



Taylors Fire & Sewer District

Annual Report

July 1, 2012 – June 30, 2013



www.taylorsdistrict.org



Introduction & Overview

Taylors Fire & Sewer District and ReWa's intergovernmental agreement was signed on March 7, 2007 by Ms. Kelly Tucker, Taylors' Director of Sewer Services and Mr. Ray Orvin, ReWa's Executive Director. After doing some research on the intergovernmental agreement it was noted that the report was due on December 1, 2007. The reports would run from December 1st to November 30th of the following year. After going through the 2007, 2008, 2009 and 2010 reports, Ms. Samantha Bartow, Taylors' Director of Sewer Services set up a meeting with Mr. Ray Orvin, ReWa's Executive Director and Mrs. Stacey Flax, ReWa's Customer Service / Contract Manager to discuss the timeline. During this meeting Ms. Bartow asked if Taylors Fire & Sewer District's report could change the dates of the agreement so it could run on fiscal year. Taylors' fiscal year is July 1st to June 30th. This change was requested due to how Taylors' reports their financials. Mr. Orvin granted Ms. Bartow to change Taylors' report to fiscal year. Since this change was done in 2011 it was also agreed that for the 1st year Taylors Fire & Sewer District would turn in a report for December 1, 2010 to June 30, 2012 to incorporate the new reporting period. From this point forward Taylors Fire & Sewer District reports will run on fiscal year reporting.

As per the established Sanitary Sewer Evaluation Protocols the lines were smoked, inspected utilizing CCTV, and rated as to the amount and location of any damage. Any breaks, open cracks, misalignments, root intrusions, or damaged manholes were marked as inflow and infiltration sources and listed for repair or replacement.



Work Plan Updates

Vehicles Purchases

Purchase Date	Equipment	Cost
1-9-2013	2013 Chevrolet Silverado 4WD Crew Cab	\$23,100.00
11-7-2012	2013 Chevrolet Silverado 4 Door Pick Up	\$37,083.00
1-27-2012	2012 Freightliner Vac-Con Truck	\$303,274.50
11-3-2010	2011 Chevrolet Silverado L. S. Pickup	\$21,512.00
6-1-2009	2009 Ford Super Duty F250 Service Truck	\$25,274.92
8-27-2008	2009 International Durastar Dump Truck	\$59,673.94
10-30-2006	2007 Ford Ranger Pick Up 4x4	\$15,030.75
7-12-2002	2002 Freightliner TV Van with Cues K2 Camera System	\$161,670.00
4-26-2002	2002 Ford Super Duty F350 XL	\$27,102.00
12-14-2005	1997 Chevrolet C6500 Dump Truck	\$11,500.00
5-18-2010	2010 Ford Crown Vic	\$22,042.68

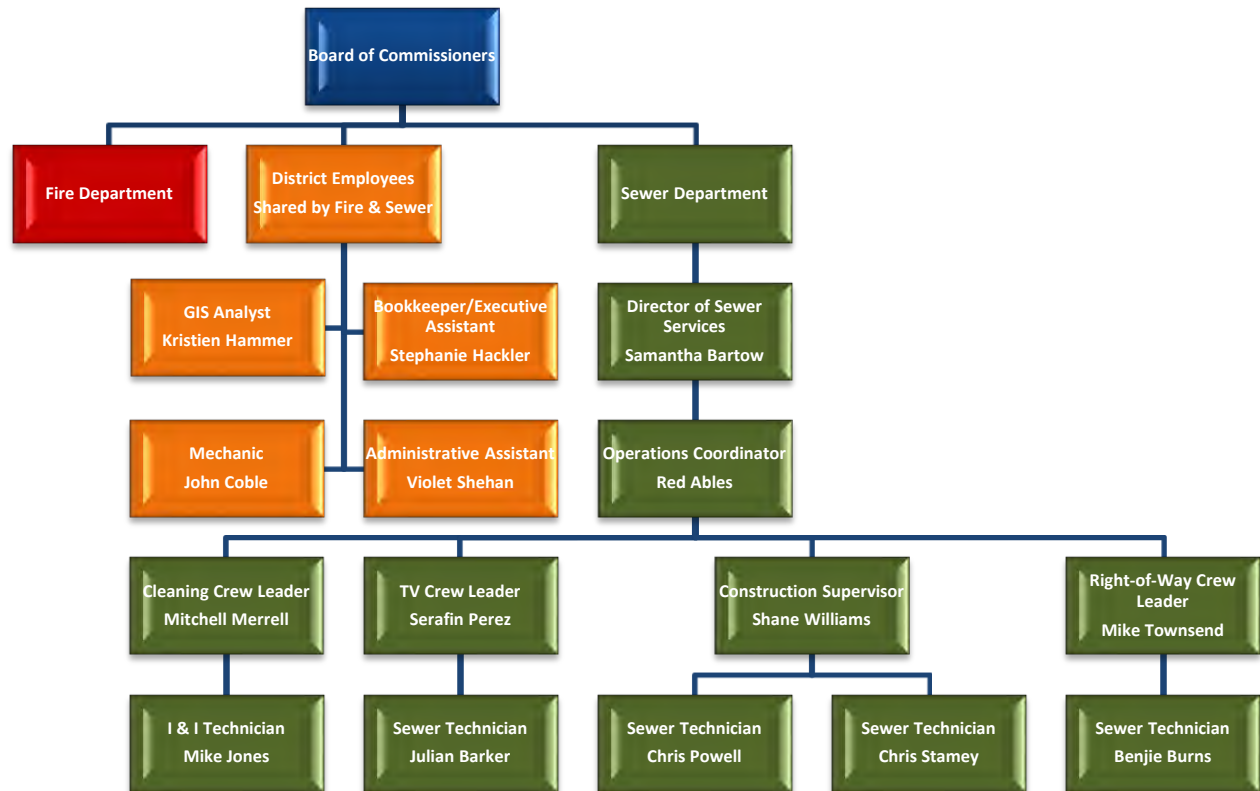
Equipment Purchases

Purchase Date	Equipment	Cost
6-21-2013	Degreaser Injector with Inverter Assembly	\$2,341.00
6-14-2013	3 – HTT-900 Cellular Monitor for Pump Stations \$1,750/ea	\$8,741.50
6-4-2013	VMC 60" Rotary Head w/ Hoses	\$3,999.00
5-14-2013	Compressor Skid Mounted	\$12,953.83
8-17-2012	Cues Sonde for Exisitng OZIII Camera	\$3,233.00
7-30-2012	Solar Tech Arrow Board 15 Lamp Solar Power	\$3,800.00
7-2-2012	Cues Oz III Pan and Tilt Color Zoom Camera Cues WTR Wheeled Crawler with 6", 8", 10-15" Rubber Wheels and Brass Spacer Set 8" Steel Wheels for WTR Crawler	\$41,686.62
5-1-2011	2002 Haulmark Trailer for Patch Repair includes: 10 Marker Cones Porter-Cable Compressor Power House Generator 36" Fan 10'x10' Canopy 1 – 8' Repair Bladder 36 – Connector Rods for Bladder	\$1,800.00

Purchase Date	Equipment	Cost
8-2-2002	2002 John Deere 310 S.G. Backhoe w Cab	\$43,300.00
9-17-2008	D&E Dual Axle Trailer	\$1,669.50
6-23-2008	Bobcat 2200 ATV	\$8,655.20
5-19-2008	with Cues K2 Camera System & Honda Generator	\$65,500.00
8-19-2005	2005 6415 John Deere Tractor w Cab	\$65,653.43
	V.M.C. Sidearm Mower	
9-29-2008	Woods 8' Bushhog	\$5,000.00
6-30-2007	2007 Hudson 10 Ton Trailer	\$7,070.20
5-28-1998	1998 Bobcat 873 Turbo Skid-Steer Loader	\$26,446.00
6-30-2007	Kobelco C.S. 80 Mini Excavator	\$78,595.00
8-17-2005	Godwin By-Pass Pump C.D. 100	\$19,142.55
9-9-2008	Sidekick Easement Machine	\$23,677.47
5-18-2011	Bulldog Jetter Machine 3000 psi	\$39,008.00
	Mi-T-M 1000 psi Steam & Pressure Washer	
	Stone Cement Mixer 655 P.M.	\$3,000.00
1-1-1986	1986 Ingersol-Rand Air Compressor (pull behind)	\$6,000.00
11-6-2009	Gossen Straw Blower for ROWs	\$1,200.00
11-13-2009	Carlton 2518 14" Chipper	\$44,201.62
	F.C.P. Tripod	
	F.C.P. Fall Protection Cable	
	F.C.P. Winch with Fall Protection	
	Hurco Smoke Machine	\$2,500.00
	Hurco Ventilator Machine	
	Hobart Ironman Welder 250 Wire-Welder	\$2,000.00
3-16-2001	Rhino Ditch Box Hyd. 6'x8'	\$6,632.45
11-29-2005	2 – G.M.E. Manual Trench Boxes with End Plates	\$5,479.14
2-20-2007	Stanley Hyd. Power Unit with Misc. Tools	\$7,575.75
	3 – Flo-Dar Flow Monitors	
	7 – Hach Sigma 910 Flow Monitors	
3-8-2010	Insight / Vision Push Camera	\$7,791.00
8-14-1996	950 Sigma Rain Gauge	\$595.00

Taylor's Fire & Sewer District

Organizational Chart



Over the last few years the District has added employees. Taylor's Fire & Sewer District has three classifications for employees: Fire Department Personnel, Sewer Department Personnel and District Administration Personnel. District Administration Personnel work for both the Sewer and Fire Departments, which reports to the Director of Sewer Services and Fire Chief. The Sewer Department has changed responsibilities for Crews; each Crew now has a Crew Leader and/or Supervisor to report to. Due to limited size of each crew, each employee is cross trained in other fields so as to add more manpower to either crew as required by the nature of the project.



Sewer Department Crews

Operations Coordinator



Construction Crew



TV Crew

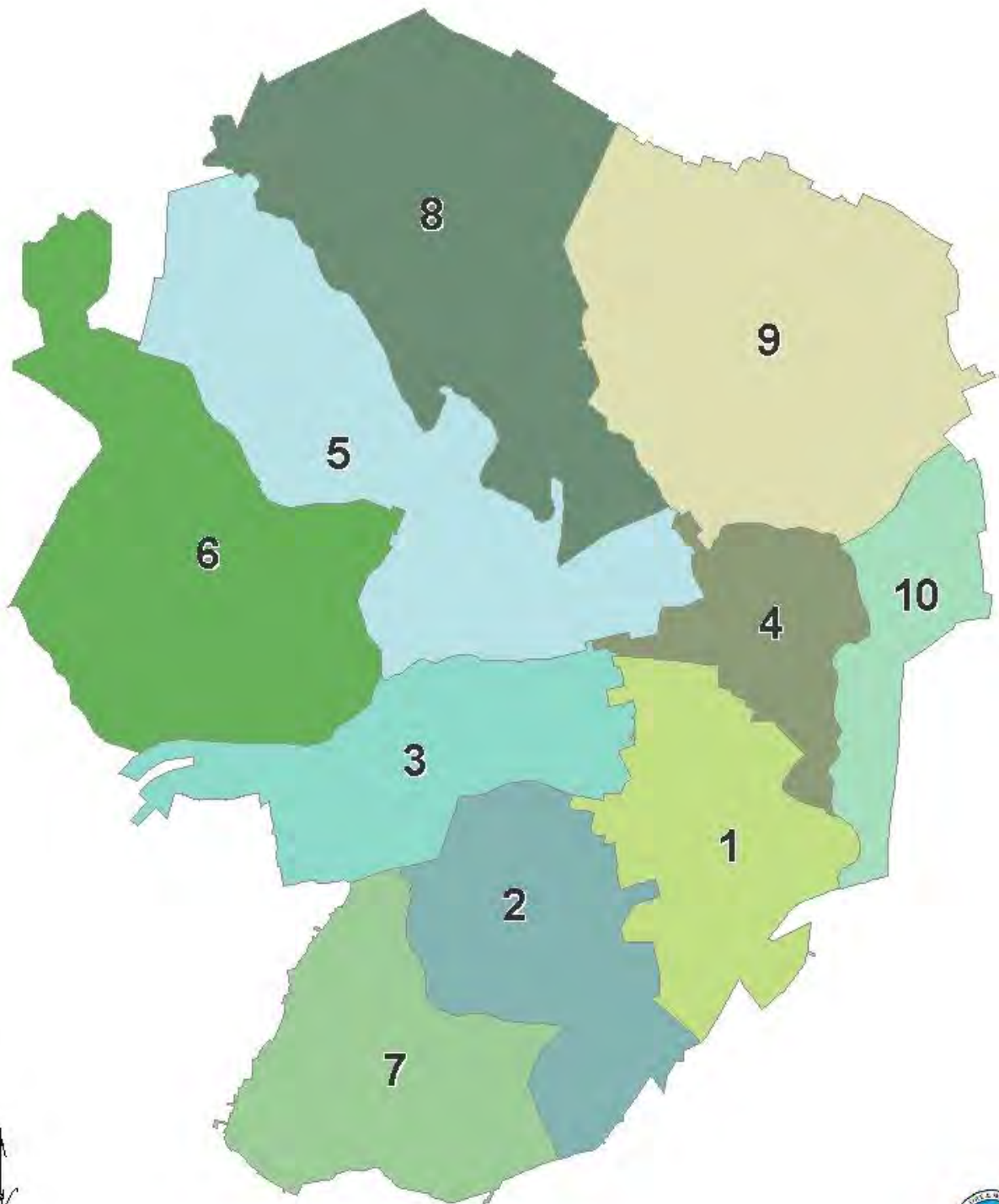


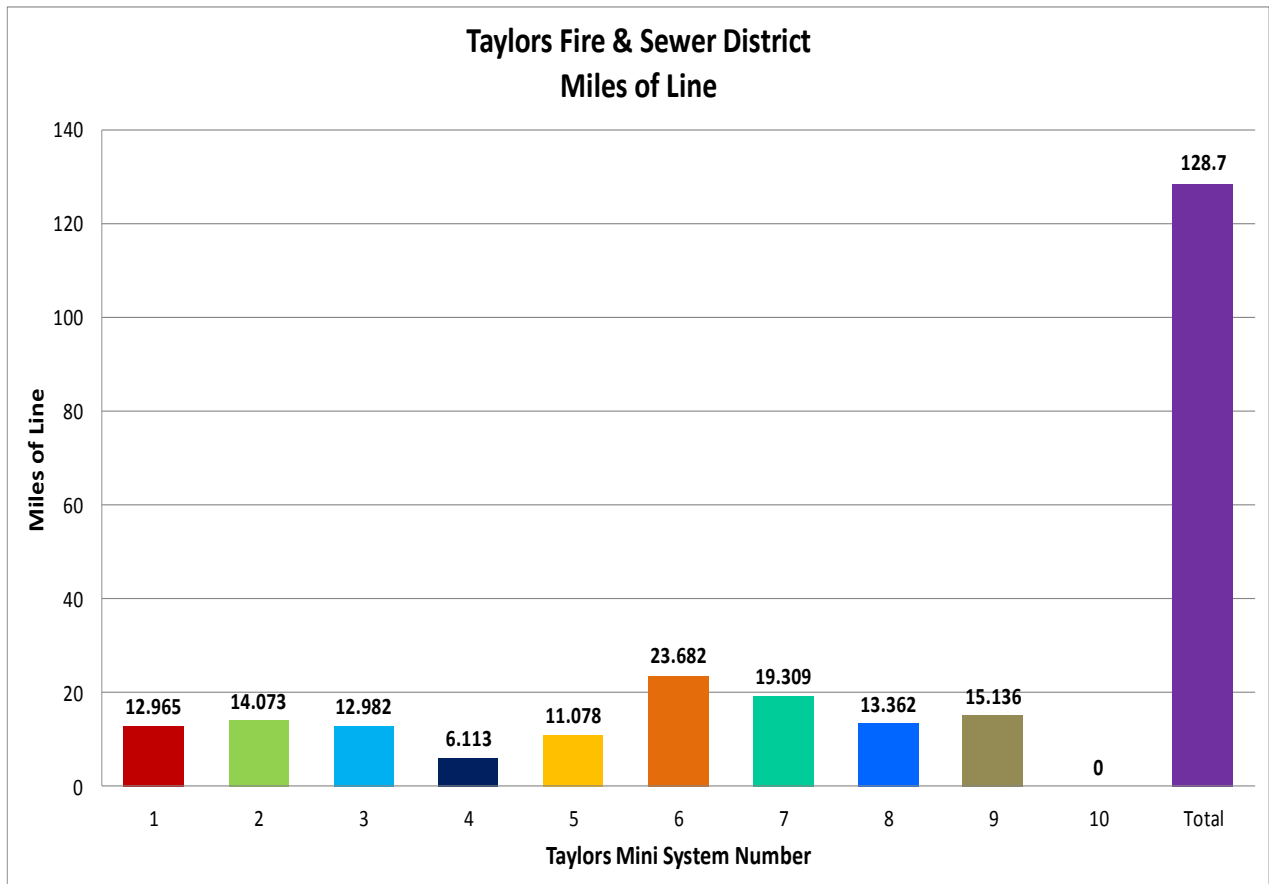
Right-of-Way Crew



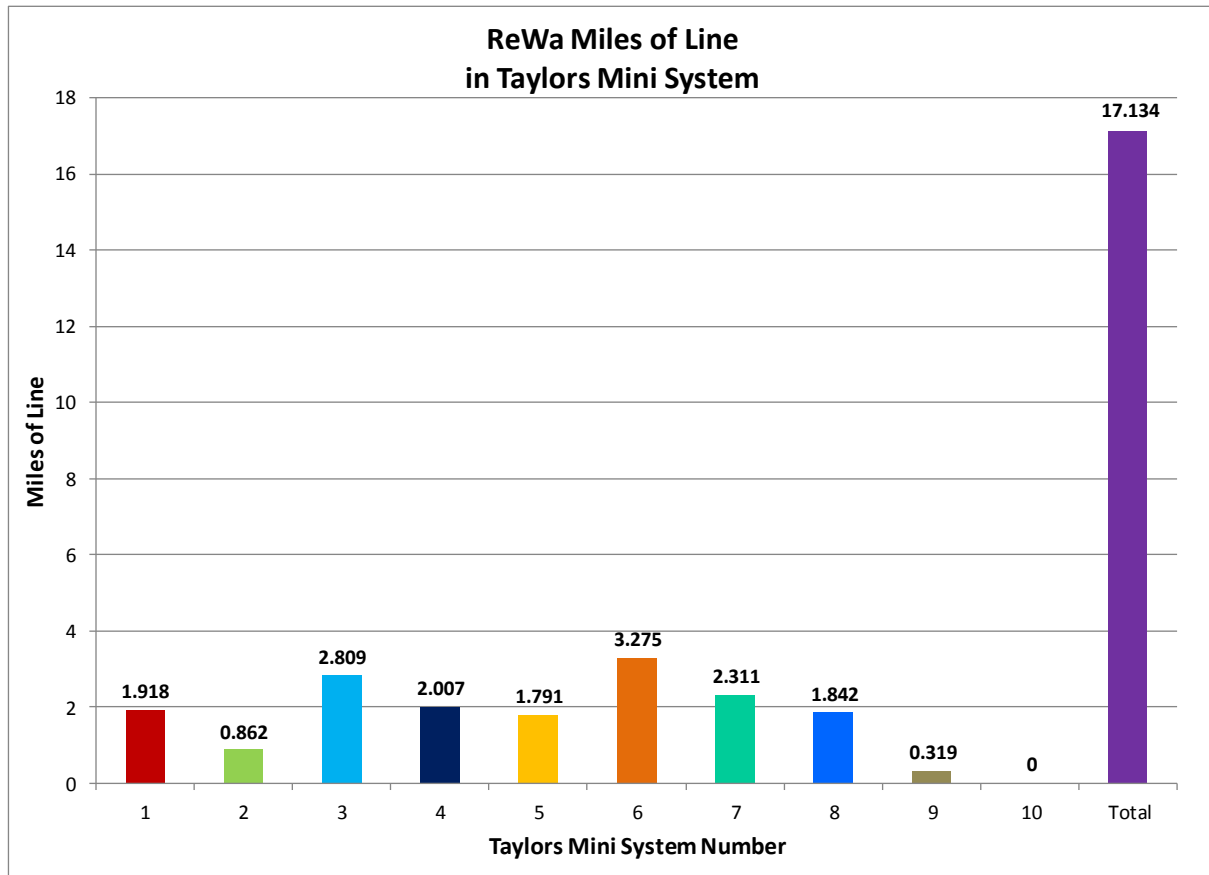
Cleaning Crew

Taylor's Sewer District Minisystems

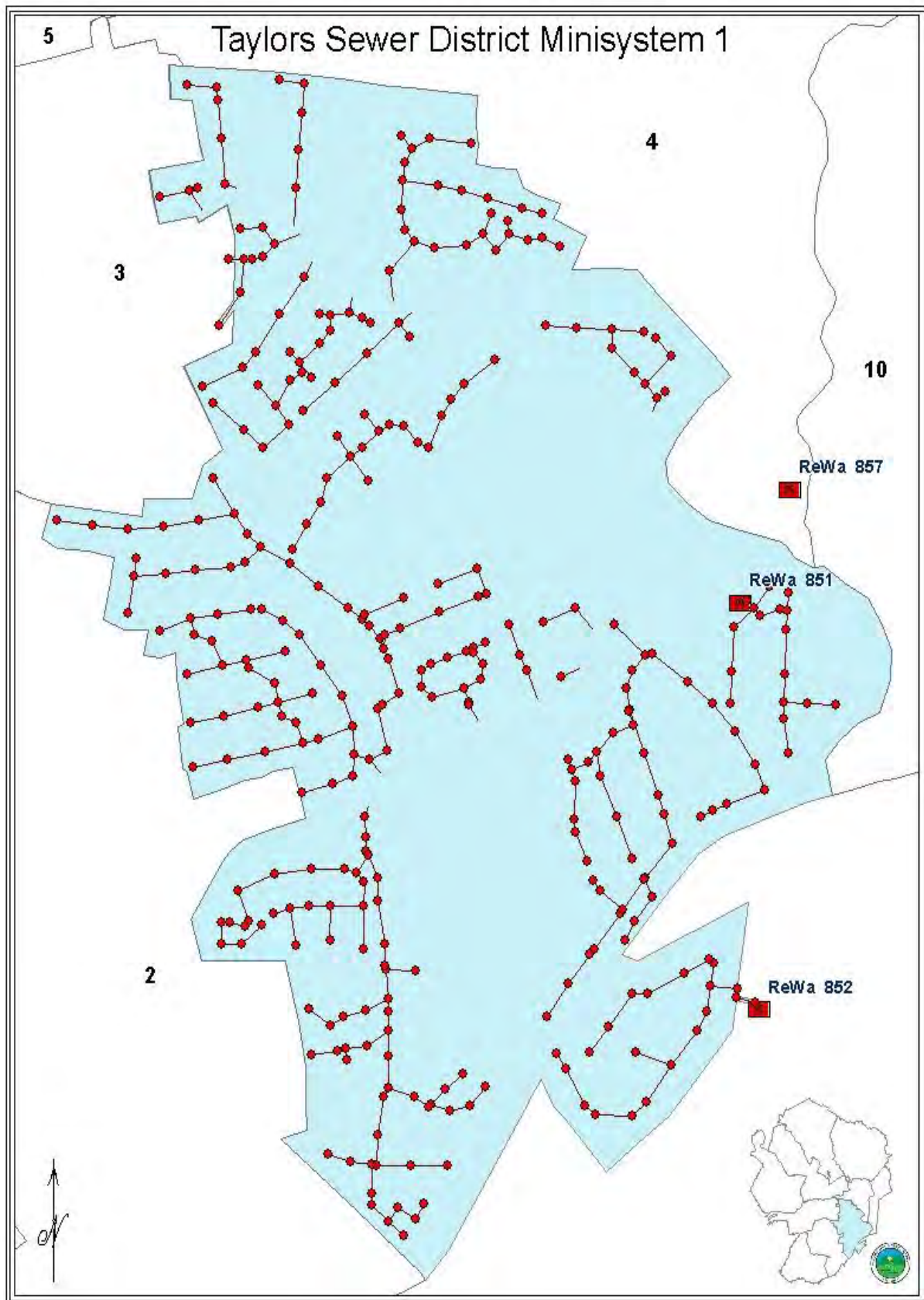




Taylor's Mini System #	Taylor's Miles of Line
1	12.965
2	14.073
3	12.982
4	6.113
5	11.078
6	23.682
7	19.309
8	13.362
9	15.136
10	0
Total:	128.7



