



Flow Chart for 66in Palmer Bowlus Flume

Head (feet)	MGD	CFS	GPM		Head (feet)	MGD	CFS	GPM
0.25	0.65694	1.0164	456.21		0.65	3.0102	4.6575	2,090.4
0.26	0.69570	1.0764	483.12		0.66	3.0897	4.7804	2,145.6
0.27	0.73552	1.1380	510.78		0.67	3.1701	4.9049	2,201.5
0.28	0.7764	1.2013	539.16		0.68	3.2515	5.0309	2,258.0
0.29	0.8183	1.2661	568.27		0.69	3.3339	5.1583	2,315.2
0.30	0.8613	1.3326	598.12		0.70	3.4173	5.2874	2,373.1
0.31	0.9053	1.4007	628.69		0.71	3.5017	5.4179	2,431.7
0.32	0.9504	1.4704	659.98		0.72	3.5870	5.5499	2,491.0
0.33	0.9965	1.5418	692.00		0.73	3.6733	5.6835	2,550.9
0.34	1.0436	1.6147	724.74		0.74	3.7606	5.8186	2,611.6
0.35	1.0918	1.6893	758.20		0.75	3.8489	5.9551	2,672.9
0.36	1.1410	1.7654	792.4		0.76	3.9382	6.0932	2,734.8
0.37	1.1913	1.8432	827.3		0.77	4.0284	6.2328	2,797.5
0.38	1.2426	1.9225	862.9		0.78	4.1196	6.3739	2,860.8
0.39	1.2949	2.0034	899.2		0.79	4.2118	6.5166	2,924.8
0.40	1.3482	2.0860	936.2		0.80	4.3049	6.6607	2,989.5
0.41	1.4026	2.1701	974.0		0.81	4.3990	6.8063	3,054.9
0.42	1.4579	2.2558	1,012.5		0.82	4.4941	6.9534	3,120.9
0.43	1.5143	2.3430	1,051.6		0.83	4.5901	7.1020	3,187.6
0.44	1.5718	2.4319	1,091.5		0.84	4.6872	7.2521	3,255.0
0.45	1.6302	2.5223	1,132.1		0.85	4.7851	7.4037	3,323.0
0.46	1.6897	2.6143	1,173.4		0.86	4.8841	7.5568	3,391.7
0.47	1.7501	2.7079	1,215.4		0.87	4.9840	7.7114	3,461.1
0.48	1.8116	2.8030	1,258.1		0.88	5.0849	7.8675	3,531.2
0.49	1.8741	2.8997	1,301.5		0.89	5.1867	8.0250	3,601.9
0.50	1.9376	2.9979	1,345.6		0.90	5.2895	8.1841	3,673.3
0.51	2.0021	3.0978	1,390.4		0.91	5.3933	8.3446	3,745.3
0.52	2.0676	3.1991	1,435.9		0.92	5.4980	8.5067	3,818.1
0.53	2.1342	3.3020	1,482.1		0.93	5.6037	8.6702	3,891.4
0.54	2.2017	3.4065	1,529.0		0.94	5.7103	8.8352	3,965.5
0.55	2.2702	3.5125	1,576.5		0.95	5.8179	9.0017	4,040.2
0.56	2.3397	3.6201	1,624.8		0.96	5.9265	9.1696	4,115.6
0.57	2.4103	3.7292	1,673.8		0.97	6.0360	9.3391	4,191.7
0.58	2.4818	3.8399	1,723.5		0.98	6.1465	9.5100	4,268.4
0.59	2.5543	3.9521	1,773.8		0.99	6.2579	9.6824	4,345.7
0.60	2.6278	4.0658	1,824.9		1.00	6.3702	9.8562	4,423.8
0.61	2.7023	4.1811	1,876.6		1.01	6.4836	10.0316	4,502.5
0.62	2.7778	4.2979	1,929.0		1.02	6.5978	10.2084	4,581.8
0.63	2.8543	4.4162	1,982.1		1.03	6.7131	10.3866	4,661.8
0.64	2.9318	4.5361	2,035.9		1.04	6.8292	10.5664	4,742.5

