Meter <u>Area</u>	Meters Used	Est. Potential Infiltration (gpd)	Est. Potential Inflow (gpd)	Infiltration <u>Ranking</u>	Inflow <u>Ranking</u>	Est. Potential <u>I &amp; I</u>	I & I <u>Ranking</u>
1	128-132	5,179.0	313,040.0	6	3	318,219.0	4
2	132	72,553.0	155,884.0	3	5	228,437.0	5
3	77	73,710.0	717,020.0	2	1	790,730.0	1
4	69-77	34,642.0	57,576.0	5	6	92,218.0	6
5	85-A1(13)	44,623.0	421,590.0	4	2	466,213.0	2
6	86(12)	141,181.0	243,970.0	1	4	385,151.0	3
	TOTAL	371,888.0	1,909,080.0			2,280,968.0	

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Meter Location	Estimated Potential Infiltration (gpd)	Estimated Potential Inflow (gpd)
69	108,352	774,596
77	73,710	717,020
85-A1(13)	44,623	421,590
86(12)	141,181	243,970
128	77,732	468,924
132	72,553	155,884
TOTAL	518,151.0	2,781,984.0

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## Ebensburg Municipal Authority Sanitary Sewer Evaluation Study 69- 15" PVC Backlot Prave Street

Metered Number of EDUs = 332

## Rainfall

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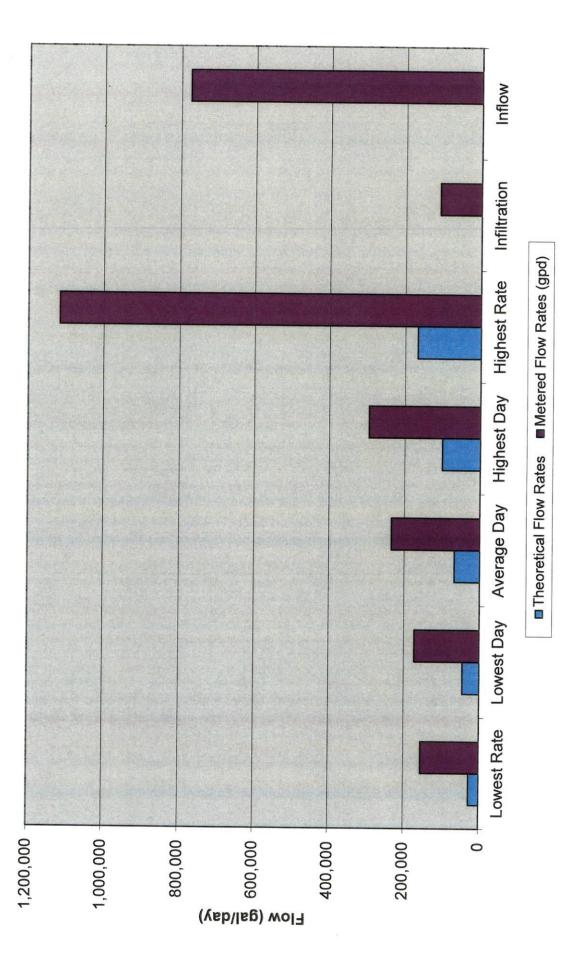
Naiman		
Days Meter Installed	70	(11/12/15 thru 1/20/16)
Days with Rainfall (>0.05")	22	,
Days Affected by Rainfall	33	
Maximum Daily Rainfall	0.52	
Minimum Daily Rainfall	0.01	
Average Daily Rainfall	0.07	

## **Theoretical Flow Rates**

Theoretical Tiow Rates			
		Theoretical	
	Theoretical Flow	Flow Rates	Metered Flow
	per EDU (gpd)	(gpd)	Rates (gpd)
Lowest Rate	80	26,560	153,874
Lowest Day	133	44,156	171,446
Average Day	200	66,400	233,773
Highest Day	300	99,600	295,061
Highest Rate	500	166,000	1,116,720
Infiltration	0	0	108.352
Inflow	0	0	774,596
Peaking Factor	2.50	2.50	4.78

