



## ST. JOHNS COUNTY UTILITY DEPARTMENT Flushing Test Chart

Flow gpm	2.0-inch		2.5-inch		3.0-inch		4-inch		6-inch		8-inch		10-inch		12-inch		16-inch		20-inch		
	Vel. (ft/s)	Dist. "X"	Vel. (ft/s)	Dist. "X"	Vel. (ft/s)	Dist. "X"	Vel. (ft/s)	Dist. "X"	Vel. (ft/s)	Dist. "X"	Vel. (ft/s)	Dist. "X"	Vel. (ft/s)	Dist. "X"	Vel. (ft/s)	Dist. "X"	Vel. (ft/s)	Dist. "X"	Vel. (ft/s)	Dist. "X"	
	ft/sec	inches	ft/sec	inches	ft/sec	inches	ft/sec	inches	ft/sec	inches	ft/sec	inches	ft/sec	inches	ft/sec	inches	ft/sec	inches	ft/sec	inches	ft/sec
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	2.55	4.41	1.63	2.82	1.14	1.96	0.64	1.10	0.28	0.49	0.16	0.28	0.10	0.18	0.07	0.12	0.04	0.07	0.03	0.04	0.04
39	3.99	6.88	2.55	4.40	1.77	3.06	1.00	1.72	0.44	0.76	0.25	0.43	0.16	0.28	0.11	0.19	0.06	0.11	0.04	0.07	0.07
50	5.11	8.82	3.27	5.65	2.27	3.92	1.28	2.21	0.57	0.98	0.32	0.55	0.20	0.35	0.14	0.25	0.08	0.14	0.05	0.09	0.09
55	5.62	9.70	3.60	6.21	2.50	4.31	1.41	2.43	0.62	1.08	0.35	0.61	0.22	0.39	0.16	0.27	0.09	0.15	0.06	0.10	0.10
98	10.01	17.29	6.41	11.07	4.45	7.68	2.50	4.32	1.11	1.92	0.63	1.08	0.40	0.69	0.28	0.48	0.16	0.27	0.10	0.17	0.17
100	10.22	17.64	6.54	11.29	4.54	7.84	2.55	4.41	1.14	1.96	0.64	1.10	0.41	0.71	0.28	0.49	0.16	0.28	0.10	0.18	0.18
150	15.33	26.46	9.81	16.94	6.81	11.76	3.83	6.62	1.70	2.94	0.96	1.65	0.61	1.06	0.43	0.74	0.24	0.41	0.15	0.26	0.26
200	20.44	35.29	13.08	22.58	9.08	15.68	5.11	8.82	2.27	3.92	1.28	2.21	0.82	1.41	0.57	0.98	0.32	0.55	0.20	0.35	0.35
220	22.48	38.81	14.39	24.84	9.99	17.25	5.62	9.70	2.50	4.31	1.41	2.43	0.90	1.55	0.62	1.08	0.35	0.61	0.22	0.39	0.39
250			16.35	28.23	11.35	19.60	6.39	11.03	2.84	4.90	1.60	2.76	1.02	1.76	0.71	1.23	0.40	0.69	0.26	0.44	0.44
300			19.62	33.87	13.62	23.52	7.66	13.23	3.41	5.88	1.92	3.31	1.23	2.12	0.85	1.47	0.48	0.83	0.31	0.53	0.53
350					15.90	27.44	8.94	15.44	3.97	6.86	2.24	3.86	1.43	2.47	0.99	1.72	0.56	0.96	0.36	0.62	0.62
391					17.76	30.66	9.99	17.25	4.44	7.66	2.50	4.31	1.60	2.76	1.11	1.92	0.62	1.08	0.40	0.69	0.69
400					18.17	31.36	10.22	17.64	4.54	7.84	2.55	4.41	1.63	2.82	1.14	1.96	0.64	1.10	0.41	0.71	0.71
450							11.50	19.85	5.11	8.82	2.87	4.96	1.84	3.18	1.28	2.21	0.72	1.24	0.46	0.79	0.79
500							12.77	22.05	5.68	9.80	3.19	5.51	2.04	3.53	1.42	2.45	0.80	1.38	0.51	0.88	0.88
550							14.05	24.26	6.24	10.78	3.51	6.06	2.25	3.88	1.56	2.70	0.88	1.52	0.56	0.97	0.97
600							15.33	26.46	6.81	11.76	3.83	6.62	2.45	4.23	1.70	2.94	0.96	1.65	0.61	1.06	1.06
612							15.63	26.99	6.95	12.00	3.91	6.75	2.50	4.32	1.74	3.00	0.98	1.69	0.63	1.08	1.08
