OPENCHANNELFLOW

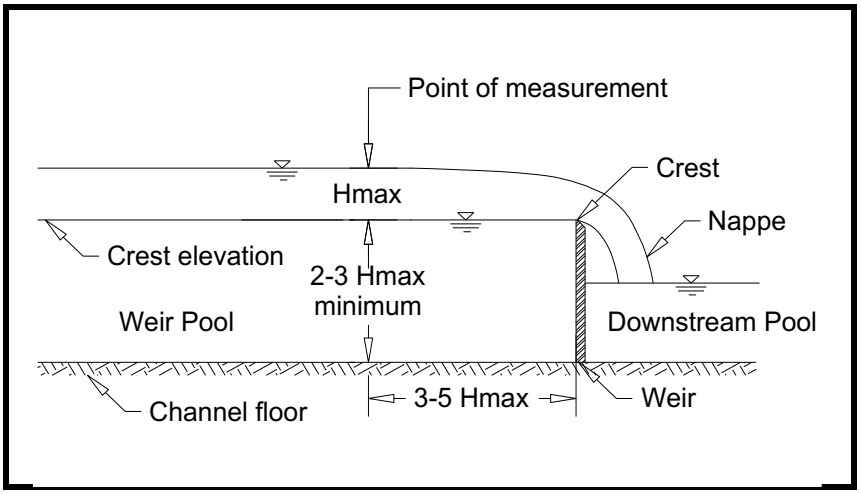
1.5' [0.4572 m] Rectangular Weir w/ End Contractions Weir Discharge Table

±2-5% Accuracy

Formulas (H in feet): $CFS = 3.330 (1.5-0.2H) H_{ft.}^{1.5}$

Formulas (H in meters): $L/S = 1838 (0.4572-0.2H) H_{m}^{1.5}$

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	0.4349	195.2	0.2810	12.32	44.31
0.21	2.52	0.0640	0.4672	209.7	0.3020	13.23	47.61
0.22	2.64	0.0671	0.5003	224.5	0.3234	14.17	50.98
0.23	2.76	0.0701	0.5341	239.7	0.3452	15.12	54.42
0.24	2.88	0.0732	0.5685	255.1	0.3674	16.10	57.93
0.25	3.00	0.0762	0.6036	270.9	0.3901	17.09	61.50
0.26	3.12	0.0792	0.6393	286.9	0.4131	18.10	65.14
0.27	3.24	0.0823	0.6756	303.2	0.4366	19.13	68.84
0.28	3.36	0.0853	0.7124	319.7	0.4605	20.18	72.60
0.29	3.48	0.0884	0.7499	336.6	0.4847	21.24	76.42
0.30	3.60	0.0914	0.7879	353.6	0.5092	22.31	80.29



Source: ISCO Open Channel Flow Measurement Handbook, Fifth Edition

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Formulas (H in meters): $L/S = 1838 (0.4572-0.2H) H_{m}^{1.5}$

