



Discharge From Rectangular Weir with End Contractions

Figures in Table are in Gallons Per Minute

Head (H) in Inches	Length (L) of weir in feet				Head (H) in Inches	Length (L) of weir in feet		
	1	3	5	Additional g.p.m. for each ft. over 5 ft.		3	5	Additional g.p.m. for each ft. over 5 ft.
1	35.4	107.5	179.8	36.05	8	2338	3956	814
1 1/4	49.5	150.4	250.4	50.4	8 1/4	2442	4140	850
1 1/2	64.9	197	329.5	66.2	8 1/2	2540	4312	890
1 3/4	81	248	415	83.5	8 3/4	2656	4511	929
2	98.5	302	506	102	9	2765	4699	970
2 1/4	117	361	605	122	9 1/4	2876	4899	1011
2 1/2	136.2	422	706	143	9 1/2	2985	5098	1051
2 3/4	157	485	815	165	9 3/4	3101	5288	1091
3	177.8	552	926	187	10	3216	5490	1136
3 1/4	199.8	624	1047	211	10 1/2	3480	5940	1230
3 1/2	222	695	1167	236	11	3716	6355	1320
3 3/4	245	769	1292	261	11 1/2	3960	6780	1410
4	269	846	1424	288	12	4185	7165	1495
4 1/4	293.6	925	1559	316	12 1/2	4430	7595	1575
4 1/2	318	1006	1696	345	13	4660	8010	1660
4 3/4	344	1091	1835	374	13 1/2	4950	8510	1780
5	370	1175	1985	405	14	5215	8980	1885
5 1/4	395.5	1262	2130	434	14 1/2	5475	9440	1985
5 1/2	421.6	1352	2282	465	15	5740	9920	2090
5 3/4	449	1442	2440	495	15 1/2	6015	10400	2165
6	476.5	1535	2600	528	16	6290	10900	2300
6 1/4		1632	2760	560	16 1/2	6565	11380	2410
6 1/2		1742	2920	596	17	6925	11970	2520
6 3/4		1826	3094	630	17 1/2	7140	12410	2640
7		1928	3260	668	18	7410	12900	2745
7 1/4		2029	3436	701.5	18 1/2	7695	13410	2855
7 1/2		2130	3609	736	19	7980	13940	2970
7 3/4		2238	3785	774	19 1/2	8280	14460	3090

This table is based on modified Francis formula:

$$Q = 1494.6 (L - 0.2H) H^{1.5}$$

which

Q = cu. ft. of water flowing per second.

L = length of weir opening in feet. (should be larger than 2H.)

H = head on weir in feet (to be measured at least 6 ft. back of weir opening)

a = should be at least 3H.