1) Pipes/channels larger than flume may cause over discharge up to 3% (as noted in chart for upper flow ranges).
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1.05	6.9464	10.7476	4,823.9		1.45	12.402	19.1884	8,612.3
1.06	7.0644	10.9303	4,905.9		1.46	12.557	19.4289	8,720.3
1.07	7.1835	11.1144	4,988.5		1.47	12.714	19.6709	8,828.9
1.08	7.3034	11.3001	5,071.8		1.48	12.871	19.9143	8,938.1
1.09	7.4243	11.4871	5,155.8		1.49	13.029	20.1591	9,048.0
1.10	7.5462	11.6757	5,240.4		1.50	13.188	20.4053	9,158.6
1.11	7.6690	11.8657	5,325.7		1.51	13.348	20.6530	9,269.7
1.12	7.7928	12.0572	5,411.6		1.52	13.509	20.9021	9,381.5
1.13	7.9174	12.2501	5,498.2		1.53	13.671	21.1526	9,493.9
1.14	8.0431	12.4445	5,585.5		1.54	13.834	21.4045	9,607.0
1.15	8.1697	12.6403	5,673.4		1.55	13.998	21.6579	9,720.7
1.16	8.2972	12.8376	5,761.9		1.56	14.163	21.9127	9,835.1
1.17	8.4256	13.0364	5,851.1		1.57	14.328	22.1689	9,950.1
1.18	8.5550	13.2366	5,941.0		1.58	14.495	22.4265	10,065.7
1.19	8.6854	13.4383	6,031.5		1.59	14.662	22.6855	10,182.0
1.20	8.8167	13.6414	6,122.7		1.60	14.830	22.9459	10,298.9
1.21	8.9489	13.8459	6,214.5		1.61	15.000	23.2078	10,416.4
1.22	9.0820	14.0520	6,307.0		1.62	15.170	23.4711	10,534.5
1.23	9.2161	14.2594	6,400.1		1.63	15.341	23.7358	10,653.4
1.24	9.3511	14.4683	6,493.8		1.64	15.513	24.0019	10,772.8
1.25	9.4871	14.6787	6,588.3		1.65	15.686	24.2694	10,892.9
1.26	9.6240	14.8905	6,683.3		1.66	15.860	24.5383	11,013.6
1.27	9.762	15.1038	6,779.0		1.67	16.034	24.8087	11,134.9
1.28	9.901	15.3185	6,875.4		1.68	16.210	25.0804	11,256.9
1.29	10.040	15.5346	6,972.4		1.69	16.386	25.3536	11,379.5
1.30	10.181	15.7522	7,070.1		1.70	16.564	25.6282	11,502.7
1.31	10.322	15.9712	7,168.4		1.71	16.742	25.9041	11,626.6
1.32	10.465	16.1917	7,267.3		1.72	16.922	26.1815	11,751.1
1.33	10.608	16.4136	7,366.9		1.73	17.102	26.4603	11,876.2
1.34	10.753	16.6369	7,467.2		1.74	17.283	26.7405	12,002.0
1.35	10.898	16.8617	7,568.1		1.75	17.465	27.0221	12,128.4
1.36	11.044	17.0879	7,669.6		1.76	17.6478	27.3052	12,255.4
1.37	11.191	17.3156	7,771.8		1.77	17.8316	27.5896	12,383.1
1.38	11.339	17.5447	7,874.6		1.78	18.0163	27.8754	12,511.3
1.39	11.488	17.7752	7,978.1		1.79	18.2020	28.1626	12,640.3
1.40	11.638	18.0071	8,082.2		1.80	18.3885	28.4512	12,769.8
1.41	11.789	18.2405	8,186.9		1.81	18.5760	28.7413	12,900.0
1.42	11.941	18.4754	8,292.3		1.82	18.7643	29.0327	13,030.8
1.43	12.094	18.7116	8,398.3		1.83	18.9536	29.3255	13,162.2
1.44	12.247	18.9493	8,505.0		1.84	19.1438	29.6198	13,294.3

