.5212	1.900	852.9	1.228	53.82	193.7
1.72	20.64	0.5243	1.928	865.4	1.246	54.61	196.5
1.73	20.76	0.5273	1.956	878.1	1.264	55.41	199.4
1.74	20.88	0.5304	1.985	890.8	1.283	56.21	202.3
1.75	21.00	0.5334	2.013	903.7	1.301	57.02	205.2
1.76	21.12	0.5364	2.042	916.6	1.320	57.84	208.1
1.77	21.24	0.5395	2.072	929.7	1.339	58.67	211.1
1.78	21.36	0.5425	2.101	942.9	1.358	59.50	214.1
1.79	21.48	0.5456	2.131	956.2	1.377	60.34	217.1
1.80	21.60	0.5486	2.160	969.6	1.396	61.18	220.1

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FEET	INCHES	METERS	CFS	GPM	MGD	L/S	M3/HR
1.81	21.72	0.5517	2.191	983.1	1.416	62.04	223.2
1.82	21.84	0.5547	2.221	996.8	1.435	62.90	226.3
1.83	21.96	0.5578	2.252	1011	1.455	63.76	229.4
1.84	22.08	0.5608	2.282	1024	1.475	64.64	232.6
1.85	22.20	0.5639	2.314	1038	1.495	65.52	235.8
1.86	22.32	0.5669	2.345	1052	1.516	66.41	239.0
1.87	22.44	0.5700	2.377	1067	1.536	67.31	242.2
1.88	22.56	0.5730	2.409	1081	1.557	68.21	245.4
1.89	22.68	0.5761	2.441	1095	1.577	69.12	248.7
1.90	22.80	0.5791	2.473	1110	1.598	70.04	252.0
1.91	22.92	0.5822	2.506	1125	1.619	70.96	255.3
1.92	23.04	0.5852	2.539	1139	1.641	71.90	258.7
1.93	23.16	0.5883	2.572	1154	1.662	72.84	262.1
1.94	23.28	0.5913	2.605	1169	1.684	73.78	265.5
1.95	23.40	0.5944	2.639	1184	1.706	74.74	268.9
1.96	23.52	0.5974	2.673	1200	1.728	75.70	272.4
1.97	23.64	0.6005	2.707	1215	1.750	76.67	275.9
1.98	23.76	0.6035	2.742	1230	1.772	77.64	279.4
1.99	23.88	0.6066	2.776	1246	1.794	78.63	282.9
2.00	24.00	0.6096	2.811	1262	1.817	79.62	286.5

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

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