FEET	INCHES	METERS	CFS	GPM	MGD	L/S	M3/HR
0.31	3.72	0.0945	0.8265	370.9	0.5342	23.41	84.22
0.32	3.84	0.0975	0.8656	388.5	0.5594	24.51	88.21
0.33	3.96	0.1006	0.9052	406.3	0.5851	25.64	92.24
0.34	4.08	0.1036	0.9454	424.3	0.6110	26.77	96.33
0.35	4.20	0.1067	0.9860	442.5	0.6373	27.92	100.5
0.36	4.32	0.1097	1.027	461.0	0.6638	29.09	104.7
0.37	4.44	0.1128	1.069	479.6	0.6907	30.27	108.9
0.38	4.56	0.1158	1.111	498.5	0.7179	31.46	113.2
0.39	4.68	0.1189	1.153	517.6	0.7454	32.66	117.5
0.40	4.80	0.1219	1.196	536.9	0.7731	33.88	121.9
0.41	4.92	0.1250	1.240	556.4	0.8012	35.11	126.3
0.42	5.04	0.1280	1.283	576.0	0.8295	36.35	130.8
0.43	5.16	0.1311	1.328	595.9	0.8581	37.60	135.3
0.44	5.28	0.1341	1.372	615.9	0.8869	38.86	139.8
0.45	5.40	0.1372	1.417	636.1	0.9160	40.14	144.4
0.46	5.52	0.1402	1.463	656.5	0.9454	41.43	149.1
0.47	5.64	0.1433	1.509	677.1	0.9750	42.72	153.7
0.48	5.76	0.1463	1.555	697.8	1.005	44.03	158.4
0.49	5.88	0.1494	1.601	718.7	1.035	45.35	163.2
0.50	6.00	0.1524	1.648	739.7	1.065	46.68	168.0
0.51	6.12	0.1554	1.696	761.0	1.096	48.02	172.8
0.52	6.24	0.1585	1.743	782.3	1.127	49.37	177.6
0.53	6.36	0.1615	1.791	803.8	1.158	50.72	182.5
0.54	6.48	0.1646	1.839	825.5	1.189	52.09	187.4
0.55	6.60	0.1676	1.888	847.3	1.220	53.47	192.4
0.56	6.72	0.1707	1.937	869.3	1.252	54.85	197.4
0.57	6.84	0.1737	1.986	891.4	1.284	56.25	202.4
0.58	6.96	0.1768	2.036	913.6	1.316	57.65	207.4
0.59	7.08	0.1798	2.086	936.0	1.348	59.06	212.5
0.60	7.20	0.1829	2.136	958.5	1.380	60.48	217.6
0.61	7.32	0.1859	2.186	981.2	1.413	61.91	222.8
0.62	7.44	0.1890	2.237	1004	1.446	63.35	227.9
0.63	7.56	0.1920	2.288	1027	1.479	64.79	233.1
0.64	7.68	0.1951	2.339	1050	1.512	66.25	238.4
0.65	7.80	0.1981	2.391	1073	1.545	67.71	243.6
0.66	7.92	0.2012	2.443	1096	1.579	69.17	248.9
0.67	8.04	0.2042	2.495	1120	1.612	70.65	254.2
0.68	8.16	0.2073	2.547	1143	1.646	72.13	259.5
0.69	8.28	0.2103	2.600	1167	1.680	73.62	264.9
0.70	8.40	0.2134	2.652	1190	1.714	75.11	270.3
0.71	8.52	0.2164	2.705	1214	1.749	76.62	275.7
0.72	8.64	0.2195	2.759	1238	1.783	78.13	281.1
0.73	8.76	0.2225	2.812	1262	1.818	79.64	286.6
0.74	8.88	0.2256	2.866	1286	1.852	81.16	292.0
0.75	9.00	0.2286	2.920	1310	1.887	82.69	297.5
0.76	9.12	0.2316	2.974	1335	1.922	84.23	303.1
0.77	9.24	0.2347	3.028	1359	1.957	85.77	308.6
0.78	9.36	0.2377	3.083	1384	1.993	87.31	314.2
0.79	9.48	0.2408	3.138	1408	2.028	88.86	319.8
0.80	9.60	0.2438	3.193	1433	2.064	90.42	325.4