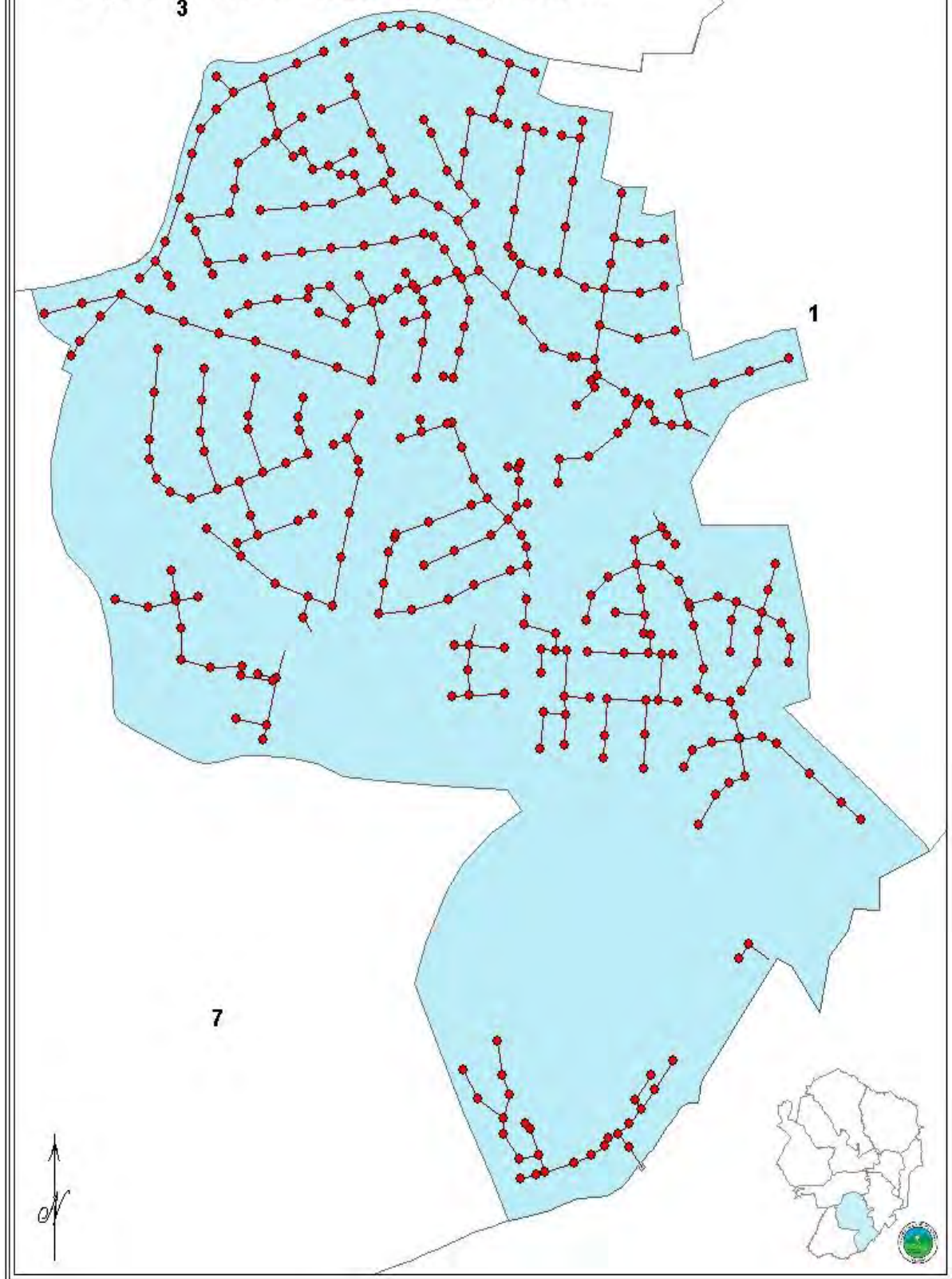
Taylors Mini System #	ReWa Miles of Line
1	1.918
2	0.862
3	2.809
4	2.007
5	1.791
6	3.275
7	2.311
8	1.842
9	0.319
10	0
Total:	17.134



Mini System #1 Data

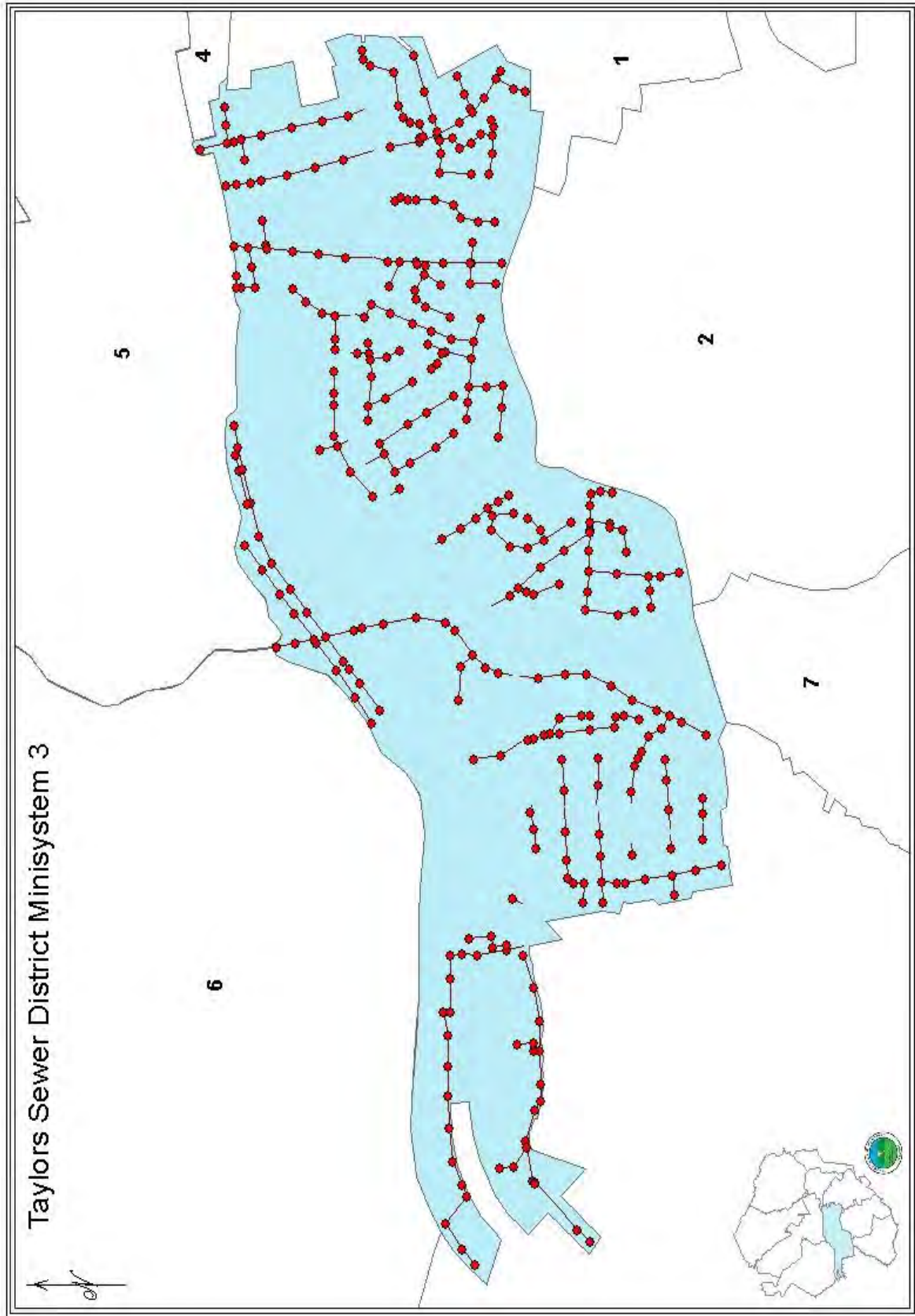
	Total	Comments
Miles of Taylors Collection Line	12.97	
Miles of 6 inch	0	
Miles of 8 inch	12.97	
Miles of 10 inch	0	
Miles of 12 inch	0	
Miles of 15 inch	0	
Miles of Taylors Force Main	0	
Miles of ReWa Trunk Line	1.92	
Miles of ReWa Force Main	0.54	
Number of Connections to ReWa Trunk Lines	17	
Number of Connections to Metro Lines	1	
Number of Connections to Greer CPW Lines	0	
Number of Connections to Wade Hampton Lines	0	
Number of Taylors Manholes	347	
Number of Taylors Pump Stations	0	
Number of ReWa Pump Stations	1	PS851
Number of Tax Parcels	1288	
Approximate Number of Businesses/Industries	8	
Number of Public Schools	0	

Taylor's Sewer District Minisystem 2



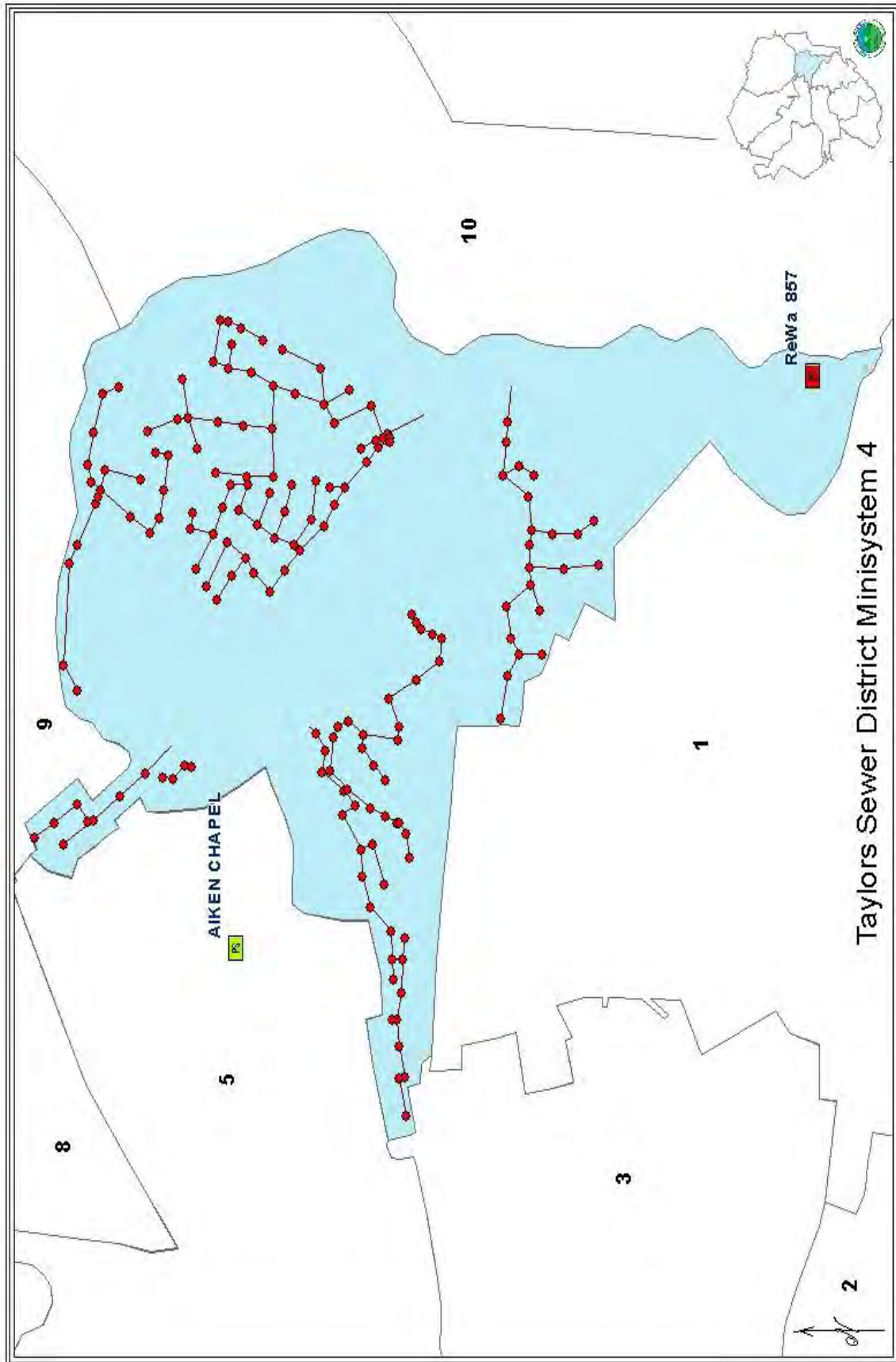
Mini System #2 Data

	Total	Comments
Miles of Taylors Collection Line	14.07	
Miles of 6 inch	0	
Miles of 8 inch	14.07	
Miles of 10 inch	0	
Miles of 12 inch	0	
Miles of 15 inch	0	
Miles of Taylors Force Main	0	
Miles of ReWa Trunk Line	0.86	
Miles of ReWa Force Main	0	
Number of Connections to ReWa Trunk Lines	7	
Number of Connections to Metro Lines	2	
Number of Connections to Greer CPW Lines	0	
Number of Connections to Wade Hampton Lines	0	
Number of Taylors Manholes	372	
Number of Taylors Pump Stations	0	
Number of ReWa Pump Stations	0	
Number of Tax Parcels	1302	
Approximate Number of Businesses/Industries	16	
Number of Public Schools	2	Eastside High School, Brushy Creek Elementary School



Mini System #3 Data

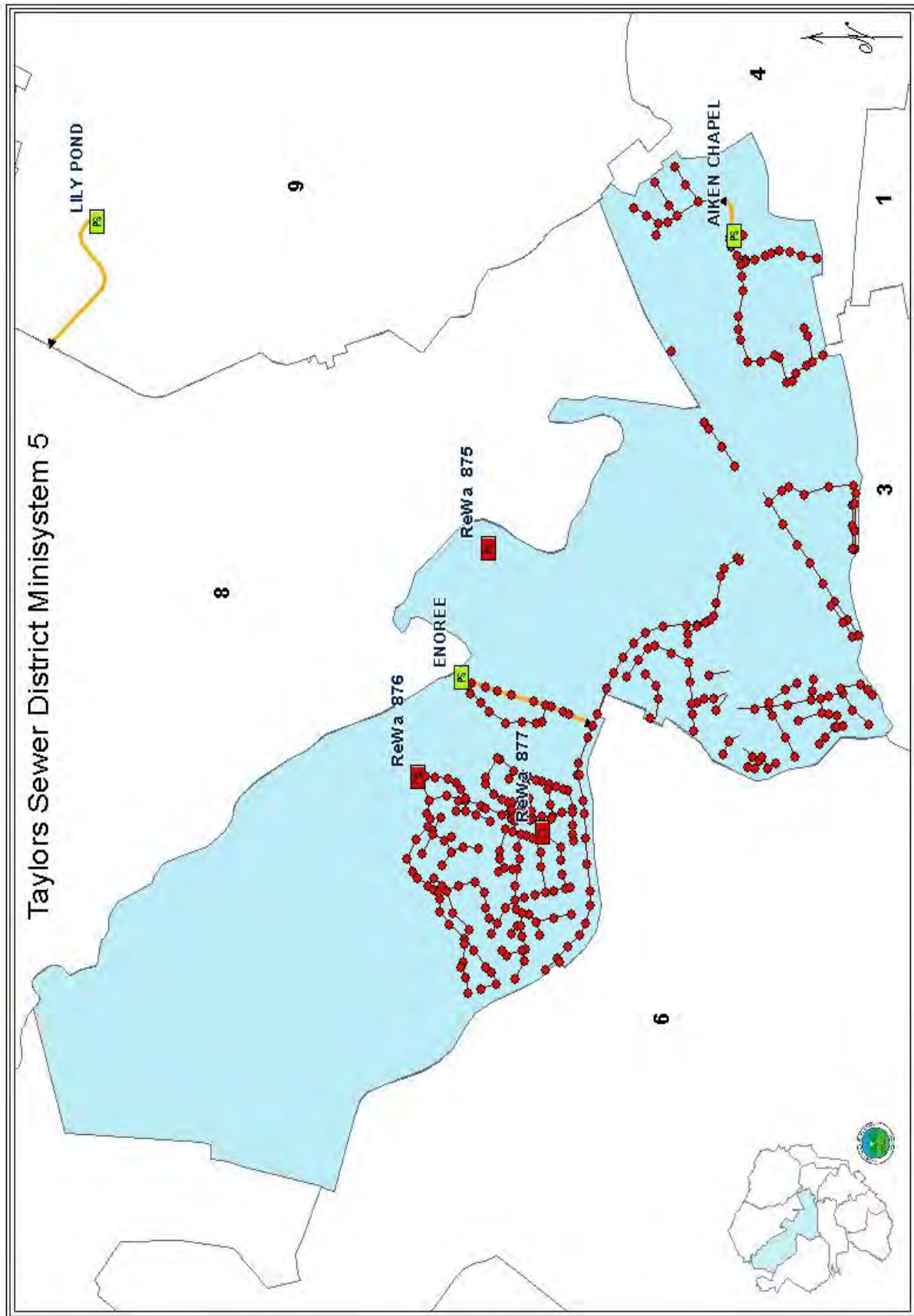
	Total	Comments
Miles of Taylors Collection Line	12.98	
Miles of 6 inch	0.27	
Miles of 8 inch	12.38	
Miles of 10 inch	0.33	
Miles of 12 inch	0	
Miles of 15 inch	0	
Miles of Taylors Force Main	0	
Miles of ReWa Trunk Line	2.81	
Miles of ReWa Force Main	0	
Number of Connections to ReWa Trunk Lines	33	
Number of Connections to Metro Lines	0	
Number of Connections to Greer CPW Lines	0	
Number of Connections to Wade Hampton Lines	0	
Number of Taylors Manholes	341	
Number of Taylors Pump Stations	0	
Number of ReWa Pump Stations	0	
Number of Tax Parcels	1042	
Approximate Number of Businesses/Industries	143	
Number of Public Schools	1	Brook Glenn Elementary School



