

Conveyable Flowrates for Schedule 40 PVC Pipe Sizes

Q, cfs = Maximum pipe flow rate in cubic feet per second at indicated pipe slope. (Unpressurized Flow)

Q, gpm = Maximum pipe flow rate in gallons per minute at indicated pipe slope. (Unpressurized Flow)

n = 0.12, Assumed Value for Manning's Roughness Coefficient

Flowrates provided in the table were calculated using Manning's Equation. $Q, \text{ cfs} = A * (1.49/n) * r^{2/3} * s^{1/2}$, $Q, \text{ gpm} = 448.8312 * Q, \text{ cfs}$

Pipe Slope	3-Inch Diameter		4-Inch Diameter		6-Inch Diameter		8-Inch Diameter		12-Inch Diameter	
	Q, cfs	Q, gpm	Q, cfs	Q, gpm	Q, cfs	Q, gpm	Q, cfs	Q, gpm	Q, cfs	Q, gpm
0.25%	0.048	21.5	0.103	46.4	0.305	136.8	0.656	294.6	1.935	868.5
0.50%	0.068	30.5	0.146	65.6	0.431	193.4	0.928	416.6	2.737	1,228.3
0.75%	0.083	37.3	0.179	80.4	0.528	236.9	1.137	510.2	3.352	1,504.3
1.00%	0.096	43.1	0.207	92.8	0.610	273.6	1.313	589.2	3.870	1,737.0
1.25%	0.107	48.2	0.231	103.7	0.681	305.9	1.468	658.7	4.327	1,942.0
1.50%	0.118	52.8	0.253	113.6	0.746	335.0	1.608	721.6	4.740	2,127.4
1.75%	0.127	57.0	0.273	122.7	0.806	361.9	1.736	779.4	5.120	2,297.9
2.00%	0.136	60.9	0.292	131.2	0.862	386.9	1.856	833.2	5.473	2,456.5
2.25%	0.144	64.6	0.310	139.2	0.914	410.3	1.969	883.7	5.805	2,605.5
2.50%	0.152	68.1	0.327	146.7	0.964	432.5	2.075	931.5	6.119	2,746.5
2.75%	0.159	71.4	0.343	153.9	1.011	453.7	2.177	977.0	6.418	2,880.5
3.00%	0.166	74.6	0.358	160.7	1.056	473.8	2.274	1,020.4	6.703	3,008.6
3.25%	0.173	77.7	0.373	167.3	1.099	493.2	2.366	1,062.1	6.977	3,131.5
3.50%	0.180	80.6	0.387	173.6	1.140	511.8	2.456	1,102.2	7.240	3,249.7
3.75%	0.186	83.4	0.400	179.7	1.180	529.8	2.542	1,140.9	7.494	3,363.7
4.00%	0.192	86.2	0.413	185.6	1.219	547.1	2.625	1,178.3	7.740	3,474.0
4.25%	0.198	88.8	0.426	191.3	1.257	564.0	2.706	1,214.6	7.978	3,581.0
4.50%	0.204	91.4	0.439	196.8	1.293	580.3	2.785	1,249.8	8.210	3,684.8
4.75%	0.209	93.9	0.451	202.2	1.328	596.2	2.861	1,284.0	8.435	3,785.7
5.00%	0.215	96.3	0.462	207.5	1.363	611.7	2.935	1,317.4	8.654	3,884.1
5.25%	0.220	98.7	0.474	212.6	1.397	626.8	3.008	1,349.9	8.868	3,980.0
5.50%	0.225	101.0	0.485	217.6	1.429	641.6	3.078	1,381.7	9.076	4,073.7
5.75%	0.230	103.3	0.496	222.5	1.462	656.0	3.148	1,412.7	9.280	4,165.2
6.00%	0.235	105.5	0.506	227.3	1.493	670.1	3.215	1,443.1	9.480	4,254.8
6.25%	0.240	107.7	0.517	232.0	1.524	683.9	3.282	1,472.9	9.675	4,342.5
6.50%	0.245	109.8	0.527	236.6	1.554	697.5	3.347	1,502.1	9.867	4,428.5
6.75%	0.249	111.9	0.537	241.1	1.584	710.7	3.410	1,530.7	10.055	4,512.9
7.00%	0.254	114.0	0.547	245.5	1.613	723.8	3.473	1,558.8	10.239	4,595.7
7.25%	0.258	116.0	0.557	249.8	1.641	736.6	3.534	1,586.3	10.421	4,677.1
7.50%	0.263	118.0	0.566	254.1	1.669	749.2	3.595	1,613.5	10.599	4,757.0
7.75%	0.267	119.9	0.576	258.3	1.697	761.6	3.654	1,640.1	10.774	4,835.7
8.00%	0.272	121.9	0.585	262.4	1.724	773.8	3.713	1,666.4	10.946	4,913.0
8.25%	0.276	123.7	0.594	266.5	1.751	785.8	3.770	1,692.2	11.116	4,989.2
8.50%	0.280	125.6	0.603	270.5	1.777	797.6	3.827	1,717.7	11.283	5,064.2
8.75%	0.284	127.4	0.612	274.5	1.803	809.2	3.883	1,742.7	11.448	5,138.2
9.00%	0.288	129.3	0.620	278.4	1.829	820.7	3.938	1,767.5	11.610	5,211.1
9.25%	0.292	131.0	0.629	282.2	1.854	832.0	3.992	1,791.8	11.770	5,282.9
9.50%	0.296	132.8	0.637	286.0	1.879	843.2	4.046	1,815.9	11.928	5,353.9
9.75%	0.300	134.5	0.646	289.7	1.903	854.2	4.099	1,839.6	12.084	5,423.8
10.00%	0.304	136.2	0.654	293.4	1.927	865.1	4.151	1,863.1	12.238	5,492.9