	Date	Flow (GPD)	Flow per EDU
Lowest Average Night Time Flow Rate (1:00 a.m. to 5:00 a.m., No Rainfall)	7-day average	153,874	(gpd) 463
Lowest Daily Flow for a 24 Hour Period With No Rainfall	7-day average	171,446	516
Average Daily Flow Through the Monitoring Period	N/A	233,773	704
Highest Daily Flow for a 24 Hour Period With No Rainfall	7-day average	295,061	889
Non-Rainfall Induced Infiltration (24-Hour Period)	N/A	123,615	372
Highest Average Night Time Flow Rate (1:00 a.m. to 5:00 a.m., No Rainfall)	7-day average	246,692	743
Non-Rainfall Induced Infiltration (4- Hour Overnight)	N/A	93,088	280
Average Peak Flow During a Significant Rainfall Event	12/02/15 5:00 a.m 11:00 a.m.	732,096	2,205
Highest Recorded Flow Rate	12/02/15 9:50 p.m.	1,116,720	3,364
Inflow	N/A	774,596	2,333

69-15"PVC/Backlot Prave Street



## Ebensburg Municipal Authority Sanitary Sewer Evaluation Study 77-15" PVC Lloyd & Spruce Street

Metered Number of EDUs =

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184

11 Days Meter Installed 70 Days with Rainfall (>0.05") 22 Days Affected by Rainfall 33 Maximum Daily Rainfall 0.52 Minimum Daily Rainfall 0.01 Average Daily Rainfall 0.07

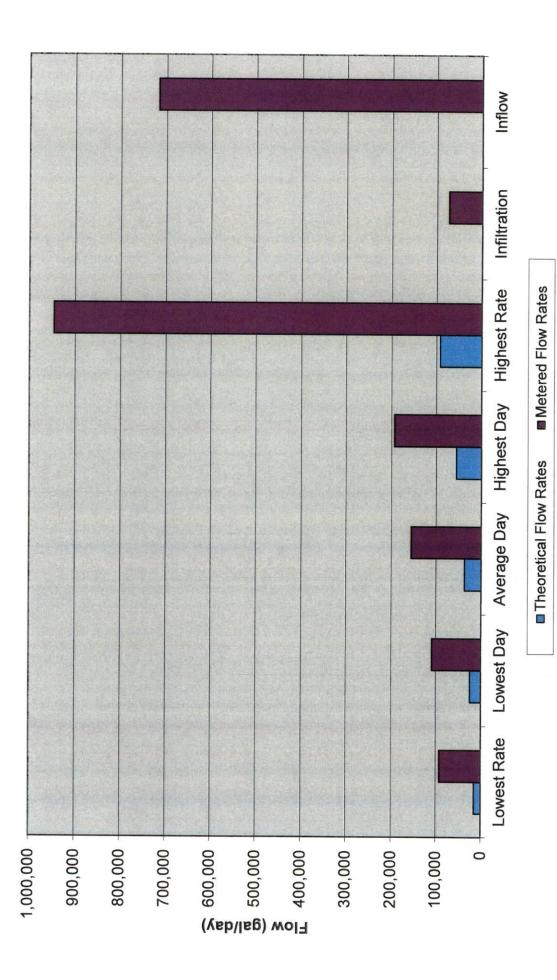
(11/12/15 thru 1/20/16)

## Theoretical Flow Rates

	Theoretical Flow per EDU (gpd)	Theoretical Flow Rates (gpd)	Metered Flow Rates (gpd)
Lowest Rate	80	14,720	92,263
Lowest Day	133	24,472	108,639
Average Day	200	36,800	155,436
Highest Day	300	55,200	193,008
Highest Rate	500	92,000	946,166
Infiltration	0	0	73,710
Inflow	0	0	717,020
Peaking Factor	2.50	2.50	6.09

	Date	Flow (GPD)	Flow per EDU (gpd)
Lowest Average Night Time Flow Rate (1:00 a.m. to 5:00 a.m., No Rainfall)	7-day average	92,263	501
Lowest Daily Flow for a 24 Hour Period With No Rainfall	7-day average	108,639	590
Average Daily Flow Through the Monitoring Period	N/A	155,436	845
Highest Daily Flow for a 24 Hour Period With No Rainfall	7-day average	193,008	1,049
Non-Rainfall Induced Infiltration (24-Hour Period)	N/A	84,369	459
Highest Average Night Time Flow Rate (1:00 a.m. to 5:00 a.m., No Rainfall)	7-day average	155,314	844
Non-Rainfall Induced Infiltration (4- Hour Overnight)	N/A	63,051	343
Average Peak Flow During a Significant Rainfall Event	12/02/15 5:00 a.m 11:00 a.m.	515,376	2,801
Highest Recorded Flow Rate	12/02/15 7:40 a.m.	946,166	5,142
Inflow	N/A	717,020	3,897