Mini System #4 Data

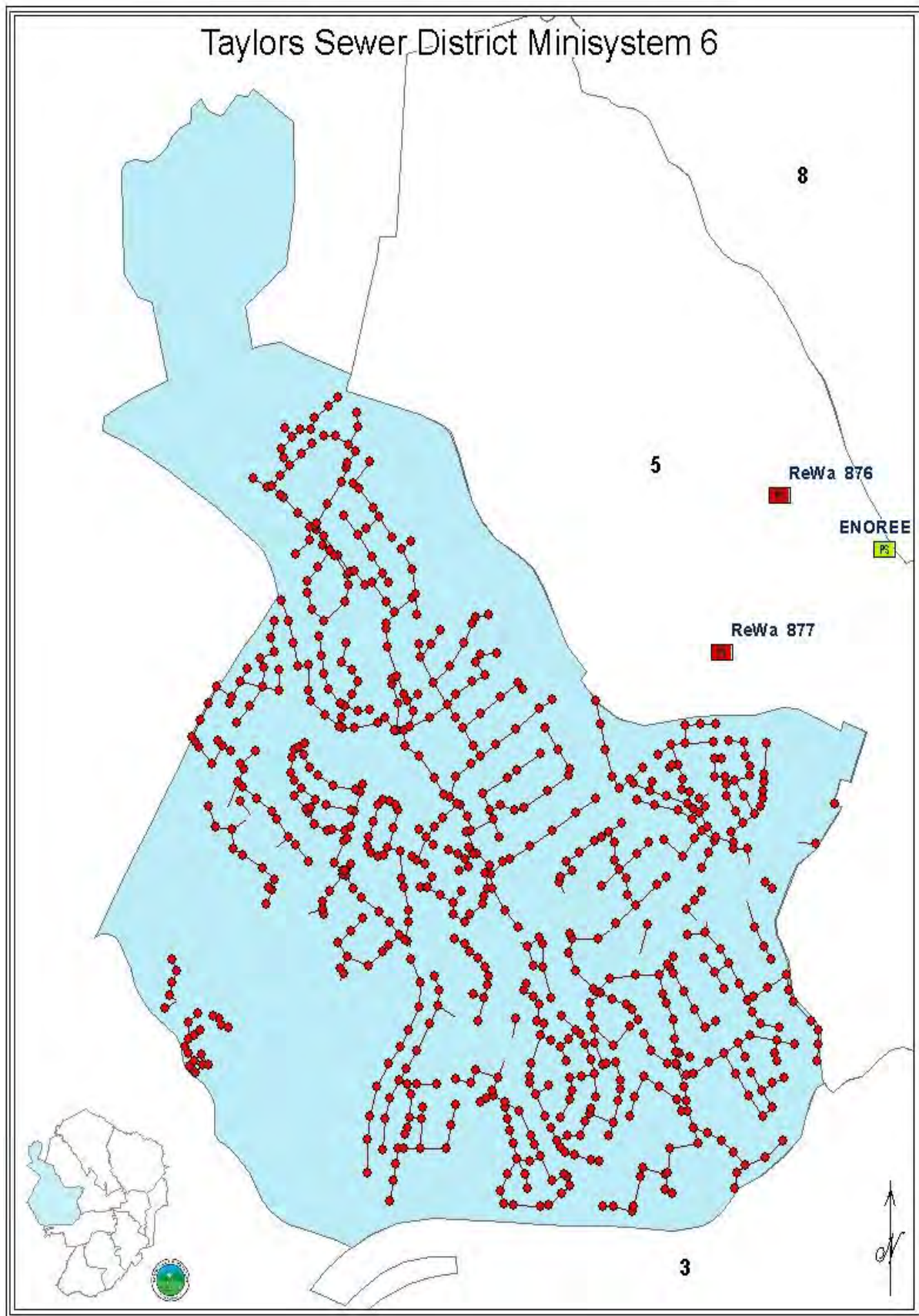
	Total	Comments
Miles of Taylors Collection Line	6.11	
Miles of 6 inch	0	
Miles of 8 inch	6.11	
Miles of 10 inch	0	
Miles of 12 inch	0	
Miles of 15 inch	0	
Miles of Taylors Force Main	0	
Miles of ReWa Trunk Line	2.01	
Miles of ReWa Force Main	0.04	
Number of Connections to ReWa Trunk Lines	8	
Number of Connections to Metro Lines	0	
Number of Connections to Greer CPW Lines	0	
Number of Connections to Wade Hampton Lines	0	
Number of Taylors Manholes	166	
Number of Taylors Pump Stations	0	
Number of ReWa Pump Stations	1	PS 857
Number of Tax Parcels	428	
Approximate Number of Businesses/Industries	42	
Number of Public Schools	1	Academy of the Arts

Taylors Sewer District Minisystem 5



Mini System #5 Data

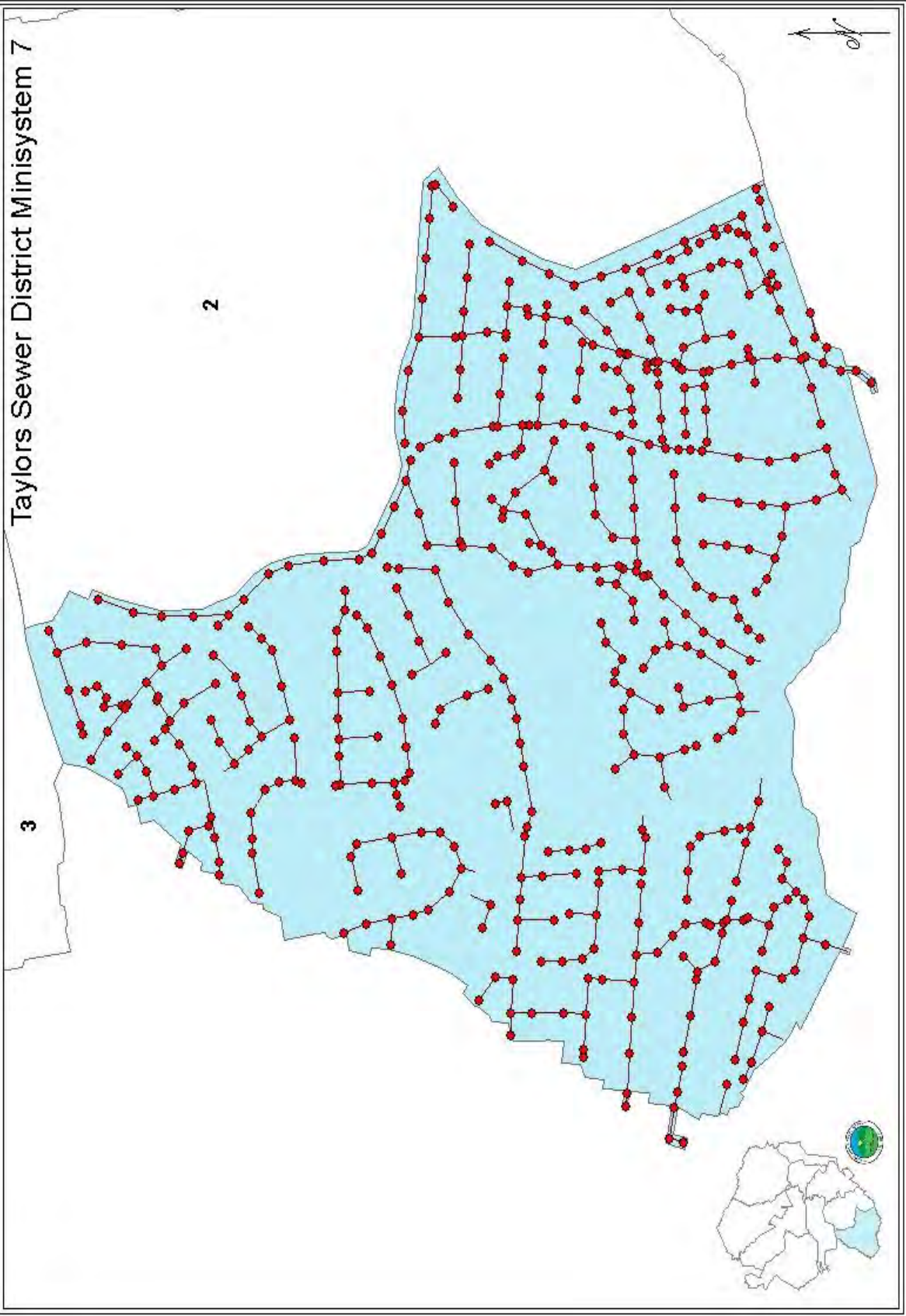
	Total	Comments
Miles of Taylors Collection Line	11.08	
Miles of 6 inch	0	
Miles of 8 inch	11.08	
Miles of 10 inch	0	
Miles of 12 inch	0	
Miles of 15 inch	0	
Miles of Taylors Force Main	0.51	
Miles of ReWa Trunk Line	1.79	
Miles of ReWa Force Main	1.17	
Number of Connections to ReWa Trunk Lines	11	
Number of Connections to Metro Lines	0	
Number of Connections to Greer CPW Lines	0	
Number of Connections to Wade Hampton Lines	0	
Number of Taylors Manholes	335	
Number of Taylors Pump Stations	2	Aiken Chapel, Enoree Heights
Number of ReWa Pump Stations	3	PS 875 PS 876 PS 877
Number of Tax Parcels	1189	
Approximate Number of Businesses/Industries	46	
Number of Public Schools	0	



Mini System #6 Data

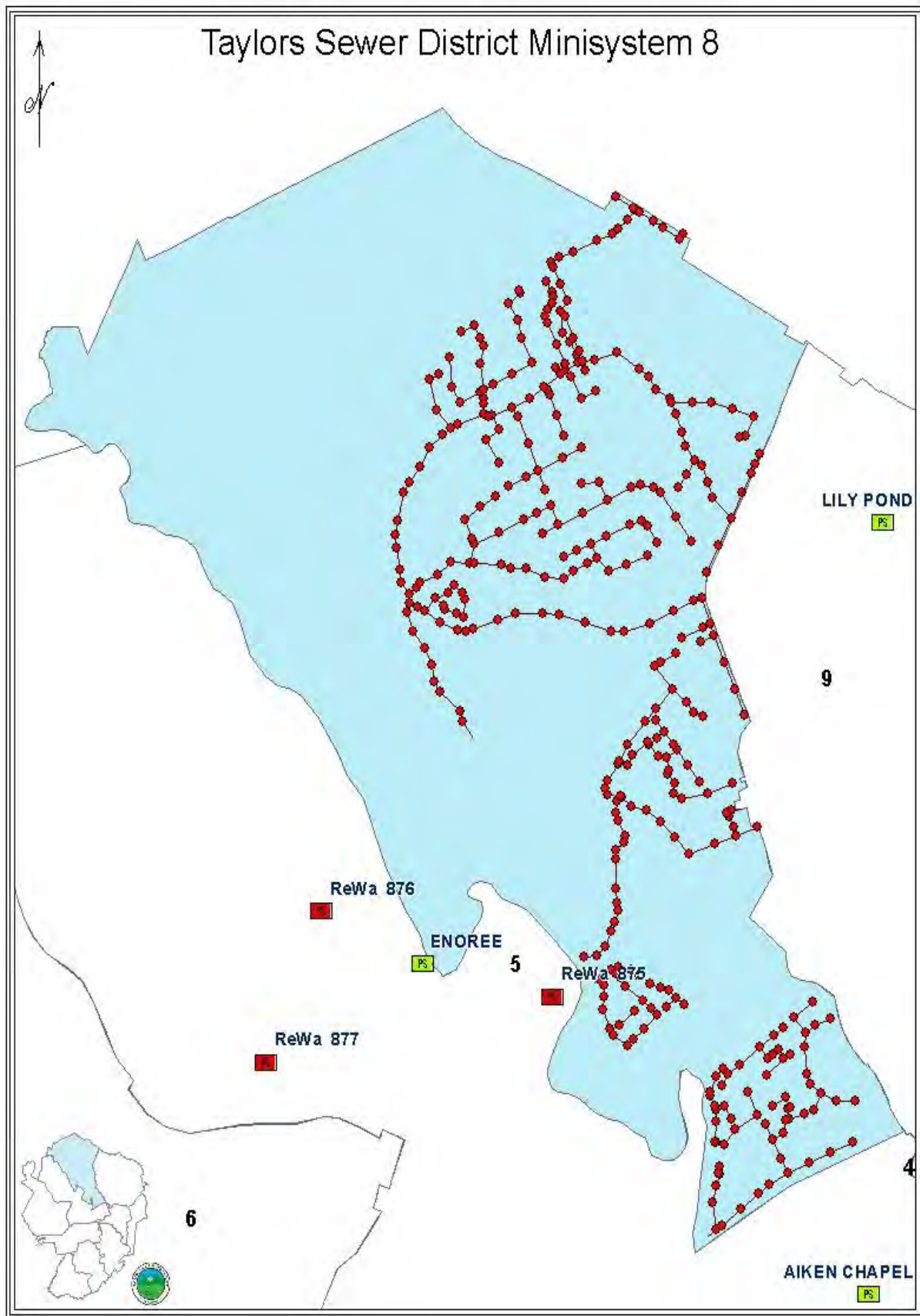
	Total	Comments
Miles of Taylors Collection Line	23.68	
Miles of 6 inch	0	
Miles of 8 inch	23.68	
Miles of 10 inch	0	
Miles of 12 inch	0	
Miles of 15 inch	0	
Miles of Taylors Force Main	0	
Miles of ReWa Trunk Line	3.28	
Miles of ReWa Force Main	0	
Number of Connections to ReWa Trunk Lines	30	
Number of Connections to Metro Lines	1	
Number of Connections to Greer CPW Lines	0	
Number of Connections to Wade Hampton Lines	0	
Number of Taylors Manholes	702	
Number of Taylors Pump Stations	0	
Number of ReWa Pump Stations	0	
Number of Tax Parcels	2097	
Approximate Number of Businesses/Industries	40	
Number of Public Schools	1	Taylors Elementary School

Taylor's Sewer District Minisystem 7



Mini System #7 Data

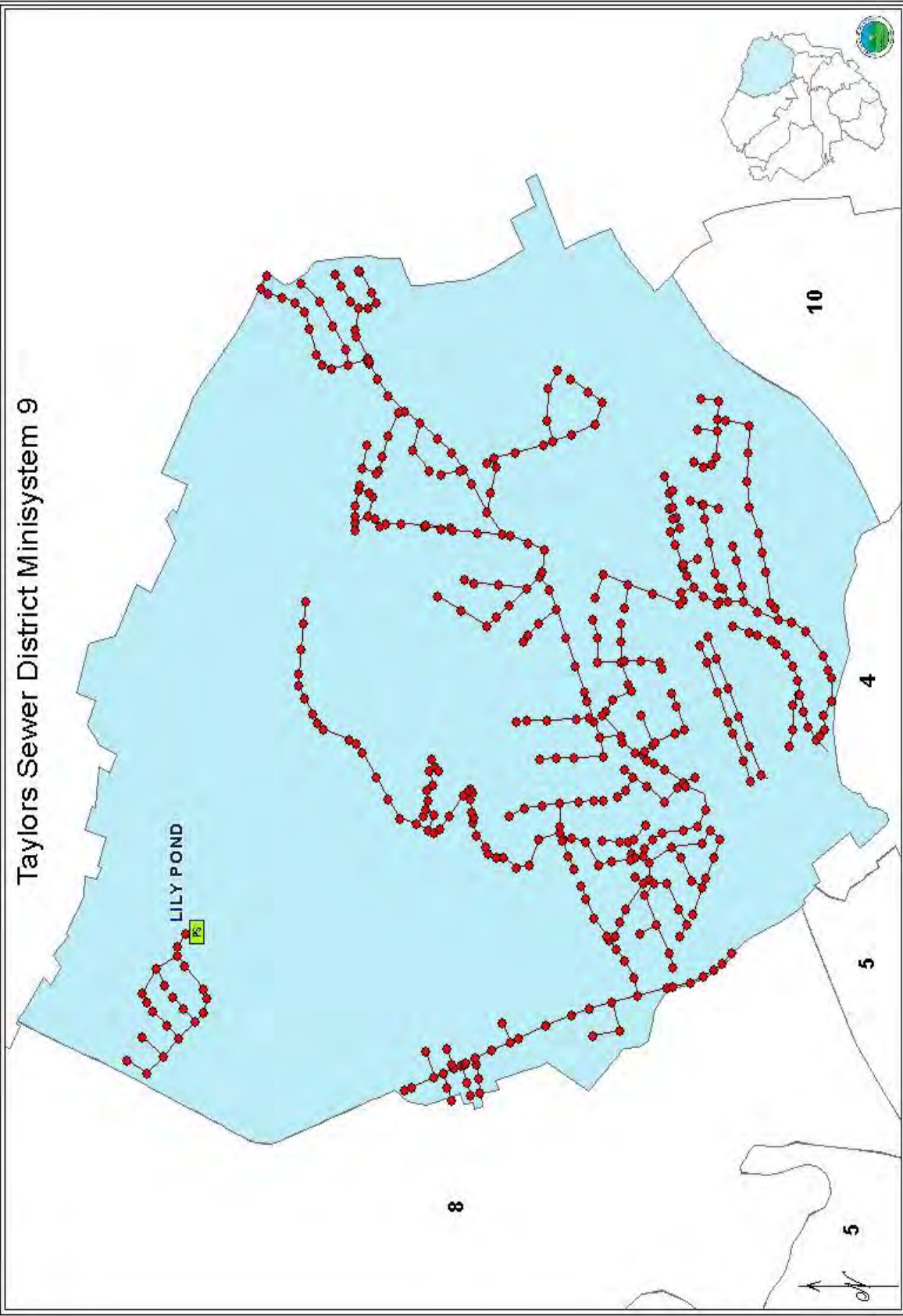
	Total	Comments
Miles of Taylors Collection Line	19.31	
Miles of 6 inch	0.11	
Miles of 8 inch	19.2	
Miles of 10 inch	0	
Miles of 12 inch	0	
Miles of 15 inch	0	
Miles of Taylors Force Main	0	
Miles of ReWa Trunk Line	2.31	
Miles of ReWa Force Main	0	
Number of Connections to ReWa Trunk Lines	27	
Number of Connections to Metro Lines	0	
Number of Connections to Greer CPW Lines	0	
Number of Connections to Wade Hampton Lines	3	
Number of Taylors Manholes	503	
Number of Taylors Pump Stations	0	
Number of ReWa Pump Stations	0	
Number of Tax Parcels	1615	
Approximate Number of Businesses/Industries	20	
Number of Public Schools	1	Northwood Middle School



Mini System #8 Data

	Total	Comments
Miles of Taylors Collection Line	13.36	
Miles of 6 inch	0	
Miles of 8 inch	11.9	
Miles of 10 inch	0.28	
Miles of 12 inch	0	
Miles of 15 inch	1	
Miles of Taylors Force Main	0	
Miles of ReWa Trunk Line	1.84	
Miles of ReWa Force Main	0	
Number of Connections to ReWa Trunk Lines	5	
Number of Connections to Metro Lines	0	
Number of Connections to Greer CPW Lines	0	
Number of Connections to Wade Hampton Lines	0	
Number of Taylors Manholes	374	
Number of Taylors Pump Stations	0	
Number of ReWa Pump Stations	0	
Number of Tax Parcels	941	
Approximate Number of Businesses/Industries	30	
Number of Public Schools	1	Foothills Career Center

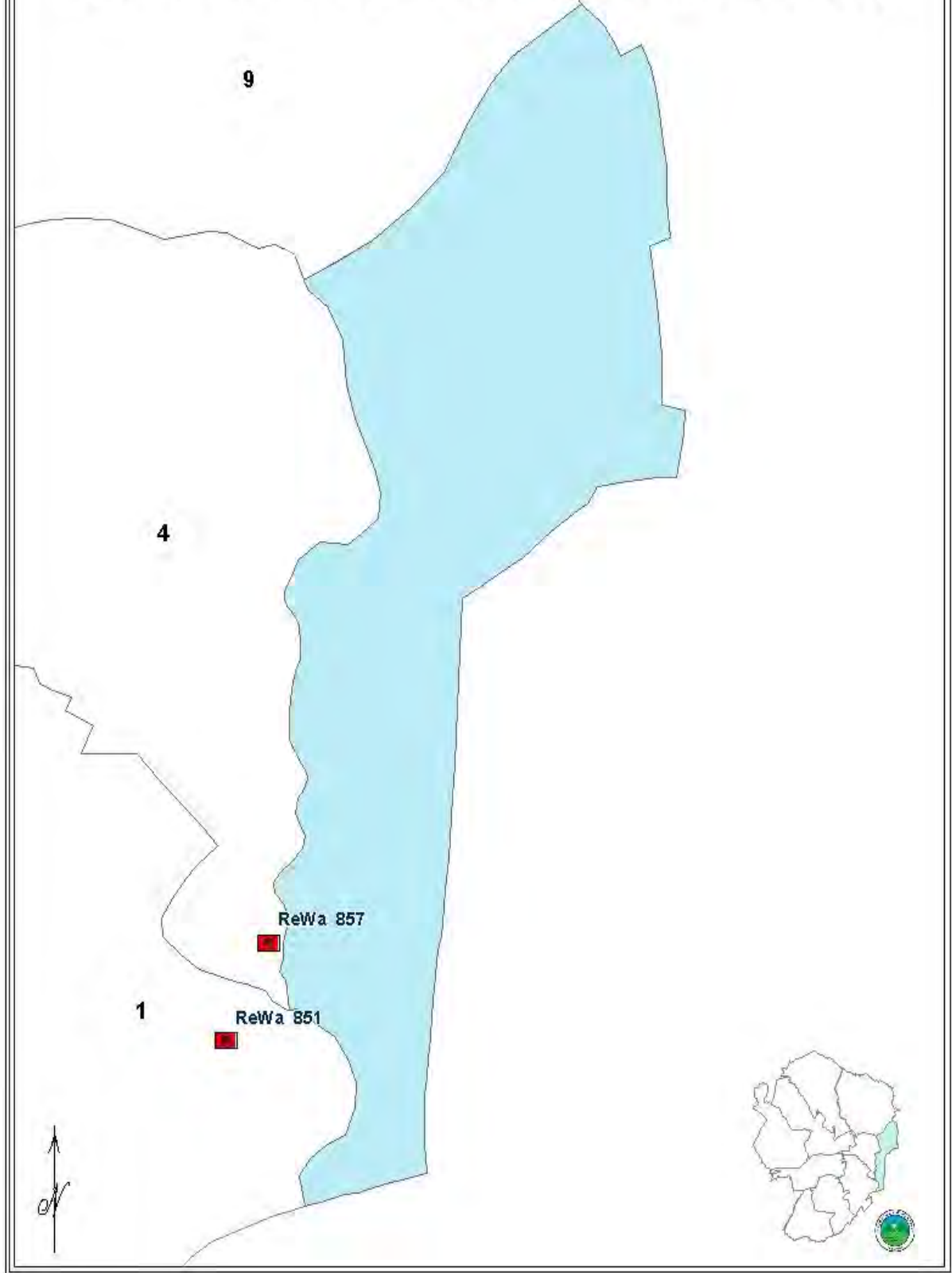
Taylors Sewer District Minisystem 9



Mini System #9 Data

	Total	Comments
Miles of Taylors Collection Line	15.14	
Miles of 6 inch	0	
Miles of 8 inch	14.93	
Miles of 10 inch	0	
Miles of 12 inch	0.21	
Miles of 15 inch	0	
Miles of Taylors Force Main	0.43	
Miles of ReWa Trunk Line	0.32	
Miles of ReWa Force Main	0	
Number of Connections to ReWa Trunk Lines	5	
Number of Connections to Greer CPW Lines	2	
Number of Connections to Metro Lines	0	
Number of Connections to Wade Hampton Lines	0	
Number of Taylors Manholes	430	
Number of Taylors Pump Stations	1	Lilly Pond
Number of ReWa Pump Stations	0	
Number of Tax Parcels	1397	
Approximate Number of Businesses/Industries	47	
Number of Public Schools	0	