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1.85	19.3348	29.9154	13,427.0		2.25	27.7146	42.8808	19,246.2
1.86	19.5268	30.2124	13,560.3		2.26	27.9424	43.2333	19,404.4
1.87	19.7197	30.5109	13,694.2		2.27	28.1711	43.5871	19,563.3
1.88	19.9135	30.8107	13,828.8		2.28	28.4007	43.9424	19,722.7
1.89	20.1082	31.1119	13,964.0		2.29	28.6312	44.2990	19,882.7
1.90	20.3037	31.4145	14,099.8		2.30	28.863	44.6569	20,043.4
1.91	20.5002	31.7185	14,236.3		2.31	29.095	45.0163	20,204.7
1.92	20.6976	32.0239	14,373.3		2.32	29.328	45.3770	20,366.6
1.93	20.8959	32.3307	14,511.0		2.33	29.562	45.7391	20,529.1
1.94	21.0951	32.6389	14,649.4		2.34	29.797	46.1025	20,692.2
1.95	21.2952	32.9485	14,788.3		2.35	30.033	46.4673	20,856.0
1.96	21.4962	33.2595	14,927.9		2.36	30.269	46.8335	21,020.3
1.97	21.6981	33.5719	15,068.1		2.37	30.507	47.2011	21,185.3
1.98	21.9009	33.8856	15,208.9		2.38	30.745	47.5700	21,350.9
1.99	22.1046	34.2008	15,350.4		2.39	30.985	47.9403	21,517.1
2.00	22.3091	34.5173	15,492.4		2.40	31.225	48.3120	21,683.9
2.01	22.5146	34.8353	15,635.1		2.41	31.466	48.6850	21,851.3
2.02	22.7210	35.1546	15,778.5		2.42	31.708	49.0594	22,019.4
2.03	22.9283	35.4753	15,922.4		2.43	31.951	49.4352	22,188.0
2.04	23.1365	35.7974	16,067.0		2.44	32.195	49.8123	22,357.3
2.05	23.3455	36.1209	16,212.2		2.45	32.439	50.1908	22,527.2
2.06	23.5555	36.4457	16,358.0		2.46	32.685	50.5707	22,697.7
2.07	23.7664	36.7720	16,504.4		2.47	32.931	50.9519	22,868.8
2.08	23.9781	37.0996	16,651.5		2.48	33.178	51.3345	23,040.5
2.09	24.1908	37.4286	16,799.1		2.49	33.427	51.7184	23,212.8
2.10	24.4043	37.7591	16,947.4		2.50	33.676	52.1038	23,385.8
2.11	24.6188	38.0908	17,096.4		2.51	33.925	52.4904	23,559.3
2.12	24.8341	38.4240	17,245.9		2.52	34.176	52.8785	23,733.5
2.13	25.0503	38.7586	17,396.0		2.53	34.428	53.2679	23,908.3
2.14	25.2674	39.0945	17,546.8		2.54	34.681	53.6587	24,083.7
2.15	25.4855	39.4318	17,698.2		2.55	34.934	54.0508	24,259.7
2.16	25.7044	39.7705	17,850.2		2.56	35.188	54.4443	24,436.3
2.17	25.9242	40.1106	18,002.9		2.57	35.443	54.8391	24,613.5
2.18	26.1449	40.4521	18,156.1		2.58	35.700	55.2353	24,791.3
2.19	26.3664	40.7949	18,310.0		2.59	35.956	55.6329	24,969.8
2.20	26.5889	41.1391	18,464.5		2.60	36.214	56.0318	25,148.8
2.21	26.8123	41.4847	18,619.6		2.61	36.473	56.4321	25,328.5
2.22	27.0365	41.8317	18,775.3		2.62	36.733	56.8337	25,508.7
2.23	27.2617	42.1800	18,931.7		2.63	36.993	57.2367	25,689.6
2.24	27.4877	42.5297	19,088.7		2.64	37.254	57.6411	25,871.1