650							16.60	28.67	7.38	12.74	4.15	7.17	2.66	4.59	1.84	3.19	1.04	1.79	0.66	1.15	1.15
700									7.95	13.72	4.47	7.72	2.86	4.94	1.99	3.43	1.12	1.93	0.72	1.23	1.23
750									8.52	14.70	4.79	8.27	3.07	5.29	2.13	3.68	1.20	2.07	0.77	1.32	1.32
800									9.08	15.68	5.11	8.82	3.27	5.65	2.27	3.92	1.28	2.21	0.82	1.41	1.41
850									9.65	16.66	5.43	9.37	3.47	6.00	2.41	4.17	1.36	2.34	0.87	1.50	1.50
880									9.99	17.25	5.62	9.70	3.60	6.21	2.50	4.31	1.41	2.43	0.90	1.55	1.55
900									10.22	17.64	5.75	9.92	3.68	6.35	2.55	4.41	1.44	2.48	0.92	1.59	1.59
950									10.79	18.62	6.07	10.48	3.88	6.70	2.70	4.66	1.52	2.62	0.97	1.68	1.68
1000									11.35	19.60	6.39	11.03	4.09	7.06	2.84	4.90	1.60	2.76	1.02	1.76	1.76
1050									11.92	20.58	6.71	11.58	4.29	7.41	2.98	5.15	1.68	2.89	1.07	1.85	1.85
1100									12.49	21.56	7.03	12.13	4.50	7.76	3.12	5.39	1.76	3.03	1.12	1.94	1.94
1150									13.06	22.54	7.34	12.68	4.70	8.12	3.26	5.64	1.84	3.17	1.18	2.03	2.03
1200									13.62	23.52	7.66	13.23	4.90	8.47	3.41	5.88	1.92	3.31	1.23	2.12	2.12
1250									14.19	24.50	7.98	13.78	5.11	8.82	3.55	6.13	2.00	3.45	1.28	2.21	2.21
1300									14.76	25.48	8.30	14.33	5.31	9.17	3.69	6.37	2.08	3.58	1.33	2.29	2.29
1350									15.33	26.46	8.62	14.89	5.52	9.53	3.83	6.62	2.16	3.72	1.38	2.38	2.38
1400											8.94	15.44	5.72	9.88	3.97	6.86	2.24	3.86	1.43	2.47	2.47
1450											9.26	15.99	5.93	10.23	4.12	7.11	2.32	4.00	1.48	2.56	2.56
1500											9.58	16.54	6.13	10.59	4.26	7.35	2.39	4.14	1.53	2.65	2.65
1550											9.90	17.09	6.34	10.94	4.40	7.60	2.47	4.27	1.58	2.73	2.73
1565											9.99	17.26	6.40	11.04	4.44	7.67	2.50	4.31	1.60	2.76	2.76
1600											10.22	17.64	6.54	11.29	4.54	7.84	2.55	4.41	1.63	2.82	2.82
1650											10.54	18.19	6.74	11.64	4.68	8.09	2.63	4.55	1.69	2.91	2.91
1700											10.86	18.75	6.95	12.00	4.83	8.33	2.71	4.69	1.74	3.00	3.00
1750											11.18	19.30	7.15	12.35	4.97	8.58	2.79	4.82	1.79	3.09	3.09
1800											11.50	19.85	7.36	12.70	5.11	8.82	2.87	4.96	1.84	3.18	3.18
1850											11.81	20.40	7.56	13.06	5.25	9.07	2.95	5.10	1.89	3.26	3.26
1900											12.13	20.95	7.77	13.41	5.39	9.31	3.03	5.24	1.94	3.35	3.35
1950											12.45	21.50	7.97	13.76	5.53	9.56	3.11	5.38	1.99	3.44	3.44
2000											12.77	22.05	8.17	14.11	5.68	9.80	3.19	5.51	2.04	3.53	3.53
2050											13.09	22.60	8.38	14.47	5.82	10.05	3.27	5.65	2.09	3.62	3.62
2100											13.41	23.16	8.58	14.82	5.96	10.29	3.35	5.79	2.15	3.70	3.70