Taylors Sewer District Minisystem 10 - Septic Tank Only



Mini System #10 Data

	Total	Comments
Miles of Taylors Collection Line	0	
Miles of 6 inch	0	
Miles of 8 inch	0	
Miles of 10 inch	0	
Miles of 12 inch	0	
Miles of 15 inch	0	
Miles of Taylors Force Main	0	
Miles of ReWa Trunk Line	0	
Miles of ReWa Force Main	0	
Number of Connections to ReWa Trunk Lines	0	
Number of Connections to Metro Lines	0	
Number of Connections to Greer CPW Lines	0	
Number of Connections to Wade Hampton Lines	0	
Number of Taylors Manholes	0	
Number of Taylors Pump Stations	0	
Number of ReWa Pump Stations	0	
Number of Tax Parcels	103	
Approximate Number of Businesses/Industries	6	
Number of Public Schools	0	

SSE/TV & Cleaning Timeline

Mini System	12-1-06 to 11-30-07	12-1-07 to 11-30-08	12-1-08 to 11-30-09	12-1-09 to 11-30-10	12-1-10 to 11-30-11	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
1											↕				
2	↕ Done														
3		↕ Done													
4														↕	
5							↕ Done								
6								↕	↕	↕					
7							↕ Done								
8													↕	↕	
9												↕	↕		
10															

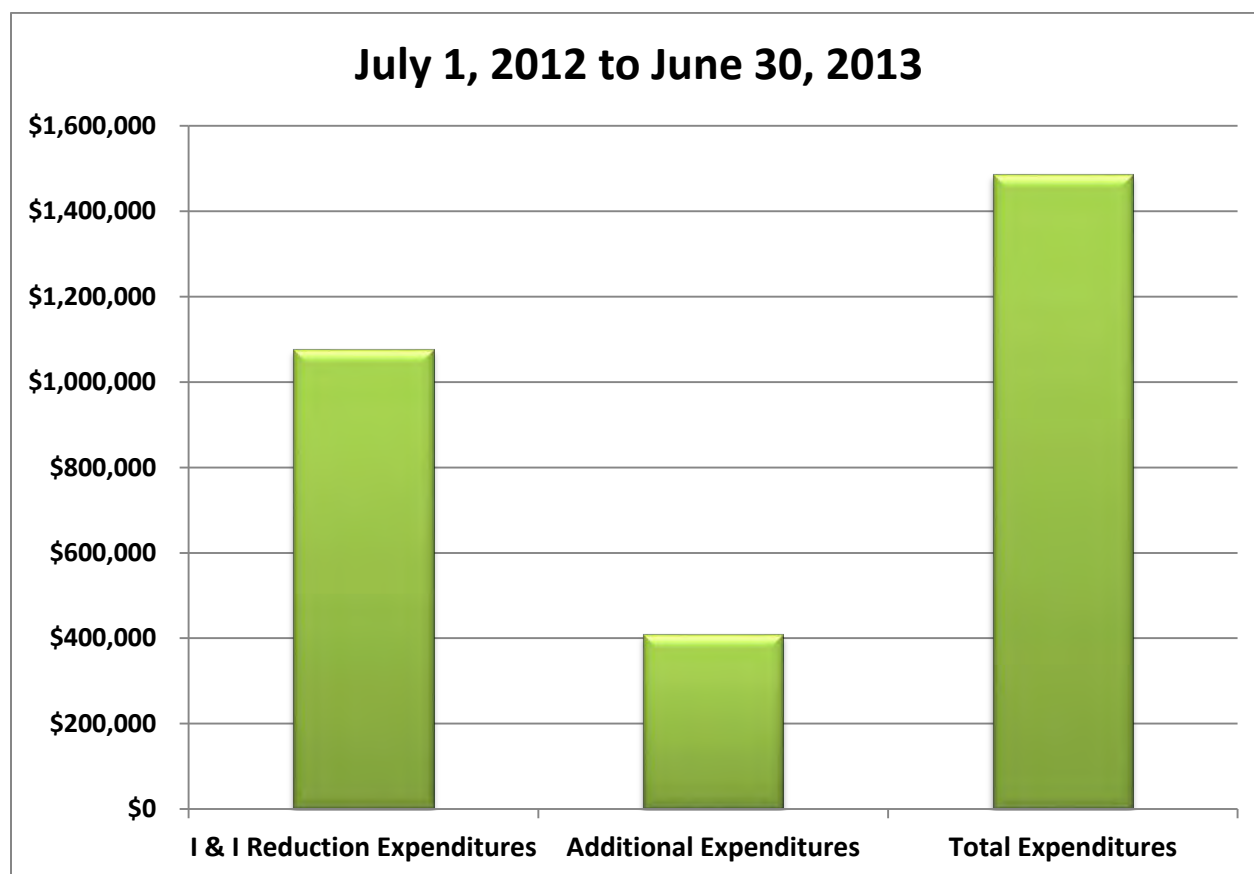
Septic Tanks



Financial Report (FY2013)

According to the budget profile for July 1, 2012 through June 30, 2013, Taylors Fire & Sewer District spent \$1,486,596 on the reduction of inflow and infiltration (I&I).

<i>I & I Reduction Expenditures:</i> July 1, 2012 to June 30, 2013	\$1,077,168
<i>Additional Expenditures:</i> July 1, 2012 to June 30, 2013	\$409,428
<i>Total Expenditures:</i> July 1, 2012 to June 30, 2013	\$1,486,596



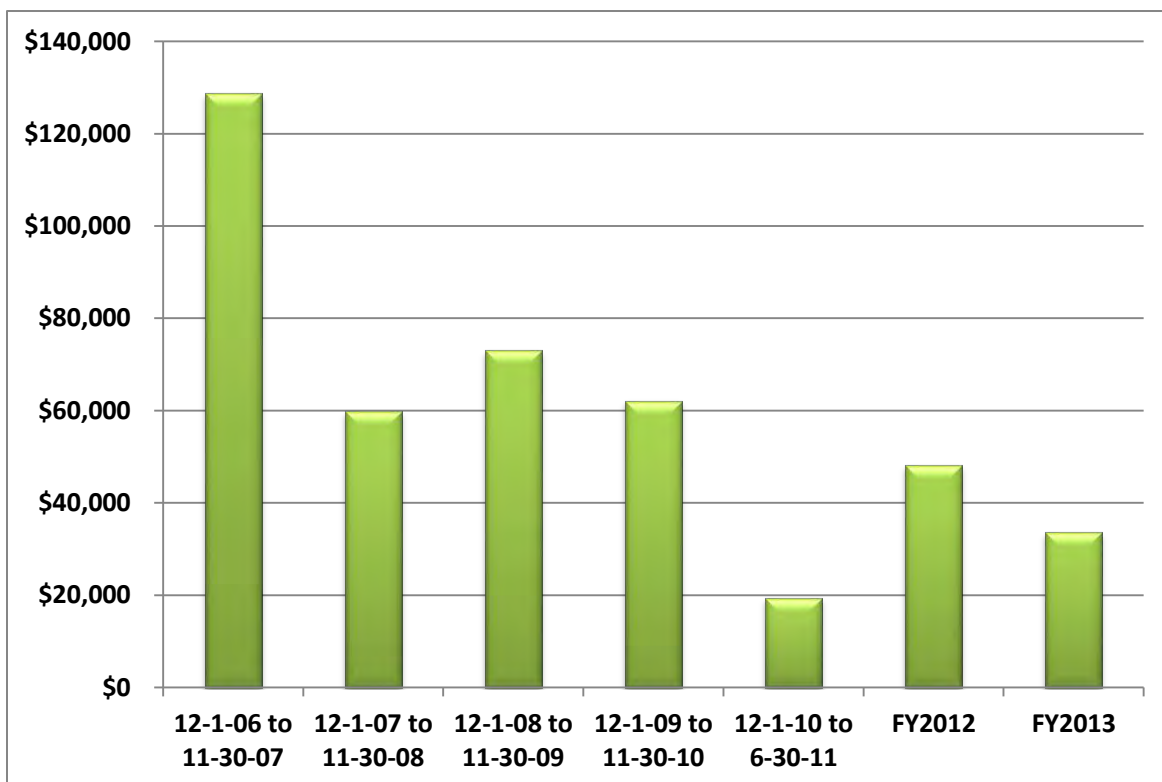
The Additional Expenditures listed above include such items as Taylors Fire & Sewer District Shared Overhead, Facilities/Utilities, Pump Station, Septic Tank Repair/Maintenance, Professional Services, and Capital Expenditures. All items the District must cover in order to serve our residents.

Taylors Fire & Sewer District uses a combination of methods to ensure and maintain the integrity of our system. Duke Root Control, Insituform CIPP, and SpectraShield Liner Systems are frequent contractors for specific projects.

Taylors Fire & Sewer District has also implemented the use of higher regulations and standards for new construction. Each site is required to seal manholes with either a Uniband or Flex Seal prior to backfilling. The entire project is monitored by Engineers representing Taylors Fire & Sewer District as well as District staff during construction in an effort to minimize and/or eliminate the amount of I&I that enters the system.

Over the past years the slowing economy has had a direct effect on our permit income. Over the last few years we have seen a steady decline.

<i>12-1-06 to 11-30-07</i>	<i>12-1-07 to 11-30-08</i>	<i>12-1-08 to 11-30-09</i>	<i>12-1-09 to 11-30-10</i>	<i>12-1-10 to 6-30-11</i>	<i>FY2012</i>	<i>FY2013</i>
\$128,800	\$59,900	\$72,975	\$62,100	\$19,375	\$48,100	\$33,625





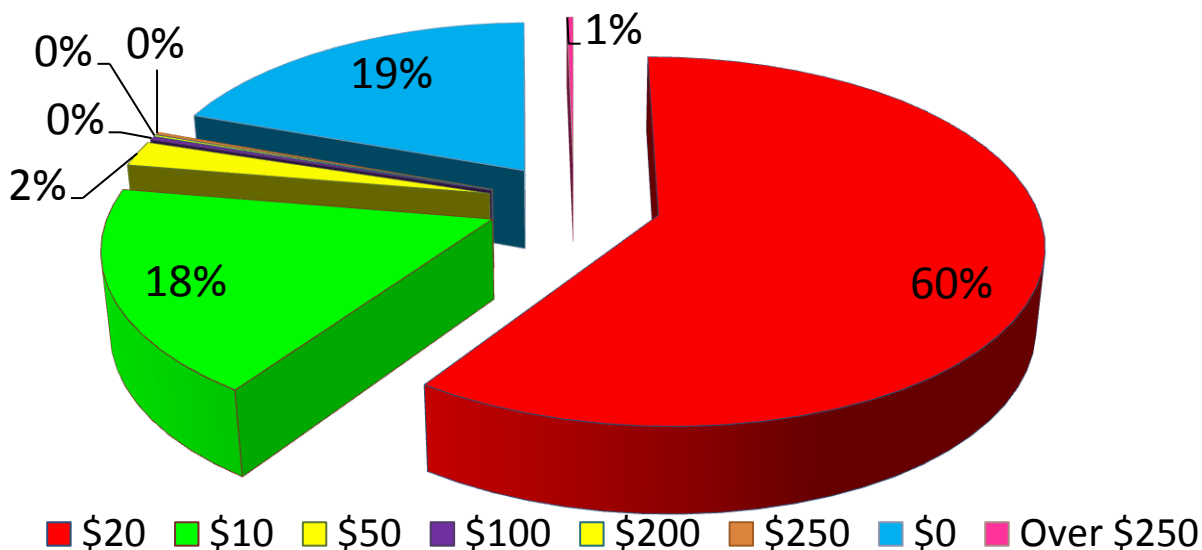
User Fees

Even though the District has steadily increased the tax millage rates each year, the funds have been offset by the decrease in fair market values. During 2007, the Board of Commissioners approved the institution of a user fee, however postponed the implementation. In 2009, the Board of Commissioners felt that the time had come to enact this fee in order to keep on schedule with the major repairs above and beyond regular maintenance of the sewer system.

The challenge was to set the fees low enough as to not create further financial burden on our residents and still be able to fund the improvements to our capital assets. The 2009 Board of Commissioners set the following fee schedule with the stipulation that it apply to all properties connected to our sewer system.

As you can see from the pie chart below majority of our fees come from Residential.

Residential Unit:	\$20
Homestead Exempt:	\$10
Business / Commercial:	\$50
Church (No Daily Activities):	\$50
Church (Daily Activities):	\$100
School:	\$200
Industry:	\$250



Taylors Fire and Sewer District
Summary of Expenditures on Sewer Services
July 1, 2012 - June 30, 2013

I & I REDUCTION EXPENDITURES

GIS/Technology	\$3,660
Maintenance - Equipment	\$244,173
Personnel/Training/Safety	\$588,376
Maintenance - Contract Services	\$218,600
R&M Building and Grounds (ROW's, etc)	\$22,359
Total I & I Expenditures	\$1,077,168 72%

ADDITIONAL EXPENDITURES

TFSD Shared Overhead	\$183,530
Facilities/Utilities	\$31,819
Pump Station	\$8,742
Septic Tank Repair/Maintenance	\$6,000
Professional Services	\$12,151
Capital Expenditures	\$167,186
Total Additional Expenditures	\$409,428 28%

Total Expenditures	\$1,486,596
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Taylor's Fire & Sewer District Finance Summary

YEAR - December 1st - November 30th *December 1st - June 30th **July 1st - June 30th	GA / TECHNOLOGY	MAINTENANCE - EQUIPMENT	PERSONNEL / TRAINING / SAFETY	MAINTENANCE - CONTRACT SERVICES	R&M BUILDINGS & GROUNDS / FACILITIES / UTILITIES	PUMP STATION	SEPTIC TANK REPAIR / MAINTENANCE	PROFESSIONAL SERVICES / CAPITAL EXPENDITURES	TFSD SHARED OVERHEAD	TOTALS EXPENDITURES
06-07	\$ 4,779	\$ 272,571	\$ 446,747	\$ 168,009	\$ 19,725	\$ 11,358	\$ 4,069	\$ 89,666	\$ 0	\$ 1,016,924
07-08	\$ 12,317	\$ 296,105	\$ 537,089	\$ 185,437	\$ 24,016	\$ 27,192	\$ 3,543	\$ 12,387	\$ 0	\$ 1,098,086
08-09	\$ 5,443	\$ 218,553	\$ 516,702	\$ 76,954	\$ 36,437	\$ 17,624	\$ 3,880	\$ 17,149	\$ 0	\$ 892,742
09-10	\$ 11,612	\$ 265,113	\$ 537,383	\$ 208,140	\$ 20,487	\$ 37,676	\$ 3,250	\$ 16,292	\$ 0	\$ 1,099,953
10-11*	\$ 9,892	\$ 162,614	\$ 322,284	\$ 254,268	\$ 14,836	\$ 16,703	\$ 1,875	\$ 14,634	\$ 0	\$ 797,106
11-12**	\$ 2,531	\$ 101,423	\$ 539,349	\$ 323,895	\$ 41,432	\$ 3,280	\$ 4,445	\$ 18,072	\$ 131,657	\$ 1,166,084
12-13**	\$ 3,660	\$ 244,173	\$ 508,376	\$ 218,600	\$ 54,178	\$ 8,742	\$ 6,000	\$ 179,337	\$ 183,530	\$ 1,486,596



Operations & Maintenance

You may see signs like the following in neighborhoods in the Taylors area when sewer maintenance is being performed:



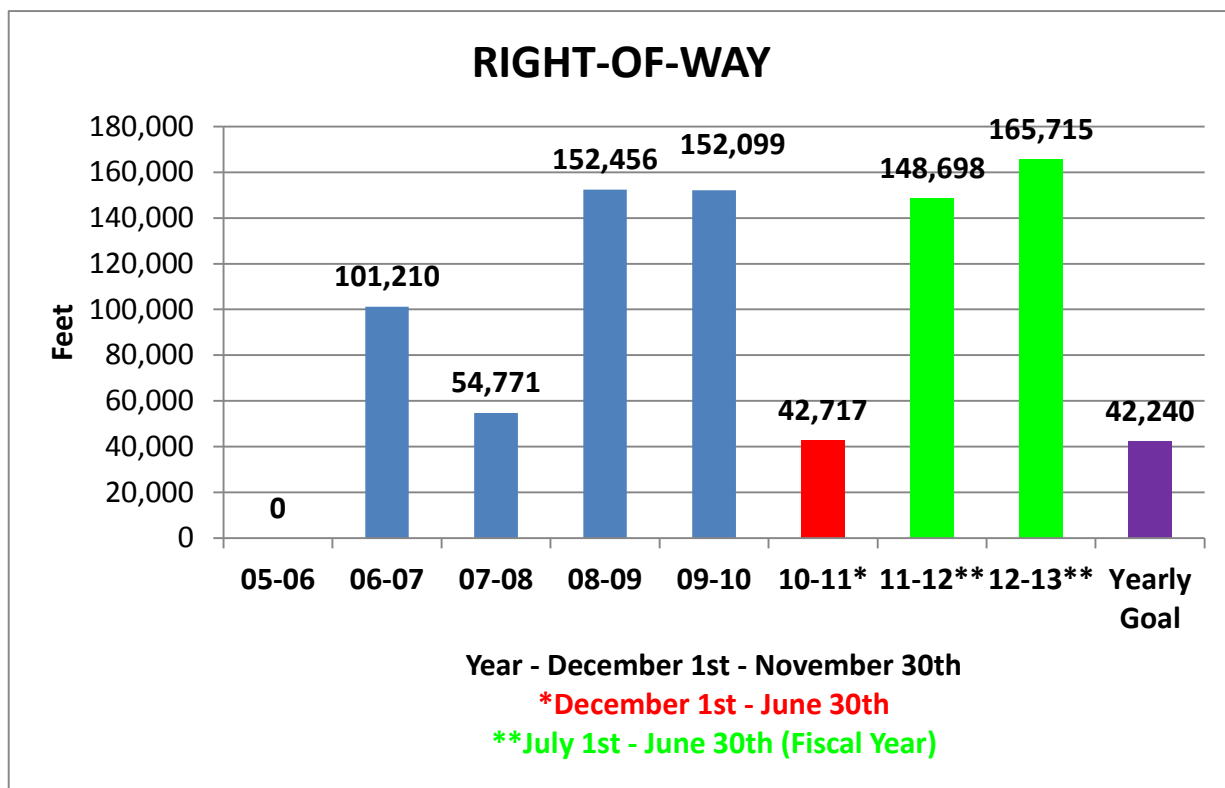
Taylor's Fire & Sewer District Work Order Summary

YEAR - December 1st - November 30th **July 1st - June 30th (Fiscal Year)	RIGHT-OF-WAY *December 1st - June 30th	CTV	REPAIR/REPLACE	CLEANING	ROOT REMOVAL	SEPTIC TANKS	MANHOLE INSPECTION	MANHOLE REPAIR/LINING	SMOKE TESTING	ROOT CONTROL
05-06	0	22,734	512	33,298	7,911	11	244	42	34,526	4,594
06-07	101,210	80,984	7,267	166,495	11,144	37	272	115	65,835	0
07-08	54,771	77,237	2,322	60,653	9,766	31	435	114	55,846	8,055
08-09	152,456	86,444	6,557	96,538	5,723	6	297	250	50,502	11,691
09-10	152,099	87,651	643	131,490	7,598	0	338	232	55,509	8,783
10-11*	42,717	92,746	3,760	105,588	7,616	0	128	45	4,346	11,207
11-12**	148,698	164,439	7,811	246,885	23,142	0	590	189	11,805	18,214
12-13**	165,715	100,804	3,992	130,141	6,882	0	355	509	15,868	8,097
Total	817,666	713,039	32,864	971,068	79,782	85	2,659	1,496	294,237	70,641
Goal	320,320	320,320		320,320			2,275		320,320	
%Above Goal	155%	123%		203%			17%		-8%	

Note: Figures have been updated for each year based on research discovery.

Right-of-Way Maintenance:

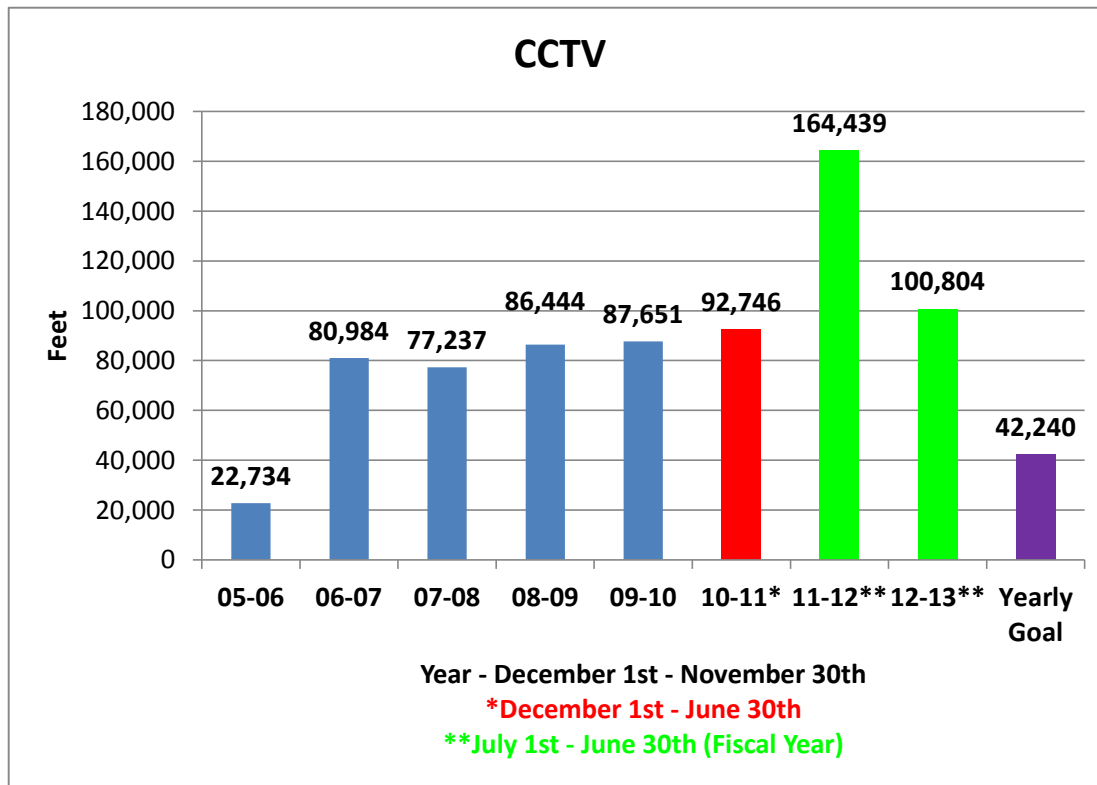
Right-of-Way Clearing – Right-of-Ways (ROW) or easements grant the right and privilege of entering private property to construct, maintain, and operate the components of our wastewater collection system. Although most Taylors Fire and Sewer District sewer lines lie underneath the road, in many cases they are located on private property. We must maintain our lines even in these areas where they go through private property via the right-of-way/easement. Therefore, in areas where the brush and foliage is not cut back by the property owner, our crews must maintain and cut down the plant and tree growth. If this is done, we know we are able to get our heavy equipment and large trucks down through the easement to make repairs, clean lines, or conduct inspections.