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FEET	INCHES	METERS	CFS	GPM	MGD	L/S	M3/HR
0.81	9.72	0.2469	3.248	1458	2.099	91.99	331.0
0.82	9.84	0.2499	3.303	1483	2.135	93.55	336.6
0.83	9.96	0.2530	3.359	1508	2.171	95.13	342.3
0.84	10.08	0.2560	3.415	1533	2.207	96.71	348.0
0.85	10.20	0.2591	3.471	1558	2.243	98.29	353.7
0.86	10.32	0.2621	3.527	1583	2.279	99.88	359.4
0.87	10.44	0.2652	3.583	1608	2.316	101.5	365.1
0.88	10.56	0.2682	3.640	1633	2.352	103.1	370.9
0.89	10.68	0.2713	3.696	1659	2.389	104.7	376.6
0.90	10.80	0.2743	3.753	1684	2.426	106.3	382.4
0.91	10.92	0.2774	3.810	1710	2.462	107.9	388.2
0.92	11.04	0.2804	3.867	1736	2.499	109.5	394.1
0.93	11.16	0.2835	3.924	1761	2.536	111.1	399.9
0.94	11.28	0.2865	3.982	1787	2.573	112.8	405.7
0.95	11.40	0.2896	4.039	1813	2.611	114.4	411.6
0.96	11.52	0.2926	4.097	1839	2.648	116.0	417.5
0.97	11.64	0.2957	4.155	1865	2.685	117.7	423.4
0.98	11.76	0.2987	4.213	1891	2.723	119.3	429.3
0.99	11.88	0.3018	4.271	1917	2.760	120.9	435.2
1.00	12.00	0.3048	4.329	1943	2.798	122.6	441.1
1.01	12.12	0.3078	4.387	1969	2.836	124.2	447.1
1.02	12.24	0.3109	4.446	1995	2.873	125.9	453.0
1.03	12.36	0.3139	4.504	2022	2.911	127.6	459.0
1.04	12.48	0.3170	4.563	2048	2.949	129.2	465.0
1.05	12.60	0.3200	4.622	2074	2.987	130.9	471.0
1.06	12.72	0.3231	4.681	2101	3.025	132.6	477.0
1.07	12.84	0.3261	4.740	2127	3.063	134.2	483.0
1.08	12.96	0.3292	4.799	2154	3.102	135.9	489.0
1.09	13.08	0.3322	4.858	2180	3.140	137.6	495.0
1.10	13.20	0.3353	4.917	2207	3.178	139.3	501.1
1.11	13.32	0.3383	4.977	2234	3.217	140.9	507.1
1.12	13.44	0.3414	5.036	2260	3.255	142.6	513.2
1.13	13.56	0.3444	5.096	2287	3.294	144.3	519.3
1.14	13.68	0.3475	5.156	2314	3.332	146.0	525.4
1.15	13.80	0.3505	5.215	2341	3.371	147.7	531.5
1.16	13.92	0.3536	5.275	2368	3.409	149.4	537.6
1.17	14.04	0.3566	5.335	2394	3.448	151.1	543.7
1.18	14.16	0.3597	5.395	2421	3.487	152.8	549.8
1.19	14.28	0.3627	5.455	2448	3.526	154.5	555.9
1.20	14.40	0.3658	5.516	2475	3.565	156.2	562.0
1.21	14.52	0.3688	5.576	2502	3.604	157.9	568.2
1.22	14.64	0.3719	5.636	2529	3.643	159.6	574.3
1.23	14.76	0.3749	5.696	2557	3.682	161.3	580.5
1.24	14.88	0.3780	5.757	2584	3.721	163.0	586.6
1.25	15.00	0.3810	5.817	2611	3.760	164.7	592.8
1.26	15.12	0.3840	5.878	2638	3.799	166.5	598.9
1.27	15.24	0.3871	5.938	2665	3.838	168.2	605.1
1.28	15.36	0.3901	5.999	2692	3.877	169.9	611.3
1.29	15.48	0.3932	6.060	2720	3.916	171.6	617.5
1.30	15.60	0.3962	6.120	2747	3.956	173.3	623.7