Sufficient Velocity for Cleansing

Velocity to Great to Measure



## ST. JOHNS COUNTY UTILITY DEPARTMENT Flushing Test Chart

Flow gpm	2.0-inch		2.5-inch		3.0-inch		4-inch		6-inch		8-inch		10-inch		12-inch		16-inch		20-inch	
	Vel. (ft/s) ft/sec	Dist. "X" inches	Vel. (ft/s) ft/sec	Dist. "X" inches	Vel. (ft/s) ft/sec	Dist. "X" inches	Vel. (ft/s) ft/sec	Dist. "X" inches	Vel. (ft/s) ft/sec	Dist. "X" inches	Vel. (ft/s) ft/sec	Dist. "X" inches	Vel. (ft/s) ft/sec	Dist. "X" inches	Vel. (ft/s) ft/sec	Dist. "X" inches	Vel. (ft/s) ft/sec	Dist. "X" inches	Vel. (ft/s) ft/sec	Dist. "X" inches
2150											13.73	23.71	8.79	15.17	6.10	10.54	3.43	5.93	2.20	3.79
2200											14.05	24.26	8.99	15.53	6.24	10.78	3.51	6.06	2.25	3.88
2250											14.37	24.81	9.20	15.88	6.39	11.03	3.59	6.20	2.30	3.97
2300											14.69	25.36	9.40	16.23	6.53	11.27	3.67	6.34	2.35	4.06
2350													9.61	16.58	6.67	11.52	3.75	6.48	2.40	4.15
2400													9.81	16.94	6.81	11.76	3.83	6.62	2.45	4.23
2450													10.01	17.29	6.95	12.01	3.91	6.75	2.50	4.32
2500													10.22	17.64	7.10	12.25	3.99	6.89	2.55	4.41
2550													10.42	18.00	7.24	12.50	4.07	7.03	2.61	4.50
2600													10.63	18.35	7.38	12.74	4.15	7.17	2.66	4.59
2650													10.83	18.70	7.52	12.99	4.23	7.31	2.71	4.68
2700													11.04	19.05	7.66	13.23	4.31	7.44	2.76	4.76
2750													11.24	19.41	7.81	13.48	4.39	7.58	2.81	4.85
2800													11.44	19.76	7.95	13.72	4.47	7.72	2.86	4.94
2850													11.65	20.11	8.09	13.97	4.55	7.86	2.91	5.03
2900													11.85	20.47	8.23	14.21	4.63	7.99	2.96	5.12
2950													12.06	20.82	8.37	14.46	4.71	8.13	3.01	5.20
3000													12.26	21.17	8.52	14.70	4.79	8.27	3.07	5.29
3050													12.47	21.52	8.66	14.95	4.87	8.41	3.12	5.38
3100													12.67	21.88	8.80	15.19	4.95	8.55	3.17	5.47
3150													12.88	22.23	8.94	15.44	5.03	8.68	3.22	5.56
3200													13.08	22.58	9.08	15.68	5.11	8.82	3.27	5.65
3250													13.28	22.94	9.22	15.93	5.19	8.96	3.32	5.73
3300													13.49	23.29	9.37	16.17	5.27	9.10	3.37	5.82
3350													13.69	23.64	9.51	16.42	5.35	9.23	3.42	5.91
3400													13.90	23.99	9.65	16.66	5.43	9.37	3.47	6.00
3450													14.10	24.35	9.79	16.91	5.51	9.51	3.53	6.09
3500													14.31	24.70	9.93	17.15	5.59	9.65	3.58	6.17

Sufficient Velocity for Cleansing

Velocity to Great to Measure

DISCHARGE PIPE IS REQUIRED TO BE INSTALLED LEVEL WITH A MINIMUM LENGTH OF THREE FEET.

90° DI BEND, TO BE FULLY RESTRAINED

Distance "X"

DISCHARGE PIPE

4"

RISER PIPE

MAIN LINE BEING FLUSHED

90° DI BEND, TO BE FULLY RESTRAINED

MAIN LINE DIAMETER	MINIMUM DISCHARGE PIPE DIAMETER
20"	10"
16"	8"
12"	8"
10"	6"
8"	6"
6"	4"
4"	2"