Per our agreement with ReWa, Taylors Fire & Sewer District will be working and/or inspecting at least 8 miles or 42,240 L.F. per year of right-of-way maintenance. As the chart above demonstrates we have exceeded our yearly goal. 2005 to 2010 (indicated by the blue column) were reported from December 1st to November 30th. 2010 to 2011 (indicated by the red column) was reported from December 1st to June 30th. 2011 to 2012 (indicated by the green column) was reported based off of Taylors' fiscal year, July 1st to June 30th. 2012 to 2013 (indicated by the green column) was reported on fiscal year. Our yearly goal is indicated in purple.

CCTV:

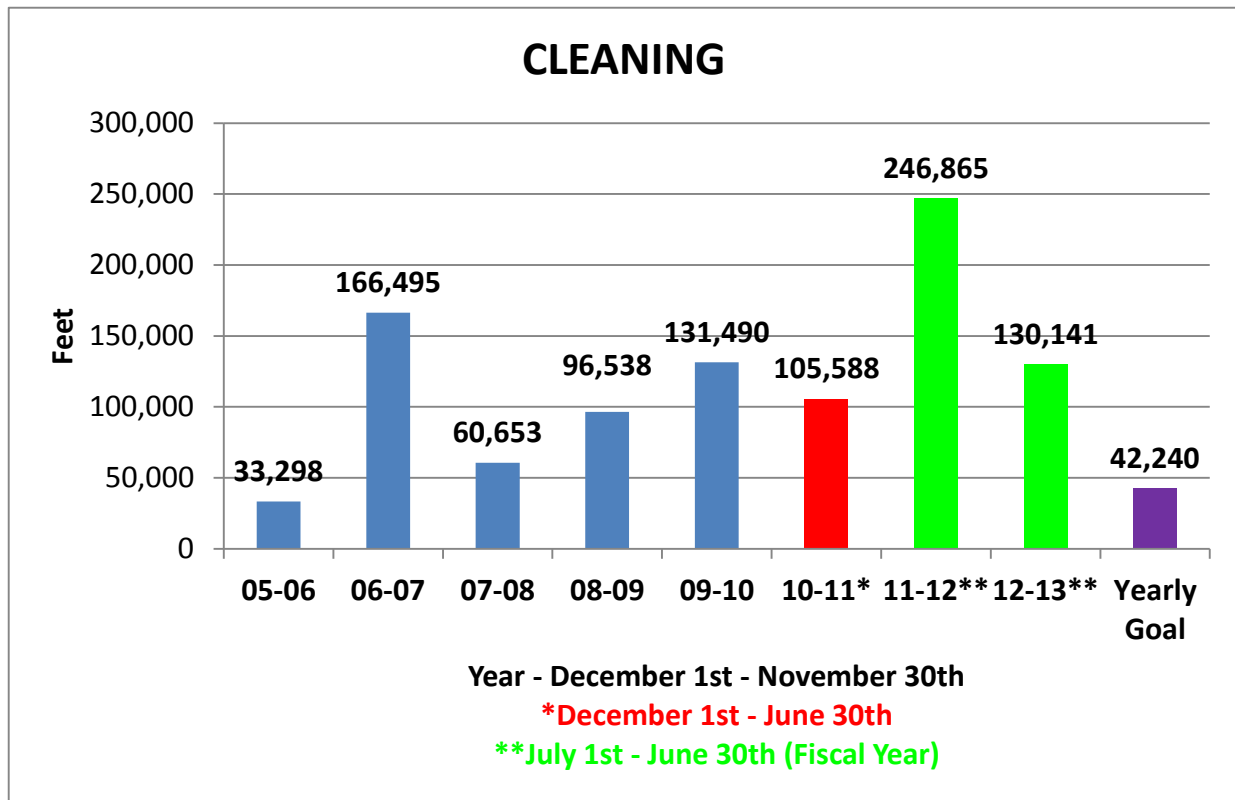
CCTV – On a daily basis, the CCTV Crew uses a Closed Circuit Television Camera to inspect and record the conditions within sewer pipes. Any defects or maintenance problems can be seen via a television monitor inside the TV van. Taylors Fire and Sewer District has one CCTV unit. CCTV data is used to view defects within the pipes and schedule maintenance, repair, and replacement of sewer infrastructure.



Per our agreement with ReWa, Taylors Fire & Sewer District will be working and/or inspecting at least 8 miles or 42,240 L.F. per year of CCTV. As the chart above demonstrates we have exceeded our yearly goal. 2005 to 2010 (indicated by the blue column) were reported from December 1st to November 30th. 2010 to 2011 (indicated by the red column) was reported from December 1st to June 30th. 2011 to 2012 (indicated by the green column) was reported based off of Taylors' fiscal year, July 1st to June 30th. 2012 to 2013 (indicated by the green column) was reported on fiscal year. Our yearly goal is indicated in purple.

Cleaning Maintenance:

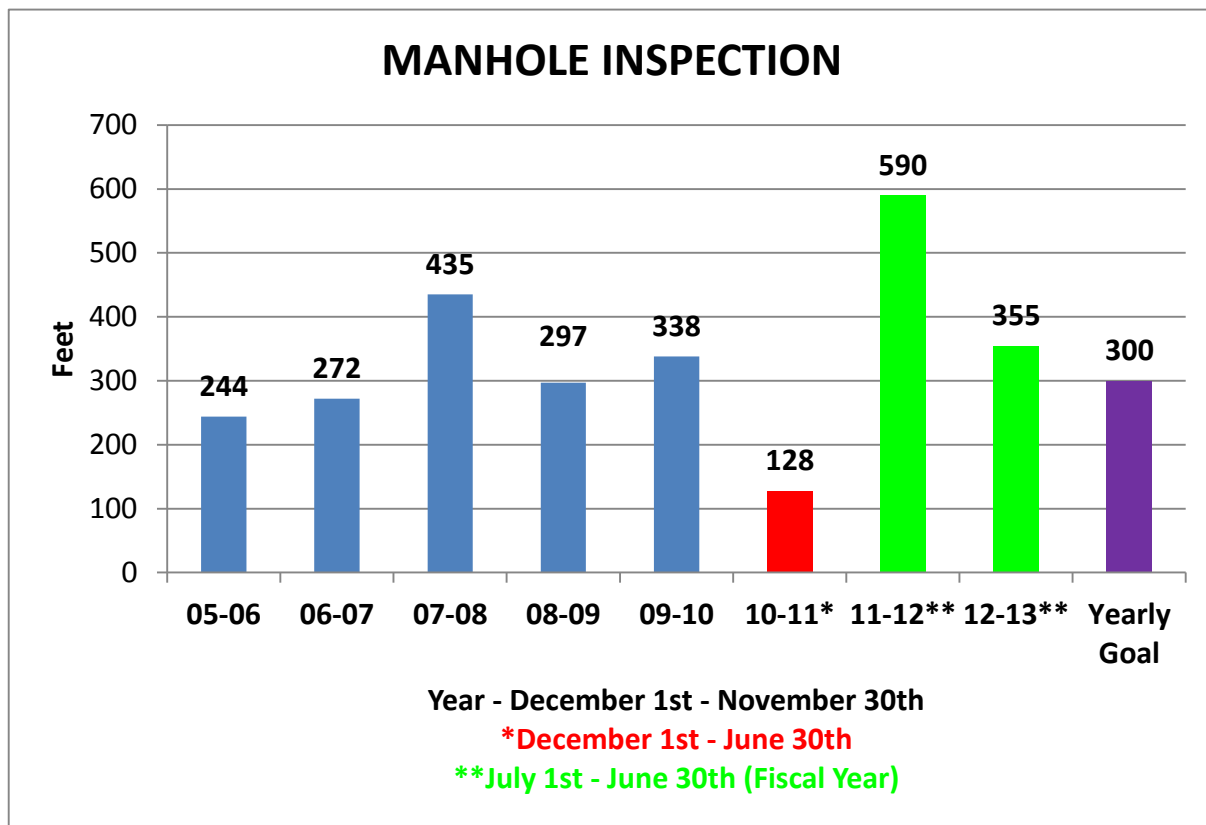
Sewer Line Cleaning - Regular cleaning of sewer lines is important to reduce I/I and keep the lines clear of foreign material. Sewer lines are cleaned using high velocity pressurized water to wash away most grit, grease, and debris. Keeping sewer lines clean is also important to allow the CCTV camera to travel through the sewer line to inspect for any problem areas to repair or rehabilitate and reduce I/I.



Per our agreement with ReWa, Taylors Fire & Sewer District will be working and/or inspecting at least 8 miles or 42,240 L.F. per year of cleaning maintenance. As the chart above demonstrates we have exceeded our yearly goal. 2005 to 2010 (indicated by the blue column) were reported from December 1st to November 30th. 2010 to 2011 (indicated by the red column) was reported from December 1st to June 30th. 2011 to 2012 (indicated by the green column) was reported based off of Taylors' fiscal year, July 1st to June 30th. 2012 to 2013 (indicated by the green column) was reported on fiscal year. Our yearly goal is indicated in purple.

Manhole Inspections:

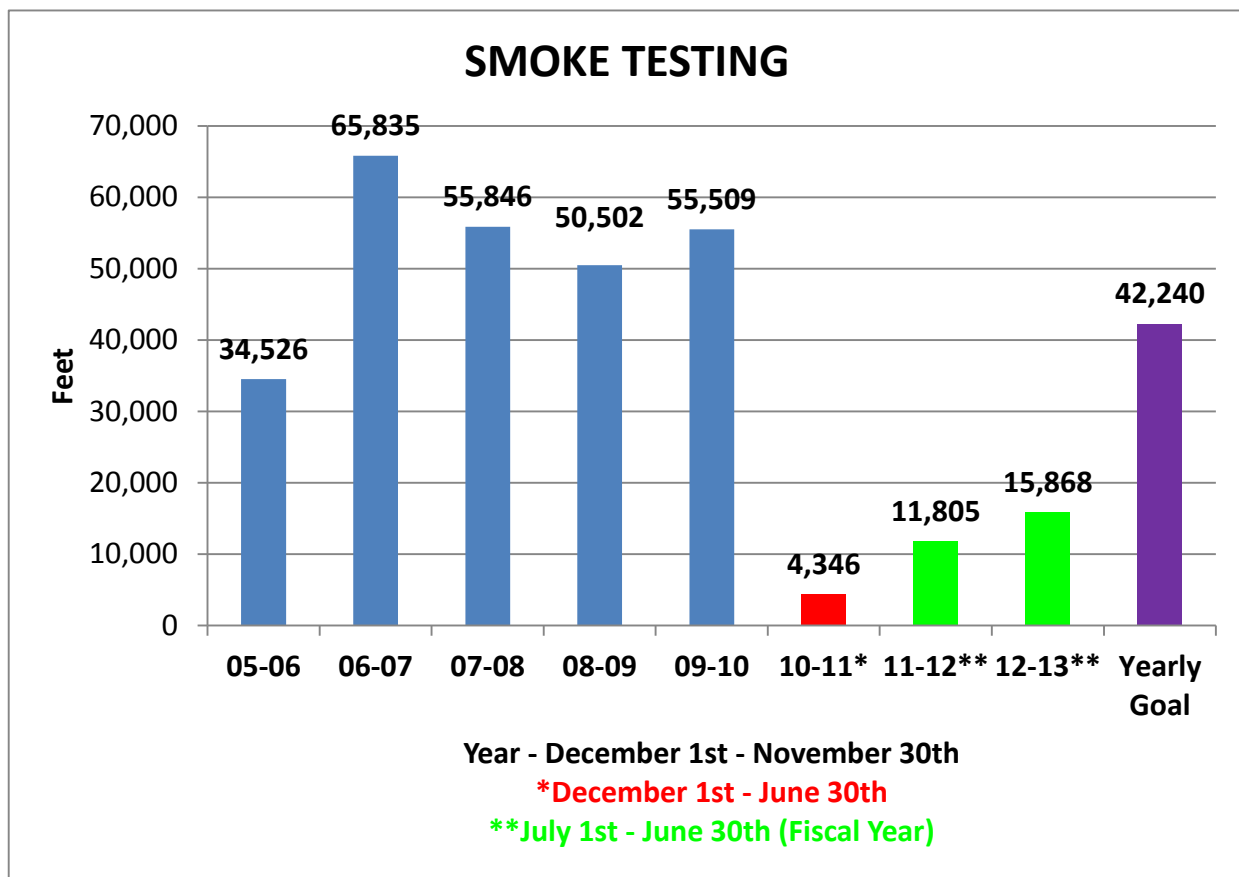
Manhole – A sewer manhole is a hole that serves as entry points for sewer employees to clean, televise, and otherwise inspect the sewer mainlines. They can be located in the road or in a right-of-way. The only part of the manhole that is visible above ground is the lid, although there are many subterranean parts to the manhole. In the bottom of the manhole there is a connection to the sewer pipe, and sewer flows through the manhole from one section of pipe to the next. As part of Operations & Maintenance and Rehabilitation, we often install, replace, and repair manholes. Manholes are sometimes referred to as access holes or maintenance holes.



Per our agreement with ReWa, Taylors Fire & Sewer District will be working and/or inspecting at least 300 manholes per year. As the chart above demonstrates we have exceeded our yearly goal in 2011 to 2012. 2005 to 2010 (indicated by the blue column) were reported from December 1st to November 30th. 2010 to 2011 (indicated by the red column) was reported from December 1st to June 30th. 2011 to 2012 (indicated by the green column) was reported based off of Taylors' fiscal year, July 1st to June 30th. 2012 to 2013 (indicated by the green column) was reported on fiscal year. Our yearly goal is indicated in purple. Due to this time frame of only 7 months in 2010 to 2011 were not able to reach the goal of 300. We were able to exceed in 2011 to 2012 to make up for not meeting the goal from the previous time frame.

Smoke Testing:

Smoke Testing – A method of blowing smoke into a closed-off section of a sewer system for the purpose of detecting sources of stormwater inflow into the sewer system. Smoke testing involves the use of a blower which forces air mixed with liquid smoke into a manhole. The smoke generated is nontoxic, has no odor, and is typically foggy white in color. The smoke is forced by the blower through the sewer system and follows the path of least resistance. Typically, the vent stacks of homes and businesses connected to the sewer pipe being testing will release the smoke into the atmosphere.



Per our agreement with ReWa, Taylors Fire & Sewer District will be working and/or inspecting at least 8 miles or 42,240 L.F per year of smoke testing. As the chart above demonstrates we have not met our yearly goal in 2011 to 2012. In March 2011, Taylors Fire & Sewer District received a complaint from a citizen in the District about our smoke testing. Due to a potential law suit, Taylors Fire & Sewer District lawyers advised us to not do any smoke testing until the issue is resolved. As you can see from the chart above we were only able to do minimal smoke testing for the 2011-2012 year. This issue seems to be resolved for now so we can get back to

our smoke testing schedule. 2005 to 2010 (indicated by the blue column) were reported from December 1st to November 30th. 2010 to 2011 (indicated by the red column) was reported from December 1st to June 30th. 2011 to 2012 (indicated by the green column) was reported based off of Taylors' fiscal year, July 1st to June 30th. 2012 to 2013 (indicated by the green column) was reported on fiscal year. Due to the excess rain we have received during this time frame we were not able to reach our yearly goal. Our yearly goal is indicated in purple.

Pump Stations:

Pump Stations – Also called Lift Stations, Pump Stations are often found at low points in topography where wastewater must be pumped uphill to a point where it can join other gravity fed lines. A wet well gathers the wastewater, where at different times the pumps will turn on and send the wastewater out through the force main. Taylors Fire and Sewer District owns and maintains three pump stations.

In June 2013 we contracted with Pete Duty & Associates to purchase three (3) HTT-900 Cellular Monitoring Systems for our pump stations (Aiken Chapel, Enoree Heights, and Lily Pond). We are now able to receive text, emails, and phone calls about each station. We can also view each pump station's status and print reports from online.

- **Pump Station Main Home Screen:**



The screenshot shows a web interface for monitoring pump stations. At the top, there's a header with 'Taylors Sewer' and a dropdown menu, a status indicator 'delays expected today', and a 'Logout' button. Below the header is a navigation bar with 'Lift Stations', 'Alarms (0)', and 'Map'. The main section is titled 'Lift Stations' and contains a table with three rows of data for different pump stations. Each row includes the station name, last report date, pump 1 and 2 start times and runtimes, and status indicators for each pump and high water. Links for 'Alarm History' and 'Service History' are provided for each station.

Name	Lastpumpreport	Pump 1 Starts	Pump 1 Runtimes	Pump 2 Starts	Pump 2 Runtimes	Pump 1 Temp	Pump 2 Temp	High Water	
Aiken Chapel PS	2013-09-10	1034	70.72 hrs	1030	88.12 hrs	Pump 1 Temp O K	Pump 2 Temp O K	High Water O K	Alarm History Service History
Lily Pond PS	2013-09-10	769	71.02 hrs	768	71.68 hrs	Pump 1 Temp O K	Pump 2 Temp O K	High Water O K	Alarm History Service History
Enoree Heights PS	2013-09-10	1037	18.23 hrs	1036	17.72 hrs	High Water O K			Alarm History Service History

Since we just started monitoring at the end of this fiscal year, we will be able to provide report in the next report cycle.

Flow Monitoring:

The Board of Commissioners decided to contract with The Clearwater Group to provide flow monitoring services. After the preliminary review and evaluation of the data, it became apparent that Taylors had a problem with the flow monitor data gathered. It seems that a large segment of our mains do not have enough flow to obtain an accurate measurement.

Attached is the report from The Clearwater Group.



Public Relations

In June 2013, Taylors Fire and Sewer District launched a website to keep up with public relations. Our website address is www.taylorsdistrict.org. You can find valuable information about our District. Below are a few screen shots of the website:

[Staff Login](#) | [Sitemap](#) | [Search](#) | [Taylors Fire & Rescue](#)

Taylors Fire and Sewer District

3335 Wade Hampton Blvd, Taylors, SC 29687
Business Hours: 864-244-5596 | After Hours: 864-244-3980

- Home
- Maintenance and Services
- About Us
- Commissioners
- District Map
- FAQs
- Fees/Permits
- History
- New Construction Standards
- Policies
- Press/Media
- Contact

WELCOME



Welcome to the Taylors Fire and Sewer District website. Taylors Fire and Sewer District is a special purpose district that covers roughly 16 square miles. We are located in central Greenville County, northeast of the [City of Greenville](#), and are adjacent to the western border of the [City of Greer](#). We share district boundaries with [Meherrington Sewer Subdistrict](#) to our northwest and southeast, and Wade Hampton Fire and Sewer District to our southwest. The wastewater collections system includes approximately 130 miles of gravity line and 3,600 manholes.

Calendar

**Board of Commissioners
Monthly Meeting:**

District Office in the Board Room,
3335 Wade Hampton Blvd.,
Taylors, SC 29687 at 4:30 pm

Tuesday, September 10, 2013

NOTE: Dates and locations may be changed at the discretion of the Chairman.

[Click here for our holidays.](#)



Taylors
Fire & Rescue



Our district office is located at 3335 Wade Hampton Boulevard in Taylors behind the Fire Department Headquarters building.



Our sewer operations shop is located at 405 Brushy Creek Road behind Fire Department Station 2. Sewer Tap Permits can be purchased or updated at our District Office Monday - Friday, 8:00 A.M. to 4:00 P.M.

Taylor's Fire and Sewer District

3335 Wade Hampton Blvd, Taylors, SC 29687
Business Hours: 864-244-5596 | After Hours: 864-244-3980

[Home](#)

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[About Us](#)

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[District Map](#)

[FAQs](#)

[Fees/Permits](#)

[History](#)

[New Construction Standards](#)

[Policies](#)

[Press/Media](#)

[Contact](#)

Calendar

Board of Commissioners Monthly Meeting:

District Office in the Board Room,
3335 Wade Hampton Blvd.,
Taylors, SC 29687 at 4:30 pm

Tuesday, September 10, 2013

NOTE: Dates and locations may be
changed at the discretion of the
Chairman.

[Click here for our holidays.](#)



Taylor's
Fire & Rescue

COMMISSIONERS



Doug Wavie



Gilbert Rivers



Mark Rea

Notice of Regular Meetings of the Taylor's Fire and Sewer District

In compliance with the provisions of chapter 30-4-10 of the S.C. Code of Laws 1976, as amended, public notice is hereby given of the following regular monthly meetings for the Board of Commissioners at Taylor's Fire and Sewer District to be held at the District Office in the Board Room, 3335 Wade Hampton Blvd., Taylors, SC 29687 at 4:30 pm.

Tuesday, January 8, 2013 - [Meeting Minutes](#)

Tuesday, February 12, 2013 - [Meeting Minutes](#)

Tuesday, March 12, 2013 - [Meeting Minutes](#)

Special Called, March 26, 2013 - [Meeting Minutes](#)

Tuesday, April 9, 2013 - [Meeting Minutes](#)

Tuesday, May 14, 2013 - [Meeting Minutes](#)

Special Called, May 28, 2013 - [Meeting Minutes](#)

Special Called, May 30, 2013 - [Meeting Minutes](#)

Tuesday, June 18, 2013 - [Meeting Minutes](#)

Tuesday, July 9, 2013 - [Meeting Minutes](#)

Tuesday, August 13, 2013 - [Agenda](#)

Tuesday, September 10, 2013

Tuesday, October 8, 2013

Tuesday, November 12, 2013

Tuesday, December 10, 2013

Agendas for regularly scheduled meetings shall be posted in the window at the District Office. Notice of any called, special or rescheduled meetings shall be posted as early as practical, but not later than twenty-four hours prior.