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2.65	37.517	58.0468	26,053.2		3.05	48.7206	75.3819	33,833.7
2.66	37.780	58.4538	26,235.9		3.06	49.0185	75.8428	34,040.6
2.67	38.044	58.8622	26,419.2		3.07	49.3173	76.3051	34,248.1
2.68	38.309	59.2720	26,603.1		3.08	49.6169	76.7687	34,456.2
2.69	38.574	59.6831	26,787.6		3.09	49.9174	77.2336	34,664.8
2.70	38.841	60.0956	26,972.8		3.10	50.2188	77.6999	34,874.1
2.71	39.108	60.5094	27,158.5		3.11	50.5210	78.1675	35,084.0
2.72	39.377	60.9246	27,344.9		3.12	50.8241	78.6365	35,294.5
2.73	39.646	61.3412	27,531.8		3.13	51.1281	79.1068	35,505.6
2.74	39.916	61.7590	27,719.4		3.14	51.4329	79.5784	35,717.3
2.75	40.187	62.1783	27,907.5		3.15	51.7386	80.0514	35,929.5
2.76	40.459	62.5989	28,096.3		3.16	52.0451	80.5257	36,142.4
2.77	40.731	63.0208	28,285.7		3.17	52.3525	81.0013	36,355.9
2.78	41.005	63.4441	28,475.7		3.18	52.6608	81.4783	36,570.0
2.79	41.2795	63.8688	28,666.3		3.19	52.9699	81.9566	36,784.7
2.80	41.5548	64.2947	28,857.5		3.20	53.2799	82.4362	36,999.9
2.81	41.8310	64.7221	29,049.3		3.21	53.5908	82.9172	37,215.8
2.82	42.1081	65.1508	29,241.7		3.22	53.9025	83.3995	37,432.3
2.83	42.3860	65.5808	29,434.7		3.23	54.2151	83.8831	37,649.4
2.84	42.6648	66.0122	29,628.3		3.24	54.5285	84.3681	37,867.0
2.85	42.9445	66.4449	29,822.5		3.25	54.8428	84.8544	38,085.3
2.86	43.2250	66.8790	30,017.4		3.26	55.1580	85.3420	38,304.2
2.87	43.5065	67.3144	30,212.8		3.27	55.4740	85.8310	38,523.6
2.88	43.7888	67.7512	30,408.8		3.28	55.7909	86.3213	38,743.7
2.89	44.0719	68.1893	30,605.5		3.29	56.1087	86.8129	38,964.3
2.90	44.3559	68.6288	30,802.7		3.30	56.4273	87.3059	39,185.6
2.91	44.6408	69.0696	31,000.6		3.31	56.7467	87.8002	39,407.4
2.92	44.9266	69.5117	31,199.0		3.32	57.0671	88.2958	39,629.9
2.93	45.2133	69.9552	31,398.1		3.33	57.388	88.7927	39,852.9
2.94	45.5008	70.4001	31,597.7		3.34	57.710	89.2910	40,076.6
2.95	45.7891	70.8463	31,798.0		3.35	58.033	89.7906	40,300.8
2.96	46.0784	71.2938	31,998.9		3.36	58.357	90.2915	40,525.6
2.97	46.3685	71.7426	32,200.3		3.37	58.682	90.7938	40,751.1
2.98	46.6595	72.1929	32,402.4		3.38	59.007	91.2973	40,977.1
2.99	46.9513	72.6444	32,605.1		3.39	59.333	91.8022	41,203.7
3.00	47.2440	73.0973	32,808.3		3.40	59.661	92.3085	41,430.9
3.01	47.5376	73.5515	33,012.2		3.41	59.989	92.8160	41,658.7
3.02	47.8321	74.0071	33,216.7		3.42	60.317	93.3249	41,887.1
3.03	48.1274	74.4640	33,421.8		3.43	60.647	93.8351	42,116.1
3.04	48.4235	74.9223	33,627.4		3.44	60.978	94.3467	42,345.7