## 77-15" PVC/Lloyd & Spruce Street



## Ebensburg Municipal Authority Sanitary Sewer Evaluation Study 85-A1 (13)- 21" VCP Caroline Street

Metered Number of EDUs =

135

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Days Meter Installed70Days with Rainfall (>0.05")22Days Affected by Rainfall33Maximum Daily Rainfall0.52Minimum Daily Rainfall0.01Average Daily Rainfall0.07

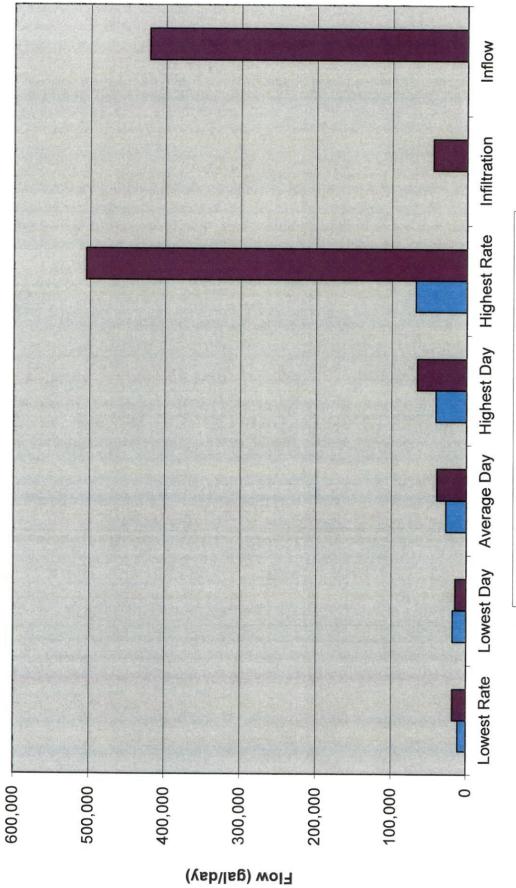
(11/12/15 thru 1/20/16)

## **Theoretical Flow Rates**

133 200 300	17,955 27,000	17,918 14,574 38,997 65,208
500	67,500	505,210
0 0 2.50	0	44,623 421,590 12,96
	200 300 500 0	200         27,000           300         40,500           500         67,500           0         0           0         0           0         0

	Date	Flow (GPD)	Flow per EDU (gpd)
Lowest Average Night Time Flow Rate (1:00 a.m. to 5:00 a.m., No Rainfall)	7-day average	17,918	133
Lowest Daily Flow for a 24 Hour Period With No Rainfall	7-day average	14,574	108
Average Daily Flow Through the Monitoring Period	N/A	38,997	289
Highest Daily Flow for a 24 Hour Period With No Rainfall	7-day average	65,208	483
Non-Rainfall Induced Infiltration (24-Hour Period)	N/A	50,634	375
Highest Average Night Time Flow Rate (1:00 a.m. to 5:00 a.m., No Rainfall)	7-day average	56,530	419
Non-Rainfall Induced Infiltration (4- Hour Overnight)	N/A	38,612	286
Average Peak Flow During a Significant Rainfall Event	12/02/15 5:00 a.m 11:00 a.m.	242,784	1,798
Highest Recorded Flow Rate	10/03/15 6:50 a.m.	505,210	3,742
Inflow	N/A	421,590	3,123

# 85-A1 (13)- 21" VCP/Caroline Street



Theoretical Flow Rates Metered Flow Rates (gpd)

## Ebensburg Municipal Authority Sanitary Sewer Evaluation Study 86 (12)- 15" VCP Triumph Street

Metered Number of EDUs =

Rainfall

Days Meter Installed

Days with Rainfall (>0.05")