NOTE: Dates and locations may be changed at the discretion of the Chairman.



Summary

Taylors Fire & Sewer District is steadily moving forward and quickly becoming one of the leaders in the local sewer industry. From innovative methodologies to plain old common sense and ingenuity, Taylors has risen to and exceeded the challenge of not only reducing inflow and infiltration but setting a higher standard for others to follow.

The staff has excelled in training opportunities. All of the employees of Taylors Fire & Sewer District's Sewer Department, are currently certified Wastewater Collection System Operators. Two District Administration employees are also certified Wastewater Collection System Operator.

Certification's: Number of Employees & Certification's
Wastewater Collection System Operators: A's <u>2</u> B's <u>3</u> C's <u>6</u> D's <u>2</u>
Biological Wastewater Operator Trainee: <u>1</u>
Nassco's PACP (Pipeline Assessment Certification Program), MACP (Manhole Assessment Certification Program), and LACP (Lateral Assessment and Certification Program) Certified – <u>4</u>

Taylors Fire & Sewer District employees are not only dedicated to their positions with the organization, but are also very involved in the Water Environment Association of South Carolina (WEASC) and the Water Environment Federation (WEF). Our Director of Sewer Services is a Past Chair of the Blue Ridge Foothills District of the WEASC. She is currently the Chair of the Voluntary Certification Committee and serves on many other committees with the Water Environment Association of South Carolina and Water Environment Federation. Taylors Fire & Sewer District is also a member in good standings with the Greenville County Geographic Information Alliance (GCGIA) and Greenville Area Utilities Coordination Committee (GAUCC). Taylors Fire & Sewer District with the other Sewer SPD's in Greenville County sponsor the September meeting of the GAUCC each year.

The implementation of a User Fee has been designated for the major capital improvements to ensure the funds needed are available as we continue to not only maintain the integrity of our sewer system, but also expand our services to meet the growth of the Taylors area. We continue to become more creative and seek out alternative avenues to make each investment the most economically feasible.

It continues to be the mission of Taylors Fire & Sewer District, to not only improve the quality of life for our residents, but to also be the best stewards of their tax dollars as humanly possible. We believe our records speak for themselves as we consistently exceed our established goals while remaining within, and often below, the confines of our budget.

Taylors Fire and Sewer District

Flow Monitoring Report

Prepared by

The Clearwater Group, Inc.

September 9, 2013

Introduction

Taylors Fire and Sewer District (“Taylors”) has been performing significant investigation and rehabilitation of its sewer system over the last decade. Included in this report are a series of documents that summarize the flow monitoring and Inflow and Infiltration (“I/I”) status of various portions of the Taylors sewer system for the period November 2011 through April 2012.

Flow Monitoring

Flow monitoring of 9.3 miles of gravity sewer lines in the Taylors system is documented in this report. This represents approximately 6% of the Taylors collection system. FloDar Flowmeters owned and maintained by Taylors were used to monitor flow.

Table 1 contains a brief description of the portions of the system flow monitored during the time period November 201 through April 2012.

Table 1 Areas of the Taylors System Flow Monitored

Mini-System	Metered Manhole Number	Street Location	Feet of Pipe	Miles of Pipe
6	MH 6-568	Robinhood Rd.	5,129	1.0
6	MH 6-098D	Bellview Dr.	3,988	0.8
6	MH 6-164	Woodheights Dr.	2,958	0.6
7	MH 7-339	Bendingwood ROW	12,954	2.5
7	MH 7-511A	Soccer Field	23,045	4.4
Total Miles				9.3

Results

Table 2 contains the results of flow monitoring as compared to the Babbitt equation calculated peaking factor. Supporting calculations and documentation for flow monitoring are provided for each manhole as Appendix A.

The 4.4 mile portion of the monitored system, associated with MH 7-511A was found to meet the Babbitt peaking factor with regards to Inflow.

For the remaining portions monitored, the allowable Babbitt peaking factor was met for most rainfall events, but the flow data is suspect. High dry weather flow infiltration and high dry weather peaking factors indicate the either there were flow meter errors or that turbulence due to meter placement caused erroneous readings. Further flow monitoring of these areas is needed to determine if the Inflow below the allowable Babbitt peaking factors.

Table 2. Flow Monitoring Summary

Project	Meter Location MH #	Rain Event Dates	Rainfall Totals	Peaking Factor (PF)	Babbitt Allowable	PF Below Babbitt Y/N	Comments
Mini-System 6	MH 6-568 Robinhood Rd	Nov 28, 2011	1.54	1.5	7.0	Y ¹	¹ High peaking factors during dry weather flow indicates questionable flow meter readings. This manhole needs to be re-measured or a different manhole selected for measurement for this section.
5,129'		Dec 27, 2011	1.32	1.4	7.0	Y ¹	
1.0 mi		Jan 20, 2011	1.38	1.7	7.0	Y ¹	
Mini-System 6	MH 6-098D Bellview Dr	Nov 15, 2011	1.67	4.3	6.9	Y ²	² High peaking factors during dry weather flow indicates questionable flow meter readings. This manhole needs to be re-measured or a different manhole selected for measurement for this section.
3,988'		Nov 28, 2011	1.54	10.3	6.9	N ²	
0.8 mi		Dec 27, 2011	1.32	7.0	6.9	Y ²	
Mini-System 6	MH 6-164 Woodheights Dr	Apr 15, 2011	1.46	2.9	8.5	Y ³	³ High peaking factors during dry weather flow and lower peaking factors during wet weather events indicate questionable flow meter readings. This manhole needs to be re-measured or a different manhole selected for measurement for this section.
2,958'		May 26, 2011	1.14	1.9	8.5	Y ³	
0.6 mi		July 25, 2011	1.12	1.7	8.5	Y ³	
Mini-System 7	MH 7-339 Bendingwood ROW	Mar 2, 2012	1.8	1.5	4.9	Y ⁴	⁴ High peaking factors during dry weather flow and lower peaking factors during wet weather events indicate questionable flow meter readings. This manhole needs to be re-measured or a different manhole selected for measurement for this section.
12,954'		Mar 30, 2012	1.03	1.8	4.9	Y ⁴	
2.5 mi		Apr 4, 2012	1.04	6.2	4.9	N ⁴	

Table 2 (Continued)

Project	Meter Location MH #	Rain Event Dates	Rainfall Totals	Peaking Factor (PF)	Babbitt Allowable	PF Below Babbitt Y/N	Comments
Mini-System 7	MH 7-551A Soccer Field	Mar 2, 2012	1.80	2.8	5.1	Y	
23,045'		Mar 30, 2012	1.03	2.3	5.1	Y	
4.4 mi		Apr 5, 2012	1.04	2.2	5.1	Y	

Conclusions

Flow monitoring of 9.3 miles, approximately 6%, of gravity sewer lines in the Taylors system was completed during the period of November 2011 through April 2012. Approximately 4.4 miles of this portion measured was found to meet the peak flow Babbitt standard and requires no further study or rehabilitation work at this time. Most of the remainder of the system measured, met the Babbitt allowable Peak Flow for the rainfall events measured, but the data was not deemed to be reliable. Additional flow monitoring of these sections, with particular attention to meter placement, is needed to confirm dry weather and peak flow values.

Respectfully submitted,

Eugene C. McCall, Jr.

The Clearwater Group, Inc.

Eugene C. McCall, Jr., Ph.D., P.E., J.D.

President

APPENDIX A – Location Map, Dry Weather, and Wet Weather flow data and calculations

MIT 6-568
Rainfall Event 1
Nov 28, 2011

Taylor's Flow Meter Data Sheet

System Data

Meter Location:	<u>6-568</u>	Pipe Size (in.):	<u>8-Inch</u>
-----------------	--------------	------------------	---------------

Inch-Miles of Sewer Upstream of Meter						
Pipe Size (in.)	Length (ft.)	Inch-Miles		Pipe Size (in.)	Length (ft.)	Inch-Miles
8	5,129	7.77		24		0.00
10		0.00		27		0.00
12		0.00		30		0.00
14		0.00		36		0.00
15		0.00		42		0.00
16		0.00		48		0.00
18		0.00		54		0.00
20		0.00		60		0.00
21		0.00		72		0.00
Total =						7.77

Dry Weather Flow

Average Daily Flow calculated from the following dates: From: <u>12/11/11</u> To: <u>12/16/11</u>	Avg. Daily Flowrate = <u>14,000</u> gpd Avg. Flow Depth = <u>0.400</u> inches Peak Hourly Flowrate = <u>94,000</u> gpd Peak Factor = <u>6.71</u>
---	---

Notes:

Completed By:

ECM

Date:

7-31-13

- computer calculated (formula)

Taylor's Flow Meter Data Sheet

Rainfall and I/I Event Duration

Rainfall: Start: 11/28/11 6:00 End: 11/29/11 6:00

Max. 24-hour Total: 1.54 in. Storm Total: 1.54 in.

I/I Event: Start: 11/28/11 5:00 End: 11/31/11 0:00

Dates and times that rainfall and I/I begin and end.

Wet Weather Event - I/I Analysis

Peak Flow Depth = 0.4 inches

I/I Event Duration = 43 hours

☐ Manhole Surcharged (Level exceeded pipe dia.)

I/I Volume = 5,375 gallons

Peak Hourly Flowrate = 21,000 gpd

Inflow and Infiltration Breakdown (optional)

Avg. Dry Weather Flow = 14,000 gpd

Dry Weather Infiltration = 6,000 gpd

Peak Factor = 1.50

Rainfall Induced Infiltration = 0 gpd

Avg. Wet Weather Flow = 11,000 gpd

Total Infiltration = 6,000 gpd

Avg. I/I Flow = 3,000 gpd

Infiltration Rate = 772 gpd/idm

Inch-Diameter Miles = 7.77 idm

Inflow = -3,000 gpd

I/I Rate = 386 gpd/idm

Inflow Rate = -386 gpd/idm

Notes: _____

Completed By

EC Mall

Date:

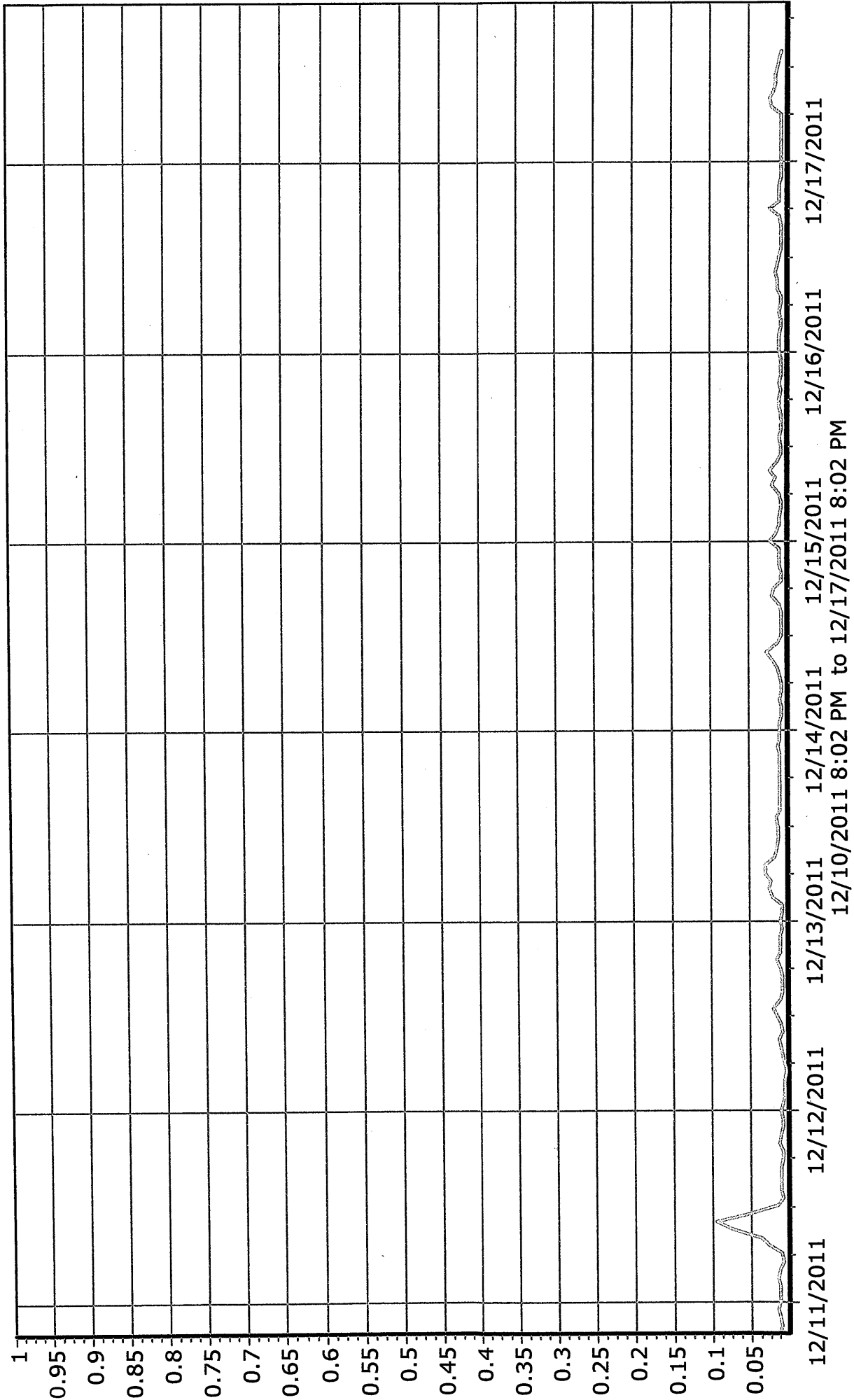
7-31-13

- computer calculated (formula)

6-568

Dry Weather Flow Dec. 2011

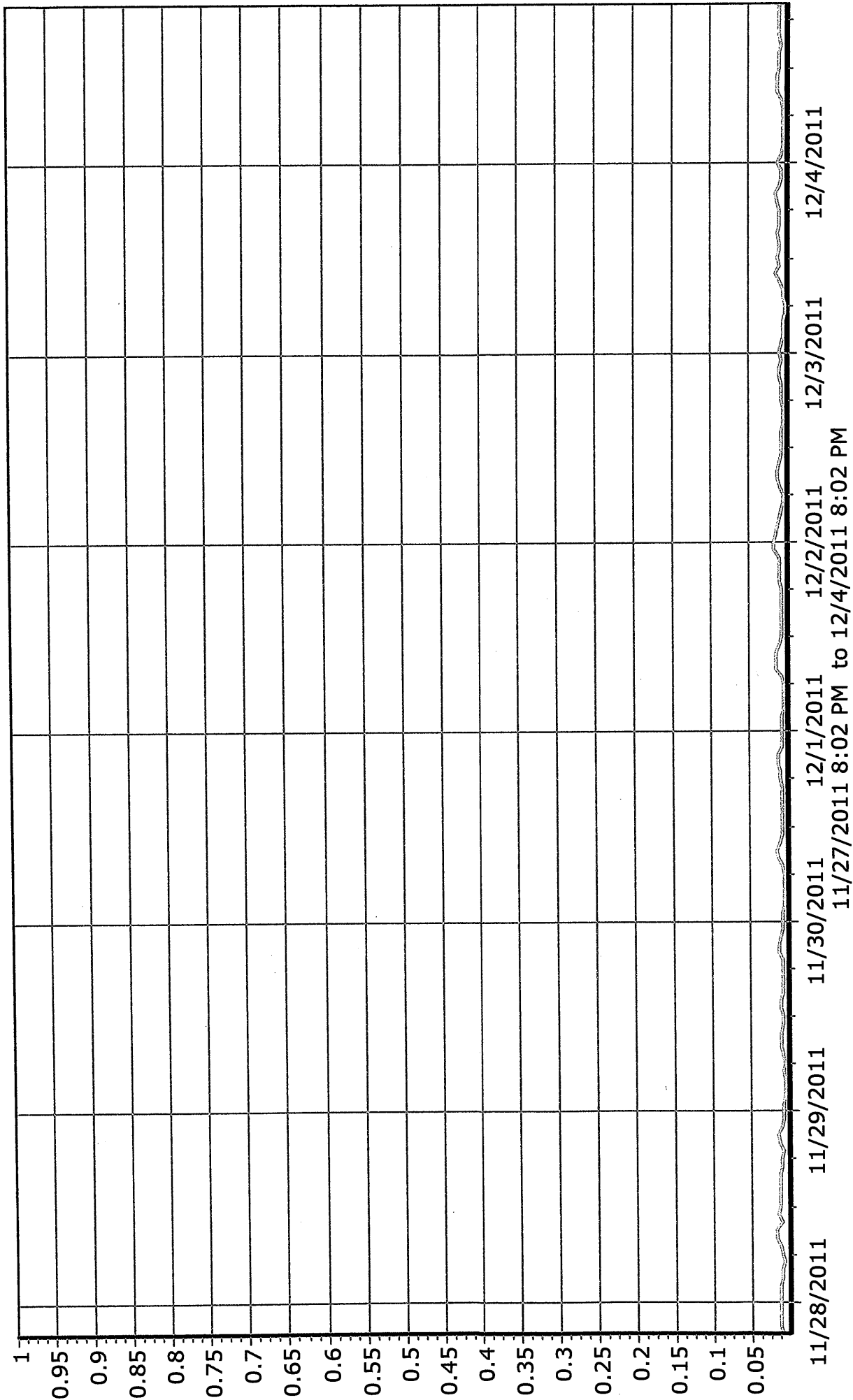
Flow (mgd)



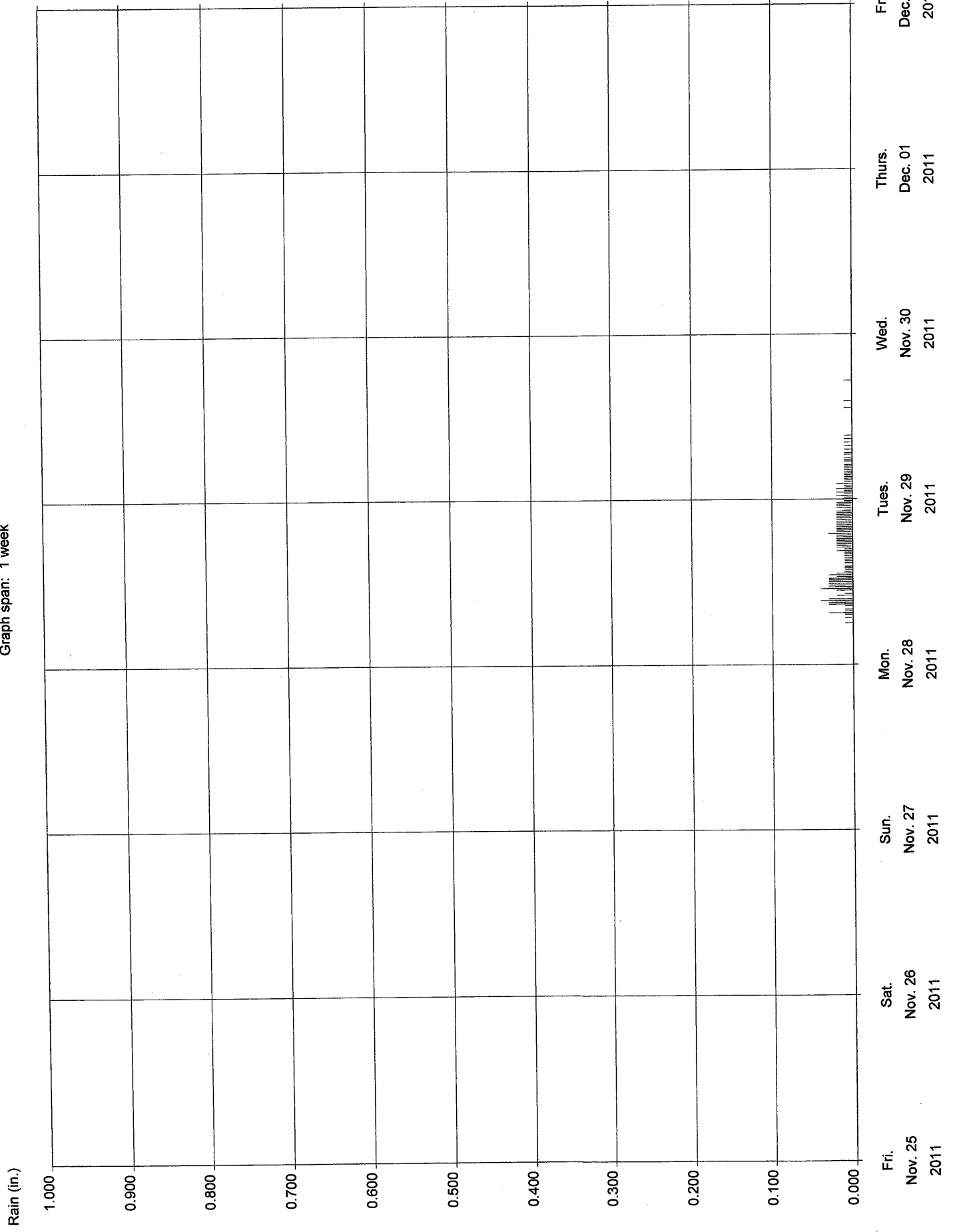
6-568

Wet Weather Event 11-28-11 to 11-29-11

Flow (mgd)



Rain 6-568 11-28-11 to 11-29-11
Site Id: 00000000 File name: 00000000.000
Graph span: 1 week



MH 6-568
Ran All Events 2
Dec 27, 2011

Taylor's Flow Meter Data Sheet

System Data

Meter Location: <u>6-568</u>	Pipe Size (in.): <u>8-Inch</u>
------------------------------	--------------------------------

Inch-Miles of Sewer Upstream of Meter								
Pipe Size (in.)		Length (ft.)	Inch-Miles		Pipe Size (in.)		Length (ft.)	Inch-Miles
8	5,129	7.77			24		0.00	
10		0.00			27		0.00	
12		0.00			30		0.00	
14		0.00			36		0.00	
15		0.00			42		0.00	
16		0.00			48		0.00	
18		0.00			54		0.00	
20		0.00			60		0.00	
21		0.00			72		0.00	
							Total =	7.77

Dry Weather Flow

<p>Average Daily Flow calculated from the following dates:</p> <p>From: <u>12/11/11</u></p> <p>To: <u>12/16/11</u></p>	<p>Avg. Daily Flowrate = <u>14,000</u> gpd</p> <p>Avg. Flow Depth = <u>0.400</u> inches</p> <p>Peak Hourly Flowrate = <u>94,000</u> gpd</p> <p>Peak Factor = <u>6.71</u></p>
--	--

Notes: _____

Completed By: _____

Date: _____

- computer calculated (formula)

Taylor's Flow Meter Data Sheet

Rainfall and I/I Event Duration

Rainfall: Start: 12/27/11 1:45 End: 12/27/11 10:15

Max. 24-hour Total: 1.32 in. Storm Total: 1.32 in.

