

WEST UNION SEWER DISTRICT CAPACITY STUDY

Sheet Updated 9/24/2014
9-14 Flow Metering

	Meter Site #				14" Leland Ave MGD	12" W.Union at Voyager	12" President Row to M.Ave
	1	2	3	4			
	15" Brook Street (MGD)	12" Christy Road (MGD)	12" 60 West Union (MGD)	10" MBTA (MGD)			
Minimum for period:	0.033	0.02	0	0.001	NA	NA	NA
Average for period:	0.146	0.112	0.045	0.017	NA	NA	NA
Max. for period	0.425	0.360	0.220	0.099	0.420	0.321	0.321
Peak Factor- Calculated	2.91	3.21	4.89	5.82	NA	NA	NA

NA : Not Applicable

Theoretical Pipe Capacity							
Pipe Capacity: S=	0.0017	0.0022	0.0022	0.004	0.0017	0.0187	0.0022
60% Pipe Capacity	1.171	0.734	2.13	0.609	0.974	2.141	0.734
3/4 Pipe Capacity	1.584	0.994	2.881	0.824	1.317	2.897	0.994
Available Pipe Capacity for Future Development							

Available Capacity							
60% pipe	0.746	0.374	1.91	0.51	0.554	1.82	0.413
3/4 pipe	1.159	0.634	2.661	0.725	0.897	2.576	0.673
West Union Sewer District	0.028	0.028	0.028	0	0.028	0.028	0.028

Available Capacity							
60% pipe	0.718	0.346	1.882	0.510	0.526	1.792	0.385
3/4 pipe	1.131	0.606	2.633	0.725	0.869	2.548	0.645
WOODS - Trask	0.031	0.031	0.0310	0	0.031	0.031	0.031

Available Capacity							
60% pipe	0.687	0.315	1.851	0.510	0.495	1.761	0.354
3/4 pipe	1.100	0.575	2.602	0.725	0.838	2.517	0.614
Hickey Future	0.018	0.018	0.018	0	0.018	0.018	0.018

Available Capacity							
60% pipe	0.669	0.297	1.833	0.510	0.477	1.743	0.336
3/4 pipe	1.082	0.557	2.584	0.725	0.820	2.499	0.596
250 WU Nursing Home	0.059	0.059	0.059	0	0.059	0.059	0.059

Available Capacity							
60% pipe	0.610	0.238	1.774	0.510	0.418	1.684	0.277
3/4 pipe	1.023	0.498	2.525	0.725	0.761	2.440	0.537
Rodenheiser - Green	0.053	0.053	0.000	0	0.053	0.053	0.053

Available Capacity							
60% pipe	0.557	0.185	1.774	0.510	0.365	1.631	0.224
3/4 pipe	0.970	0.445	2.525	0.725	0.708	2.387	0.484
133 WU Capital Property	0.077	0.077	0.077	0	0.077	0.077	0.077

Available Capacity							
60% pipe	0.480	0.108	1.696	0.510	0.288	1.554	0.147
3/4 pipe	0.893	0.368	2.447	0.725	0.631	2.310	0.407
Gayner Phase 1 MGD	0.352	0.352	0.352	0.352	0.352	0.352	0.352

Available Capacity							
60% pipe	0.128	-0.244	1.344	0.158	-0.064	1.202	-0.205
3/4 pipe	0.541	0.016	2.095	0.373	0.279	1.958	0.055
Gayner AR MGD	0.167	0.167	0.000	0.167	0.167	0.167	0.167

Available Capacity For Future Developments							
60% pipe	-0.040	-0.412	1.344	-0.009	-0.232	1.034	-0.373
3/4 pipe	0.373	-0.152	2.095	0.206	0.111	1.790	-0.113

Build-out Peak Flow							
	1.211	1.146	0.786	0.618	1.206	1.107	1.107

- Pipe capacity exceeded by proposed development flows
 - Proposed development flow does not exceed available capacity
- Notes:
1. Rain events during the 2 week flow meter period totaled 3.35 inches
 2. WUSA= West Union Sewer area constructed by the Town of Ashland.
 3. Italics text indicates estimated numbers