Days Affected by Rainfall

Maximum Daily Rainfall

Minimum Daily Rainfall

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375

70

22

33

0.52

0.01

0.07

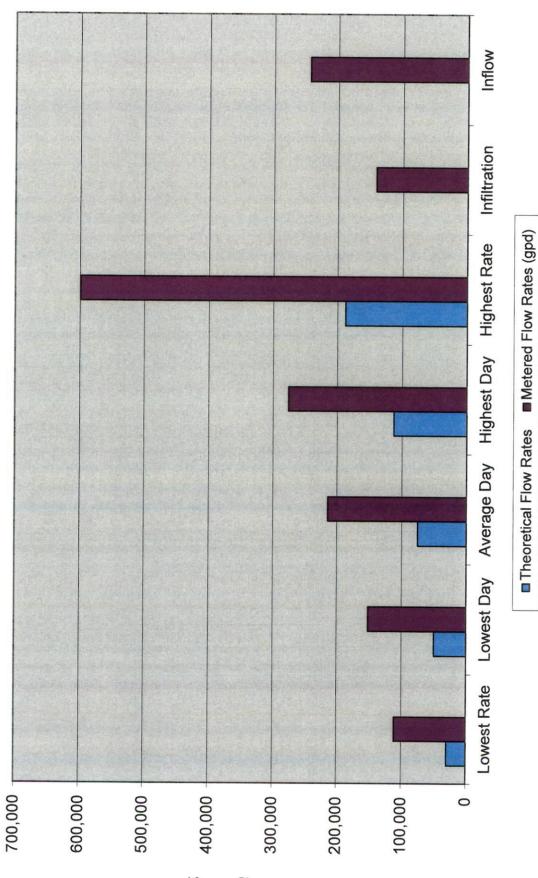
(11/12/15 thru 1/20/16)

Average Daily Rainfall
Theoretical Flow Rates

	Theoretical Flow per EDU (gpd)	Theoretical Flow Rates (gpd)	Metered Flow Rates (gpd)
Lowest Rate	80	30,000	111,003
Lowest Day	133	49.875	151,492
Average Day	200	75.000	214,322
Highest Day	300	112,500	276,296
Highest Rate	500	187,500	599,472
Infiltration	0	0	141,181
Inflow	0	0	243,970
Peaking Factor	2.50	2.50	2.80

	Date	Flow (GPD)	Flow per EDU (gpd)
Lowest Average Night Time Flow Rate (1:00 a.m. to 5:00 a.m., No Rainfall)	7-day average	111,003	296
Lowest Daily Flow for a 24 Hour Period With No Rainfall	7-day average	151,492	404
Average Daily Flow Through the Monitoring Period	N/A	214,322	572
Highest Daily Flow for a 24 Hour Period With No Rainfall	7-day average	276,296	737
Non-Rainfall Induced Infiltration (24-Hour Period)	N/A	124,804	333
Highest Average Night Time Flow Rate (1:00 a.m. to 5:00 a.m., No Rainfall)	7-day average	268,560	716
Non-Rainfall Induced Infiltration (4- Hour Overnight)	N/A	157,557	420
Average Peak Flow During a Significant Rainfall Event	12/02/15 5:00 a.m 11:00 a.m.	342,576	914
Highest Recorded Flow Rate	12/05/15 2:10 p.m.	599,472	1,599
Inflow	N/A	243,970	651

86 (12)- 15" VCP/ Triumph Street



Flow (gal/day)

## Ebensburg Municipal Authority Sanitary Sewer Evaluation Study 128- 10" PVC Backlot Prave Street

Metered Number of EDUs =

Rainfall

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275

70
22
33
0.52
0.01
0.07

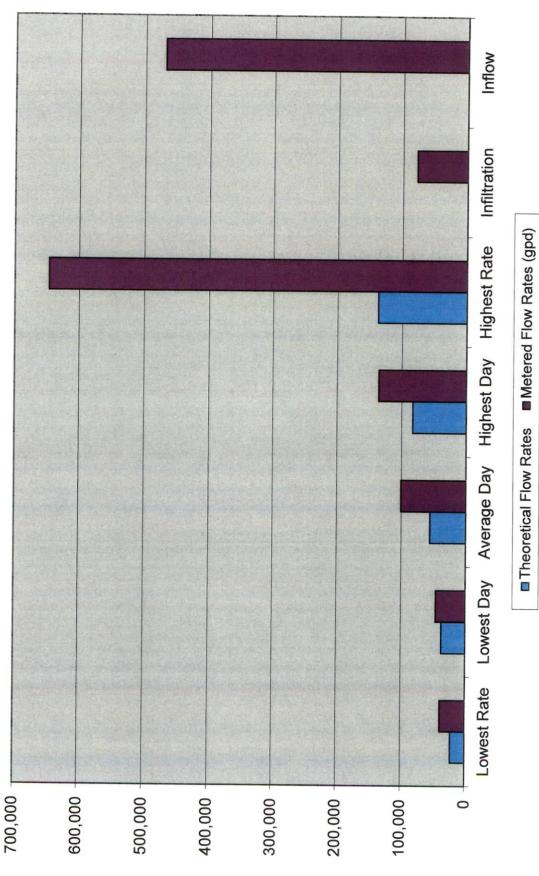
(11/12/15 thru 1/20/16)