I/I Event: Start: 12/27/11 1:00 End: 12/29/11 0:00

Dates and times that rainfall and I/I begin and end.

Wet Weather Event - I/I Analysis

Peak Flow Depth = 0.5 inches

I/I Event Duration = 47 hours

☐ Manhole Surcharged (Level exceeded pipe dia.)

I/I Volume = 3,917 gallons

Peak Hourly Flowrate = 19,000 gpd

Inflow and Infiltration Breakdown (optional)

Avg. Dry Weather Flow = 14,000 gpd

Dry Weather Infiltration = 6,000 gpd

Peak Factor = 1.36

Rainfall Induced Infiltration = 0 gpd

Avg. Wet Weather Flow = 10,000 gpd

Total Infiltration = 6,000 gpd

Avg. I/I Flow = 2,000 gpd

Infiltration Rate = 772 gpd/idm

Inch-Diameter Miles = 7.77 idm

Inflow = -4,000 gpd

I/I Rate = 257 gpd/idm

Inflow Rate = -515 gpd/idm

Notes: _____

Completed By EC McAll

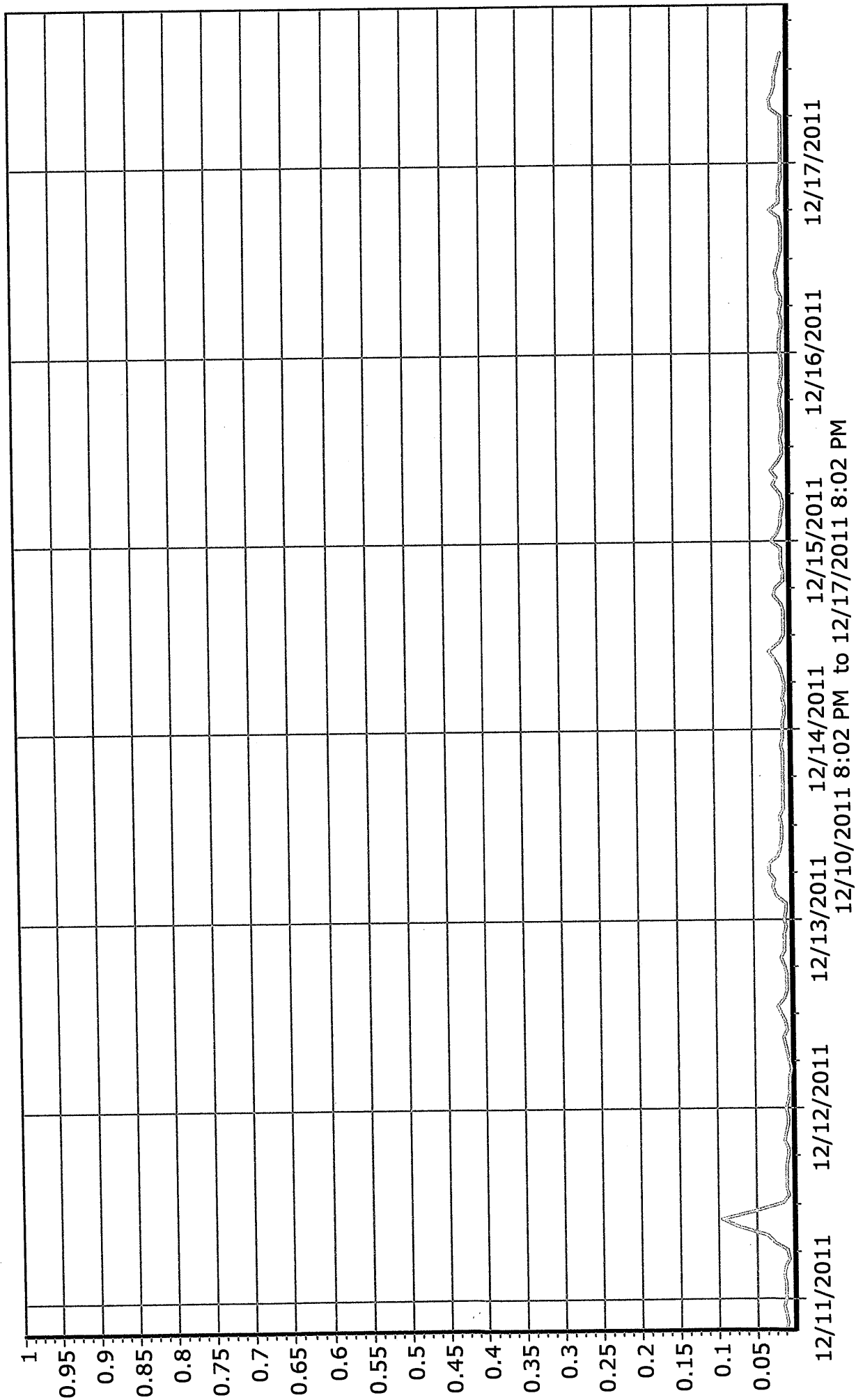
Date: 7-31-13

- computer calculated (formula)

6-568

Dry Weather Flow Dec. 2011

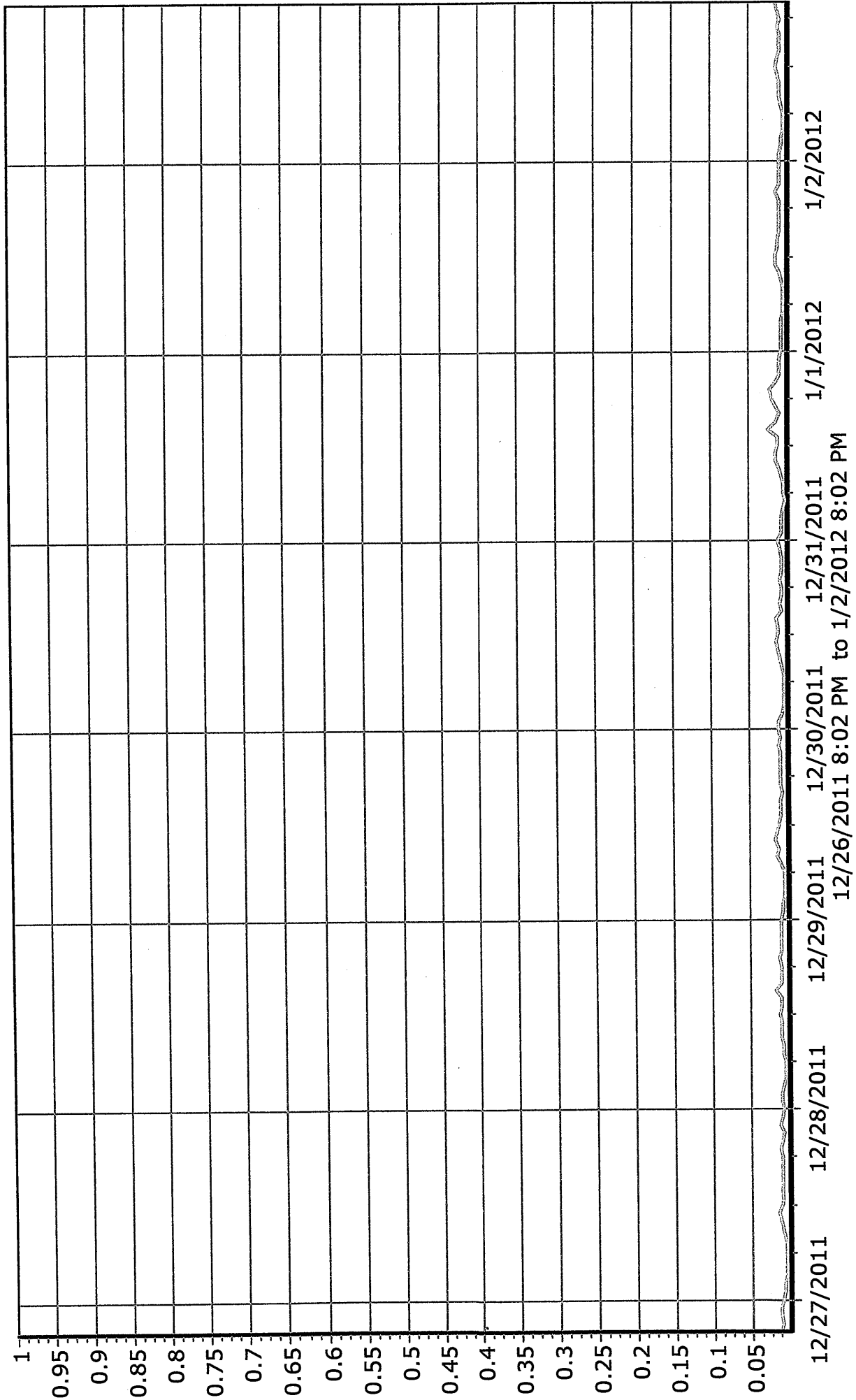
Flow (mgd)



6-568

Wet Weather Event 12-27-11

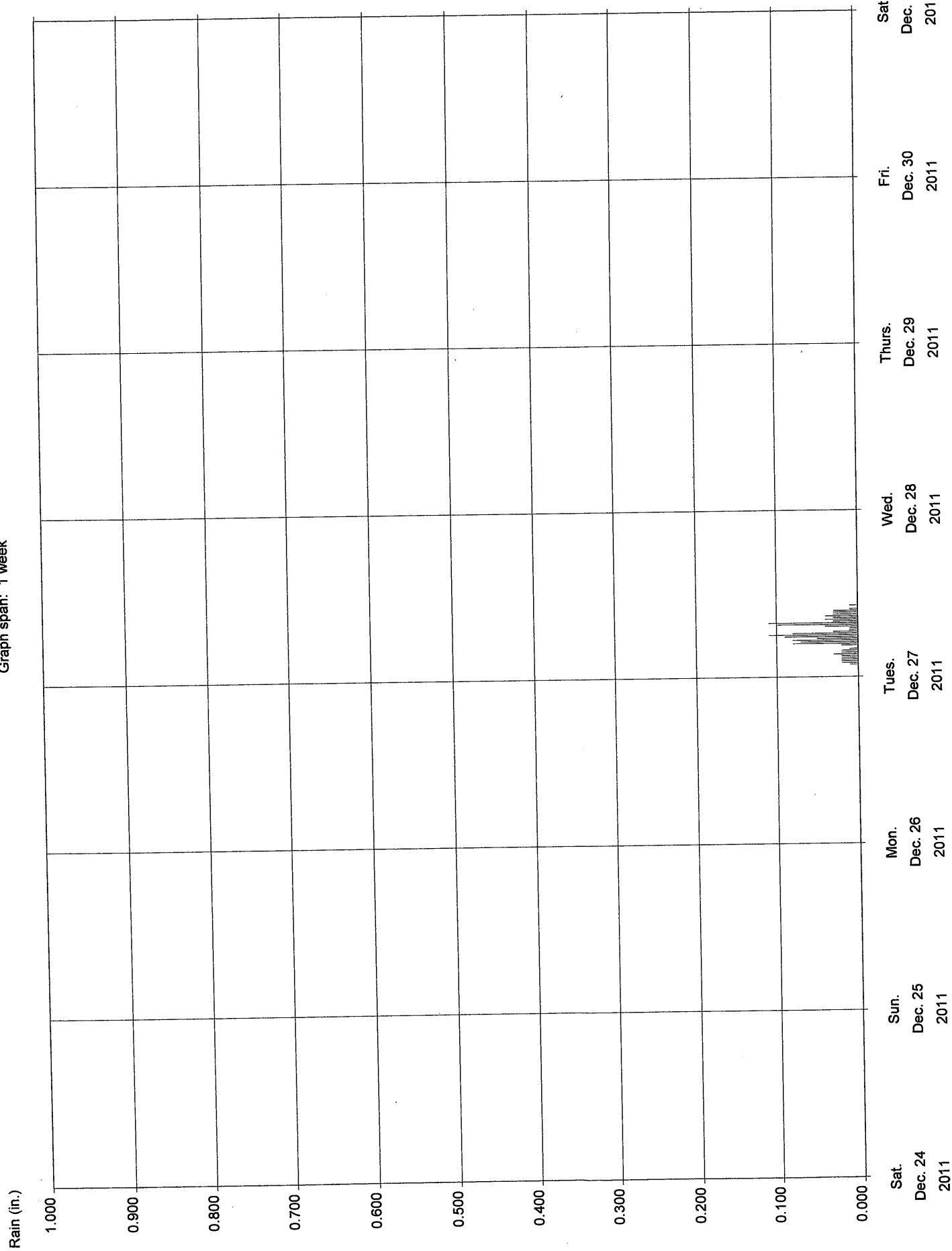
Flow (mgd)



Rain 6-568 12-27-11

Site Id: 00000000 File name: 00000000.000

Graph span: 1 week



Taylors Flow Meter Data Sheet

MH 6-568
Point A/East 3
Jan 20, 2012

System Data

Meter Location: <u>6-568</u>	Pipe Size (in.): <u>8-Inch</u>
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Inch-Miles of Sewer Upstream of Meter						
Pipe Size (in.)	Length (ft.)	Inch-Miles		Pipe Size (in.)	Length (ft.)	Inch-Miles
8	5,129	7.77		24		0.00
10		0.00		27		0.00
12		0.00		30		0.00
14		0.00		36		0.00
15		0.00		42		0.00
16		0.00		48		0.00
18		0.00		54		0.00
20		0.00		60		0.00
21		0.00		72		0.00
Total =						7.77

Dry Weather Flow

<p>Average Daily Flow calculated from the following dates:</p> <p>From: <u>12/11/11</u></p> <p>To: <u>12/16/11</u></p>	<p>Avg. Daily Flowrate = <u>14,000</u> gpd</p> <p>Avg. Flow Depth = <u>0.400</u> inches</p> <p>Peak Hourly Flowrate = <u>94,000</u> gpd</p> <p>Peak Factor = <u>6.71</u></p>
--	--

Notes: _____

Completed By: EC Miller

Date: 7-31-13

- computer calculated (formula)

Taylor's Flow Meter Data Sheet

Rainfall and I/I Event Duration

Rainfall: Start: 1/20/12 16:00 End: 1/21/12 6:00

Max. 24-hour Total: 1.38 in. Storm Total: 1.38 in.

I/I Event: Start: 1/20/12 15:00 End: 1/23/12 0:00

Dates and times that rainfall and I/I begin and end.

Wet Weather Event - I/I Analysis

Peak Flow Depth = 0.6 inches

I/I Event Duration = 57 hours

☐ Manhole Surcharged (Level exceeded pipe dia.)

I/I Volume = 9,500 gallons

Peak Hourly Flowrate = 24,000 gpd

Inflow and Infiltration Breakdown (optional)

Avg. Dry Weather Flow = 14,000 gpd

Dry Weather Infiltration = 6,000 gpd

Peak Factor = 1.71

Rainfall Induced Infiltration = 0 gpd

Avg. Wet Weather Flow = 12,000 gpd

Total Infiltration = 6,000 gpd

Avg. I/I Flow = 4,000 gpd

Infiltration Rate = 772 gpd/idm

Inch-Diameter Miles = 7.77 idm

Inflow = -2,000 gpd

I/I Rate = 515 gpd/idm

Inflow Rate = -257 gpd/idm

Notes:

Completed By EC McAll

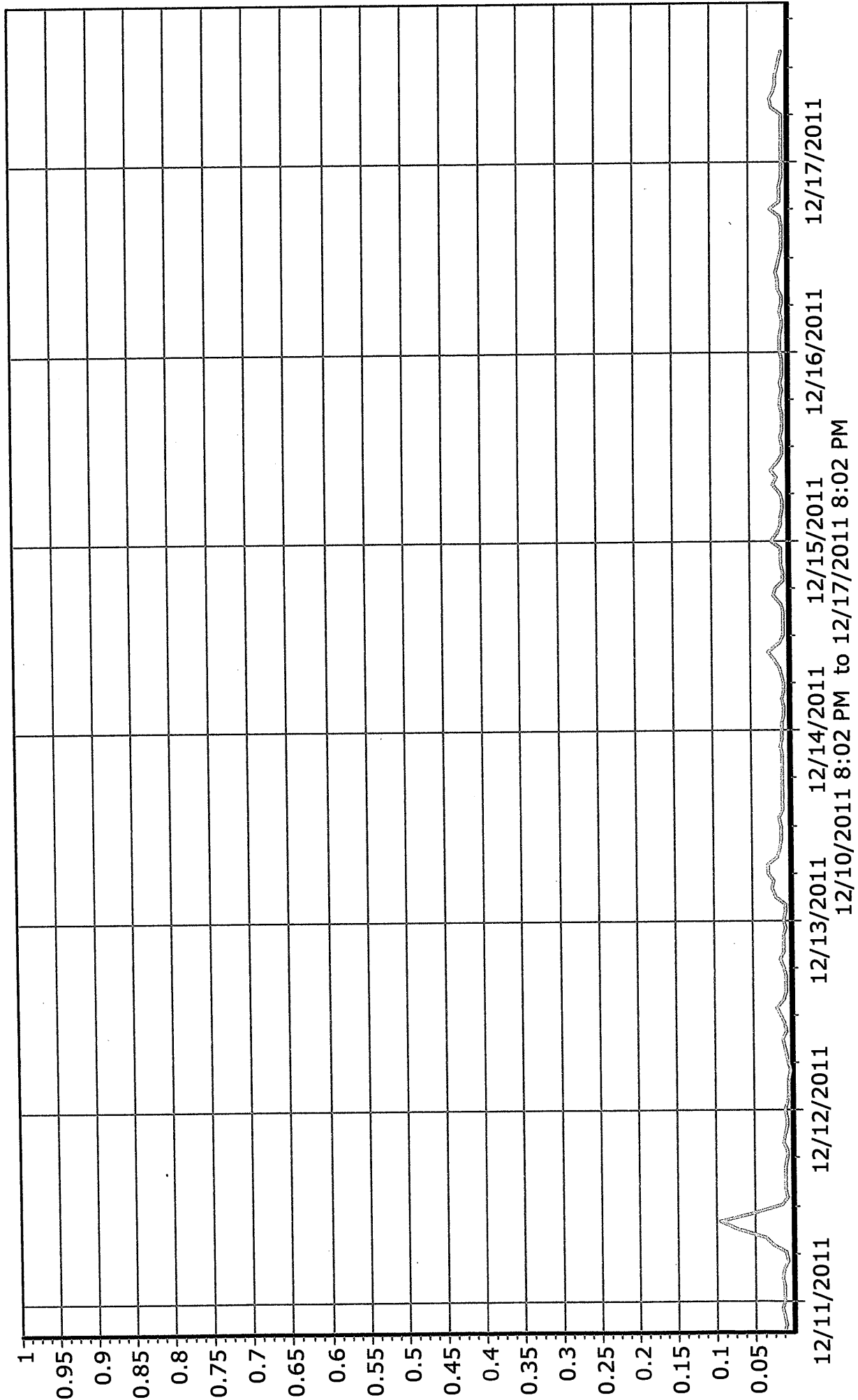
Date: 7-8-13

- computer calculated (formula)

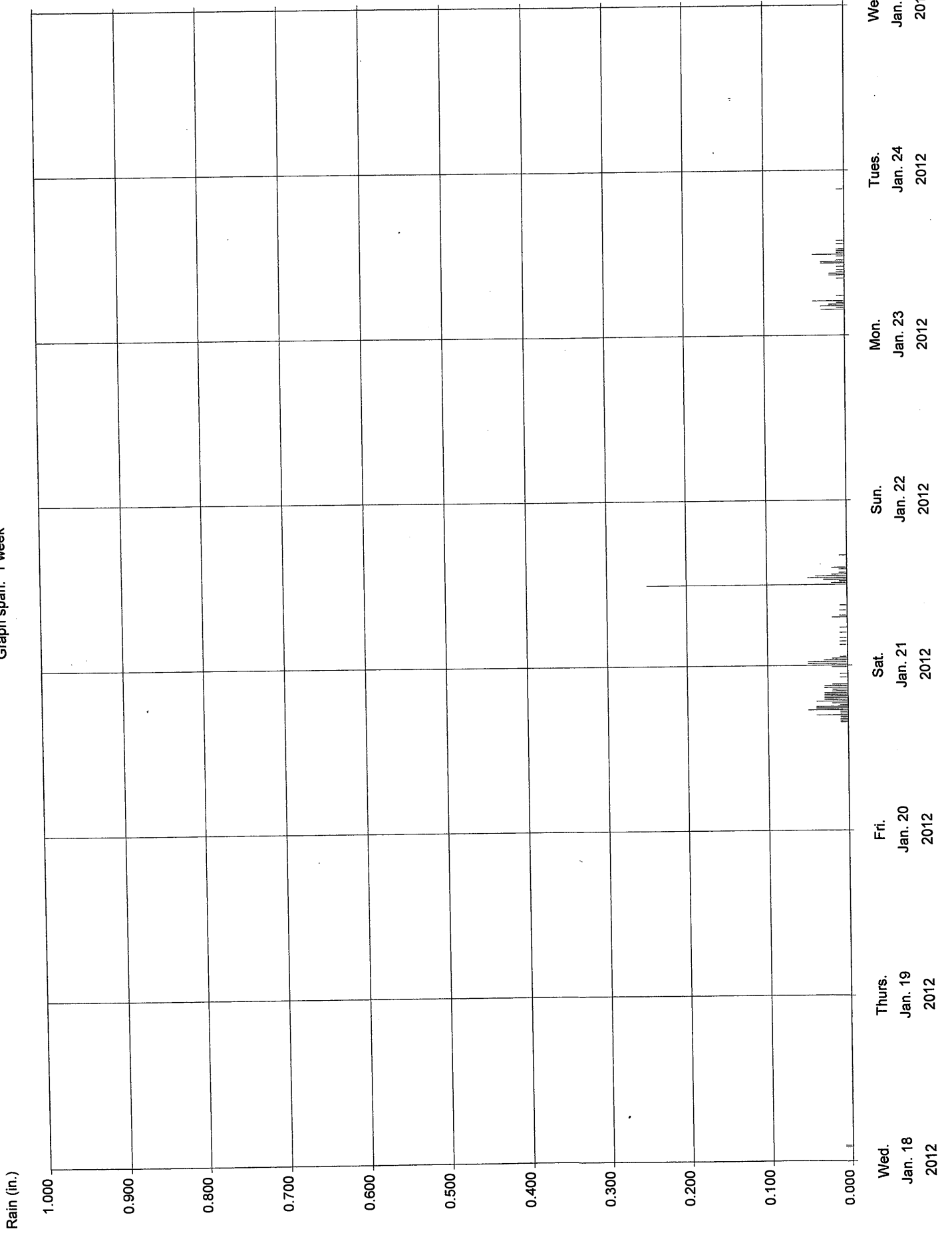
6-568

Dry Weather Flow Dec. 2011

— Flow (mgd)



Rain 6-568 1-20-12 to 1-21-12
Site Id: 00000000 File name: 00000000.000
Graph span: 1 week



Taylors Flow Meter Data Sheet

MH 6-098D
Per All Event 1
Nov 15, 2011

System Data

Meter Location: <u>6-098D</u>	Pipe Size (in.): <u>8-Inch</u>
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Inch-Miles of Sewer Upstream of Meter							
Pipe Size (in.)	Length (ft.)	Inch-Miles		Pipe Size (in.)	Length (ft.)	Inch-Miles	
8	3,988	6.04		24		0.00	
10		0.00		27		0.00	
12		0.00		30		0.00	
14		0.00		36		0.00	
15		0.00		42		0.00	
16		0.00		48		0.00	
18		0.00		54		0.00	
20		0.00		60		0.00	
21		0.00		72		0.00	
					Total =	6.04	

Dry Weather Flow

<p>Average Daily Flow calculated from the following dates:</p> <p>From: <u>12/11/11</u></p> <p>To: <u>12/16/11</u></p>	<p>Avg. Daily Flowrate = <u>3,000</u> gpd</p> <p>Avg. Flow Depth = <u>0.300</u> inches</p> <p>Peak Hourly Flowrate = <u>20,000</u> gpd</p> <p>Peak Factor = <u>6.67</u></p>
--	---

Notes: _____

Completed By: EC H.M.