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FEET	INCHES	METERS	CFS	GPM	MGD	L/S	M3/HR
1.31	15.72	0.3993	6.181	2774	3.995	175.1	629.9
1.32	15.84	0.4023	6.242	2801	4.034	176.8	636.1
1.33	15.96	0.4054	6.303	2829	4.074	178.5	642.3
1.34	16.08	0.4084	6.364	2856	4.113	180.2	648.5
1.35	16.20	0.4115	6.425	2883	4.152	181.9	654.7
1.36	16.32	0.4145	6.486	2911	4.192	183.7	660.9
1.37	16.44	0.4176	6.547	2938	4.231	185.4	667.1
1.38	16.56	0.4206	6.608	2965	4.270	187.1	673.3
1.39	16.68	0.4237	6.669	2993	4.310	188.9	679.5
1.40	16.80	0.4267	6.730	3020	4.349	190.6	685.8
1.41	16.92	0.4298	6.791	3048	4.389	192.3	692.0
1.42	17.04	0.4328	6.852	3075	4.428	194.0	698.2
1.43	17.16	0.4359	6.913	3103	4.468	195.8	704.4
1.44	17.28	0.4389	6.974	3130	4.507	197.5	710.7
1.45	17.40	0.4420	7.035	3157	4.547	199.2	716.9
1.46	17.52	0.4450	7.096	3185	4.586	201.0	723.1
1.47	17.64	0.4481	7.158	3212	4.626	202.7	729.4
1.48	17.76	0.4511	7.219	3240	4.665	204.4	735.6
1.49	17.88	0.4542	7.280	3267	4.705	206.2	741.8
1.50	18.00	0.4572	7.341	3295	4.745	207.9	748.1
1.51	18.12	0.4602	7.402	3322	4.784	209.6	754.3
1.52	18.24	0.4633	7.463	3350	4.824	211.4	760.5
1.53	18.36	0.4663	7.525	3377	4.863	213.1	766.8
1.54	18.48	0.4694	7.586	3405	4.903	214.8	773.0
1.55	18.60	0.4724	7.647	3432	4.942	216.6	779.2
1.56	18.72	0.4755	7.708	3459	4.982	218.3	785.5
1.57	18.84	0.4785	7.769	3487	5.021	220.0	791.7
1.58	18.96	0.4816	7.830	3514	5.061	221.8	797.9
1.59	19.08	0.4846	7.891	3542	5.100	223.5	804.1
1.60	19.20	0.4877	7.953	3569	5.140	225.2	810.4
1.61	19.32	0.4907	8.014	3597	5.179	226.9	816.6
1.62	19.44	0.4938	8.075	3624	5.219	228.7	822.8
1.63	19.56	0.4968	8.136	3651	5.258	230.4	829.0
1.64	19.68	0.4999	8.197	3679	5.298	232.1	835.2
1.65	19.80	0.5029	8.258	3706	5.337	233.9	841.5
1.66	19.92	0.5060	8.319	3733	5.376	235.6	847.7
1.67	20.04	0.5090	8.379	3761	5.416	237.3	853.9
1.68	20.16	0.5121	8.440	3788	5.455	239.0	860.1
1.69	20.28	0.5151	8.501	3815	5.494	240.8	866.3
1.70	20.40	0.5182	8.562	3843	5.534	242.5	872.5
1.71	20.52	0.5212	8.623	3870	5.573	244.2	878.7
1.72	20.64	0.5243	8.683	3897	5.612	245.9	884.8
1.73	20.76	0.5273	8.744	3924	5.651	247.6	891.0
1.74	20.88	0.5304	8.805	3952	5.691	249.4	897.2
1.75	21.00	0.5334	8.865	3979	5.730	251.1	903.4
1.76	21.12	0.5364	8.926	4006	5.769	252.8	909.6
1.77	21.24	0.5395	8.986	4033	5.808	254.5	915.7
1.78	21.36	0.5425	9.047	4060	5.847	256.2	921.9
1.79	21.48	0.5456	9.107	4087	5.886	257.9	928.0
1.80	21.60	0.5486	9.168	4114	5.925	259.6	934.2

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FEET	INCHES	METERS	CFS	GPM	MGD	L/S	M3/HR
1.81	21.72	0.5517	9.228	4141	5.964	261.3	940.3
1.82	21.84	0.5547	9.288	4169	6.003	263.0	946.5
1.83	21.96	0.5578	9.348	4196	6.042	264.7	952.6
1.84	22.08	0.5608	9.408	4223	6.081	266.4	958.7
1.85	22.20	0.5639	9.468	4249	6.119	268.1	964.8
1.86	22.32	0.5669	9.528	4276	6.158	269.8	971.0
1.87	22.44	0.5700	9.588	4303	6.197	271.5	977.1
1.88	22.56	0.5730	9.648	4330	6.236	273.2	983.2
1.89	22.68	0.5761	9.708	4357	6.274	274.9	989.2
1.90	22.80	0.5791	9.768	4384	6.313	276.6	995.3
1.91	22.92	0.5822	9.827	4411	6.351	278.3	1001
1.92	23.04	0.5852	9.887	4437	6.390	280.0	1007
1.93	23.16	0.5883	9.946	4464	6.428	281.7	1014
1.94	23.28	0.5913	10.01	4491	6.467	283.4	1020
1.95	23.40	0.5944	10.07	4517	6.505	285.0	1026
1.96	23.52	0.5974	10.12	4544	6.543	286.7	1032
1.97	23.64	0.6005	10.18	4570	6.582	288.4	1038
1.98	23.76	0.6035	10.24	4597	6.620	290.1	1044
1.99	23.88	0.6066	10.30	4623	6.658	291.7	1050
2.00	24.00	0.6096	10.36	4650	6.696	293.4	1056

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