## Theoretical Flow Rates

Lowest Rate Lowest Day Average Day Highest Day Highest Rate Infiltration Inflow	Theoretical Flow per EDU (gpd) 80 133 200 300 500 0 0 0	Theoretical Flow Rates (gpd) 22,000 36,575 55,000 82,500 137,500 0 0	Metered Flow Rates (gpd) 38,510 45,759 100,510 136,258 647,165 77,732 468,924
Peaking Factor	0 2.50	0 2.50	468,924 6.44

	Date	Flow (GPD)	Flow per EDU (gpd)
Lowest Average Night Time Flow Rate (1:00 a.m. to 5:00 a.m., No Rainfall)	7-day average	38,510	140
Lowest Daily Flow for a 24 Hour Period With No Rainfall	7-day average	45,759	166
Average Daily Flow Through the Monitoring Period	N/A	100,510	365
Highest Daily Flow for a 24 Hour Period With No Rainfall	7-day average	136,258	495
Non-Rainfall Induced Infiltration (24-Hour Period)	N/A	90,499	329
Highest Average Night Time Flow Rate (1:00 a.m. to 5:00 a.m., No Rainfall)	7-day average	103,474	376
Non-Rainfall Induced Infiltration (4- Hour Overnight)	N/A	64,964	236
Average Peak Flow During a Significant Rainfall Event	12/02/15 5:00 a.m 11:00 a.m.	357,984	1,302
Highest Recorded Flow Rate	12/27/15 6:00 p.m.	647,165	2,353
Inflow	N/A	468,924	1,705

128- 10" PVC/Backlot Prave Street



Flow (gal/day)

## Ebensburg Municipal Authority Sanitary Sewer Evaluation Study 132- 10" VCP West Street

Metered Number of EDUs = 169

## Rainfall

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Days Meter Installed	70	(11/12/15 thru 1/20/16)
Days with Rainfall (>0.05")	22	(
Days Affected by Rainfall	33	
Maximum Daily Rainfall	0.52	
Minimum Daily Rainfall	0.01	
Average Daily Rainfall	0.07	

## Theoretical Flow Rates

	Theoretical Flow per EDU (gpd)	Theoretical Flow Rates (gpd)	Metered Flow Rates (gpd)
Lowest Rate	80	13,520	131,842
Lowest Day	133	22,477	155,226
Average Day	200	33,800	200,122
Highest Day	300	50,700	233,453
Highest Rate	500	84,500	428,558
Infiltration	0	0	72,553
Inflow	0	0	155,884
Peaking Factor	2.50	2.50	2.14

	Date	Flow (GPD)	Flow per EDU (gpd)
Lowest Average Night Time Flow Rate (1:00 a.m. to 5:00 a.m., No Rainfall)	7-day average	131,842	780
Lowest Daily Flow for a 24 Hour Period With No Rainfall	7-day average	155,226	918
Average Daily Flow Through the Monitoring Period	N/A	200,122	1,184
Highest Daily Flow for a 24 Hour Period With No Rainfall	7-day average	233,453	1,381
Non-Rainfall Induced Infiltration (24-Hour Period)	N/A	78,227	463
Highest Average Night Time Flow Rate (1:00 a.m. to 5:00 a.m., No Rainfall)	7-day average	198,720	1,176
Non-Rainfall Induced Infiltration (4- Hour Overnight)	N/A	66,878	396
Average Peak Flow During a Significant Rainfall Event	12/02/15 5:00 a.m 11:00 a.m.	325,296	1,925
Highest Recorded Flow Rate	12/02/15 8:50 a.m.	428,558	2,536
Inflow	N/A	155,884	922

132-10" VCP/West Street