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3.45	61.309	94.8595	42,575.9		3.85	75.2679	116.4566	52,269.3
3.46	61.642	95.3737	42,806.7		*For points listed below, please footnote			
3.47	61.975	95.8892	43,038.1		3.86	75.6343	117.0235	52,523.8
3.48	62.309	96.4061	43,270.0		3.87	76.0015	117.5917	52,778.8
3.49	62.644	96.9242	43,502.6		3.88	76.3696	118.1613	53,034.4
3.50	62.980	97.4437	43,735.8		3.89	76.7386	118.7321	53,290.6
3.51	63.316	97.9645	43,969.5		3.90	77.1084	119.3042	53,547.4
3.52	63.654	98.4866	44,203.9		3.91	77.4790	119.8777	53,804.8
3.53	63.992	99.0101	44,438.8		3.92	77.8505	120.4524	54,062.8
3.54	64.331	99.5349	44,674.3		3.93	78.2228	121.0285	54,321.4
3.55	64.671	100.0610	44,910.5		3.94	78.5960	121.6059	54,580.5
3.56	65.012	100.5884	45,147.2		3.95	78.9700	122.1846	54,840.2
3.57	65.354	101.1171	45,384.5		3.96	79.3448	122.7646	55,100.6
3.58	65.696	101.6472	45,622.4		3.97	79.7206	123.3459	55,361.5
3.59	66.040	102.1785	45,860.9		3.98	80.0971	123.9285	55,623.0
3.60	66.384	102.7112	46,100.0		3.99	80.4745	124.5125	55,885.0
3.61	66.729	103.2452	46,339.7		4.00	80.8528	125.0977	56,147.7
3.62	67.075	103.7806	46,579.9		4.01	81.2319	125.6842	56,411.0
3.63	67.422	104.3172	46,820.8		4.02	81.6118	126.2721	56,674.8
3.64	67.770	104.8552	47,062.3		4.03	81.9926	126.8612	56,939.3
3.65	68.118	105.3945	47,304.3		4.04	82.3742	127.4517	57,204.3
3.66	68.468	105.9351	47,547.0		4.05	82.7567	128.0435	57,469.9
3.67	68.818	106.4770	47,790.2		4.06	83.1400	128.6365	57,736.1
3.68	69.169	107.0203	48,034.0		4.07	83.5241	129.2309	58,002.8
3.69	69.521	107.5648	48,278.4		4.08	83.9091	129.8266	58,270.2
3.70	69.874	108.1107	48,523.4		4.09	84.2950	130.4236	58,538.1
3.71	70.227	108.6579	48,769.0		4.10	84.6817	131.0219	58,806.7
3.72	70.582	109.2064	49,015.2		4.11	85.0692	131.6215	59,075.8
3.73	70.937	109.7562	49,262.0		4.12	85.4576	132.2224	59,345.5
3.74	71.294	110.3074	49,509.4		4.13	85.8468	132.8246	59,615.8
3.75	71.651	110.8598	49,757.3		4.14	86.2368	133.4281	59,886.7
3.76	72.008	111.4136	50,005.9		4.15	86.6277	134.0329	60,158.1
3.77	72.367	111.9687	50,255.0		4.16	87.0195	134.6390	60,430.2
3.78	72.727	112.5251	50,504.7		4.17	87.4121	135.2464	60,702.8
3.79	73.087	113.0828	50,755.1		4.18	87.8055	135.8552	60,976.0
3.80	73.449	113.6418	51,006.0		4.19	88.1998	136.4652	61,249.8
3.81	73.811	114.2021	51,257.5		4.20	88.5949	137.0765	61,524.2
3.82	74.1738	114.7638	51,509.5		4.21	88.9908	137.6891	61,799.2
3.83	74.5376	115.3268	51,762.2		4.22	89.3876	138.3031	62,074.7
3.84	74.9023	115.8910	52,015.5		4.23	89.7853	138.9183	62,350.8

- 1) Pipes/channels larger than flume may cause over discharge up to 3% (as noted in chart for upper flow ranges).
- 2) Flow ranges are based on meter capability, freeboard allowances and flow studies. Points beyond these may perform satisfactorily.



Flow Chart for 66in Palmer Bowlus Flume

4.24	90.1837	139.5348	62,627.6
4.25	90.5831	140.1527	62,904.9
4.26	90.9832	140.7718	63,182.8
4.27	91.3842	141.3922	63,461.2
4.28	91.7860	142.0140	63,740.3
4.29	92.1887	142.6370	64,019.9
4.30	92.5922	143.2613	64,300.1
4.31	92.9966	143.8870	64,580.9
4.32	93.4018	144.5139	64,862.3
4.33	93.8078	145.1421	65,144.3
4.34	94.2147	145.7716	65,426.8
4.35	94.622	146.4025	65,710.0
4.36	95.031	147.0346	65,993.7
4.37	95.440	147.6680	66,278.0
4.38	95.851	148.3027	66,562.9
4.39	96.262	148.9387	66,848.3
4.40	96.674	149.5761	67,134.4
4.41	97.086	150.2147	67,421.0
4.42	97.500	150.8546	67,708.2
4.43	97.914	151.4958	67,996.0
4.44	98.330	152.1383	68,284.4
4.45	98.746	152.7820	68,573.3
4.46	99.163	153.4271	68,862.8
4.47	99.580	154.0735	69,153.0
4.48	99.999	154.7212	69,443.7
4.49	100.418	155.3701	69,734.9
4.50	100.839	156.0204	70,026.8
4.51	101.260	156.6720	70,319.2
4.52	101.682	157.3248	70,612.3
4.53	102.104	157.9790	70,905.9
4.54	102.528	158.6344	71,200.0
4.55	102.953	159.2911	71,494.8
4.56	103.378	159.9491	71,790.1
4.57	103.804	160.6084	72,086.1
4.58	104.231	161.2691	72,382.6
4.59	104.659	161.9310	72,679.6
4.60	105.087	162.5941	72,977.3

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