Date: 7-31-13

Flow Meter Data Sheet - computer calculated (formula)

Taylor's Flow Meter Data Sheet

Rainfall and I/I Event Duration

Rainfall: Start: 11/15/11 21:30 End: 11/16/11 21:15

Max. 24-hour Total: 1.67 in. Storm Total: 1.67 in.

I/I Event: Start: 11/15/11 20:30 End: 11/18/11 0:00

Dates and times that rainfall and I/I begin and end.

Wet Weather Event - I/I Analysis

Peak Flow Depth = 0.6 inches

I/I Event Duration = 52 hours

☐ Manhole Surcharged (Level exceeded pipe dia.)

I/I Volume = 4,333 gallons

Peak Hourly Flowrate = 13,000 gpd

Inflow and Infiltration Breakdown (optional)

Avg. Dry Weather Flow = 3,000 gpd

Dry Weather Infiltration = 1,000 gpd

Peak Factor = 4.33

Rainfall Induced Infiltration = 1,000 gpd

Avg. Wet Weather Flow = 4,000 gpd

Total Infiltration = 2,000 gpd

Avg. I/I Flow = 2,000 gpd

Infiltration Rate = 331 gpd/idm

Inch-Diameter Miles = 6.04 idm

Inflow = 0 gpd

I/I Rate = 331 gpd/idm

Inflow Rate = 0 gpd/idm

Notes:

Completed By SC Adell

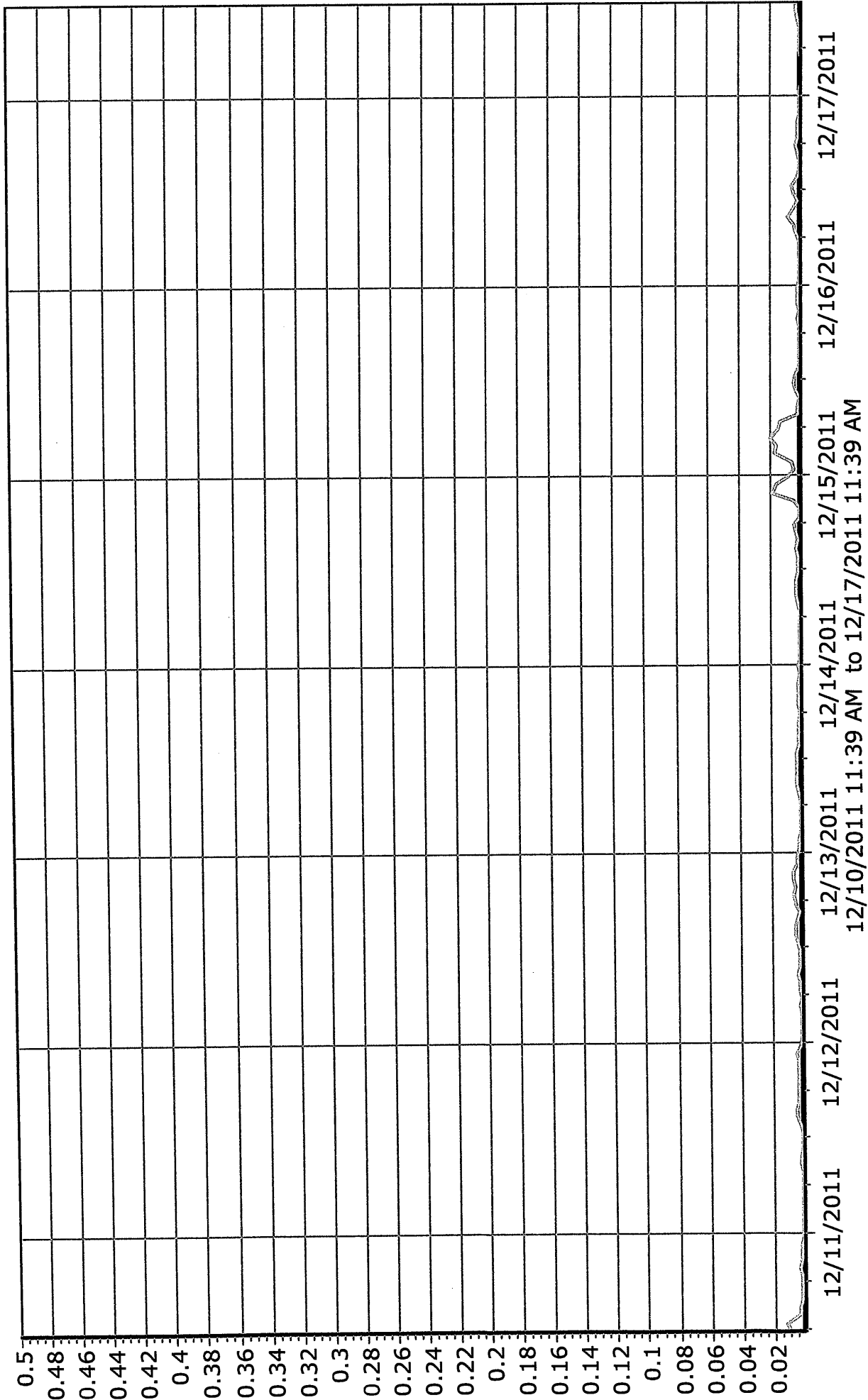
Date: 7-31-13

- computer calculated (formula)

6-098D

Dry Weather Flow Dec. 2011

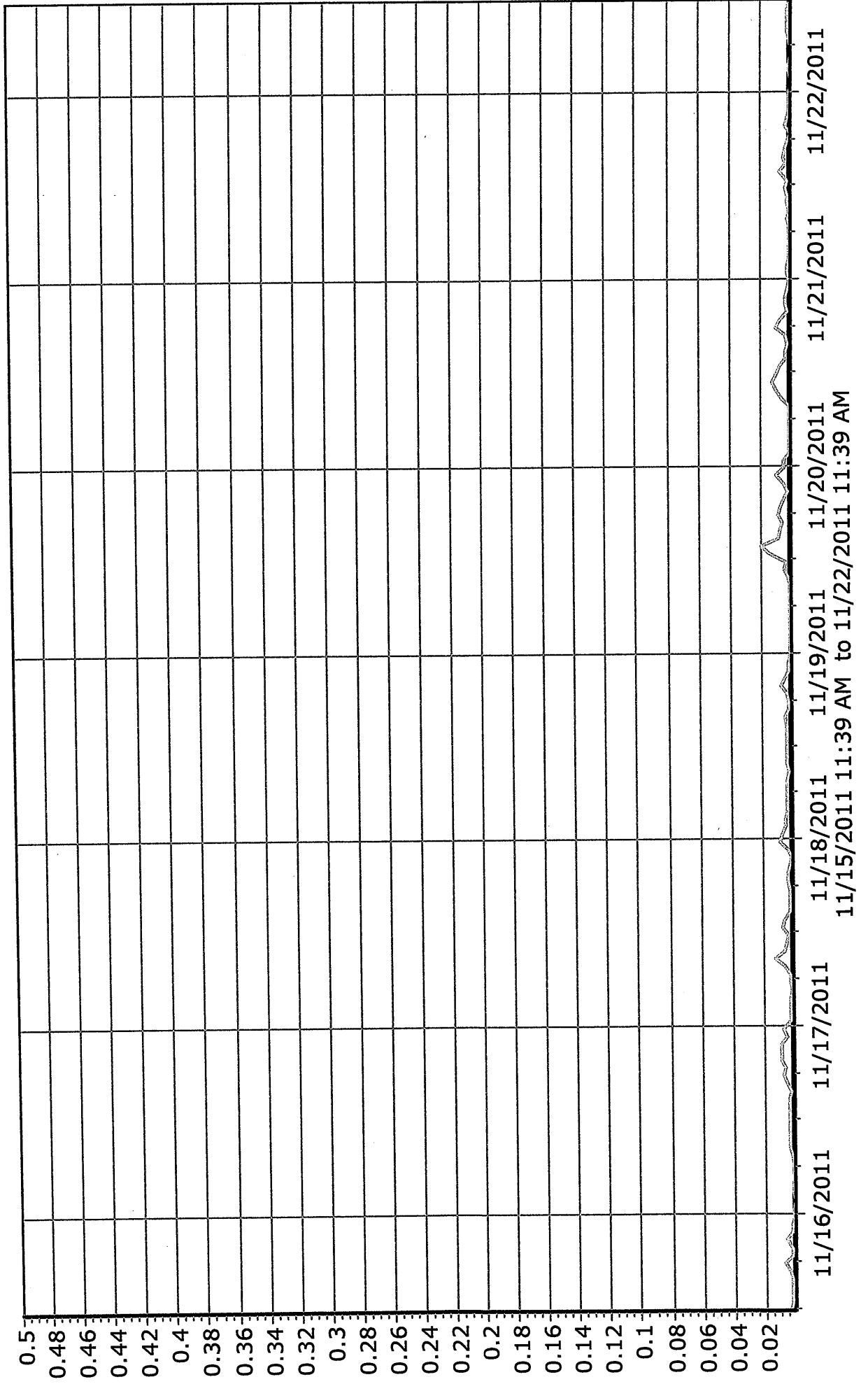
— Flow (mgd)



6-098D

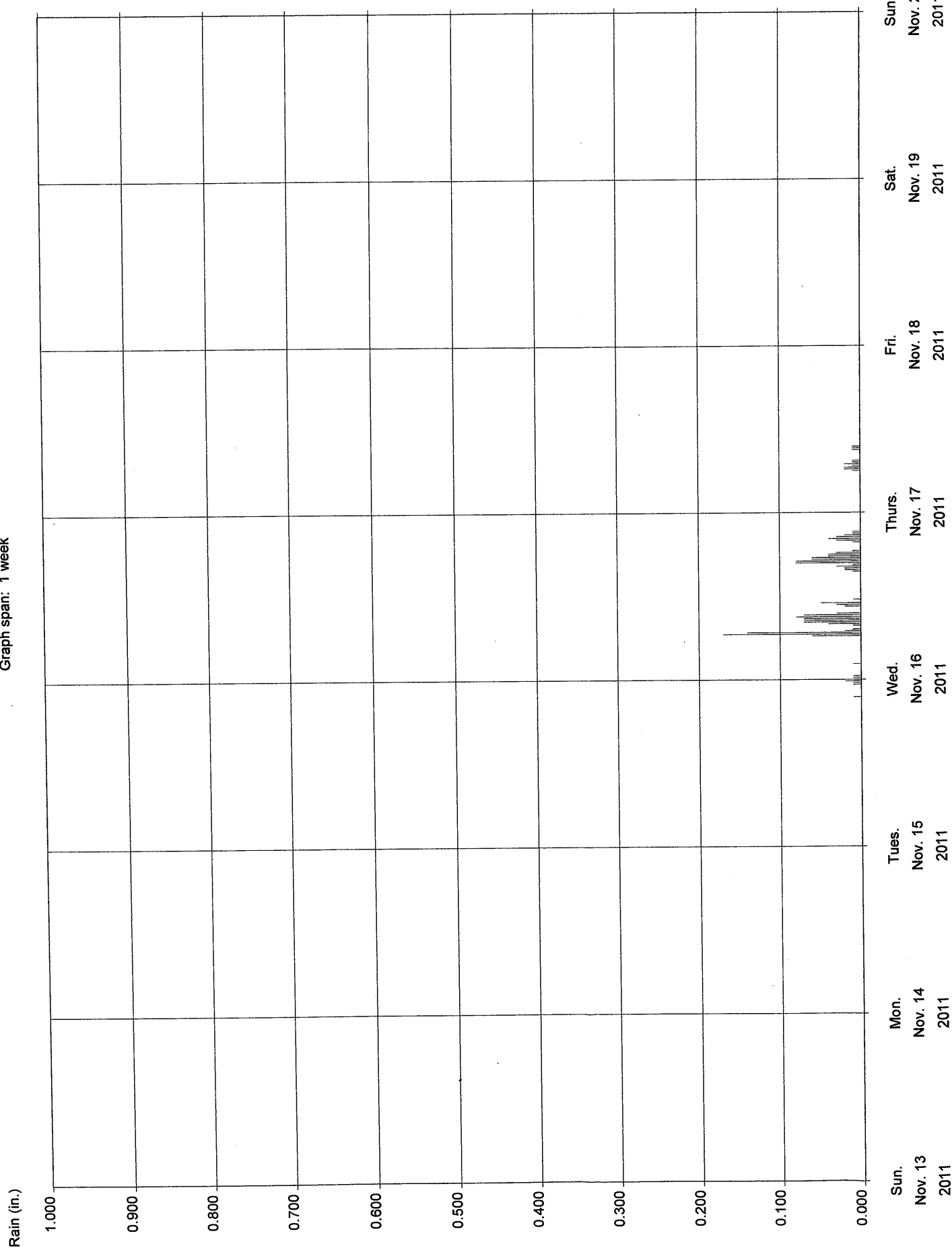
Wet Weather Event 11-16-11

— Flow (mgd)



Site Id: 00000000 File name: 00000000.000

Graph span: 1 week



Taylors Flow Meter Data Sheet

MH 6-098D
Rainfall Plot 2
Nov 28, 2011

System Data

Meter Location: <u>6-098D</u>	Pipe Size (in.): <u>8-Inch</u>
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Inch-Miles of Sewer Upstream of Meter							
Pipe Size (in.)	Length (ft.)	Inch-Miles		Pipe Size (in.)	Length (ft.)	Inch-Miles	
8	3,988	6.04		24		0.00	
10		0.00		27		0.00	
12		0.00		30		0.00	
14		0.00		36		0.00	
15		0.00		42		0.00	
16		0.00		48		0.00	
18		0.00		54		0.00	
20		0.00		60		0.00	
21		0.00		72		0.00	
					Total =	6.04	

Dry Weather Flow

<p>Average Daily Flow calculated from the following dates:</p> <p>From: <u>12/11/11</u></p> <p>To: <u>12/16/11</u></p>	<p>Avg. Daily Flowrate = <u>3,000</u> gpd</p> <p>Avg. Flow Depth = <u>0.300</u> inches</p> <p>Peak Hourly Flowrate = <u>20,000</u> gpd</p> <p>Peak Factor = <u>6.67</u></p>
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Notes: _____

Completed By: EC HLM

Date: 7-31-13

- computer calculated (formula)

Taylors Flow Meter Data Sheet

Rainfall and I/I Event Duration

Rainfall: Start: 11/28/11 6:00 End: 11/29/11 6:00

Max. 24-hour Total: 1.54 in. Storm Total: 1.54 in.

I/I Event: Start: 11/28/11 5:00 End: 11/30/11 0:00

Dates and times that rainfall and I/I begin and end.

Wet Weather Event - I/I Analysis

Peak Flow Depth = 0.9 inches

I/I Event Duration = 42 hours

☐ Manhole Surcharged (Level exceeded pipe dia.)

I/I Volume = 5,250 gallons

Peak Hourly Flowrate = 31,000 gpd

Inflow and Infiltration Breakdown (optional)

Avg. Dry Weather Flow = 3,000 gpd

Dry Weather Infiltration = 1,000 gpd

Peak Factor = 10.33

Rainfall Induced Infiltration = 2,000 gpd

Avg. Wet Weather Flow = 5,000 gpd

Total Infiltration = 3,000 gpd

Avg. I/I Flow = 3,000 gpd

Infiltration Rate = 497 gpd/idm

Inch-Diameter Miles = 6.04 idm

Inflow = 0 gpd

I/I Rate = 497 gpd/idm

Inflow Rate = 0 gpd/idm

Notes:

Completed By

ECM

Date:

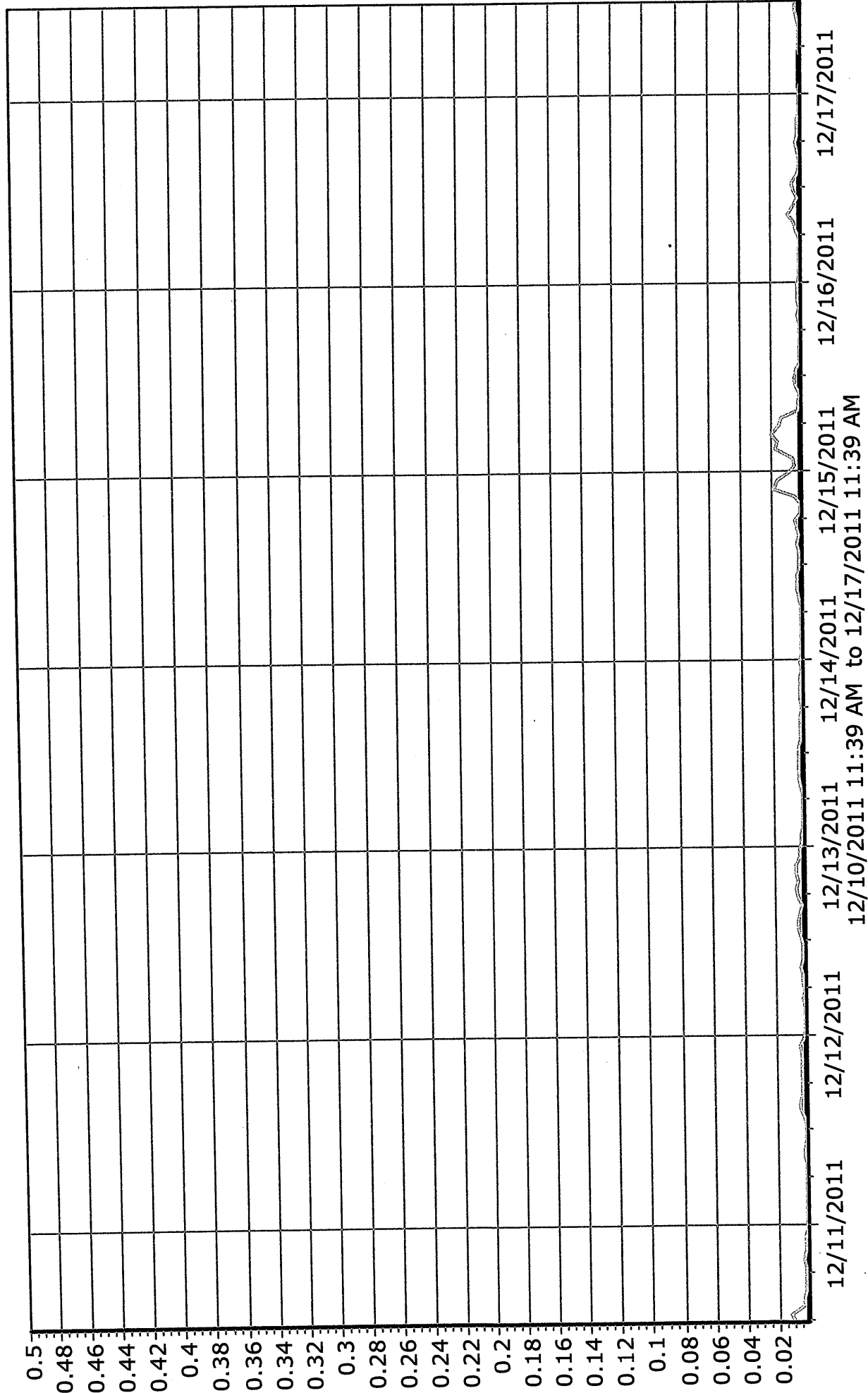
7-31-13

- computer calculated (formula)

6-098D

Dry Weather Flow Dec. 2011

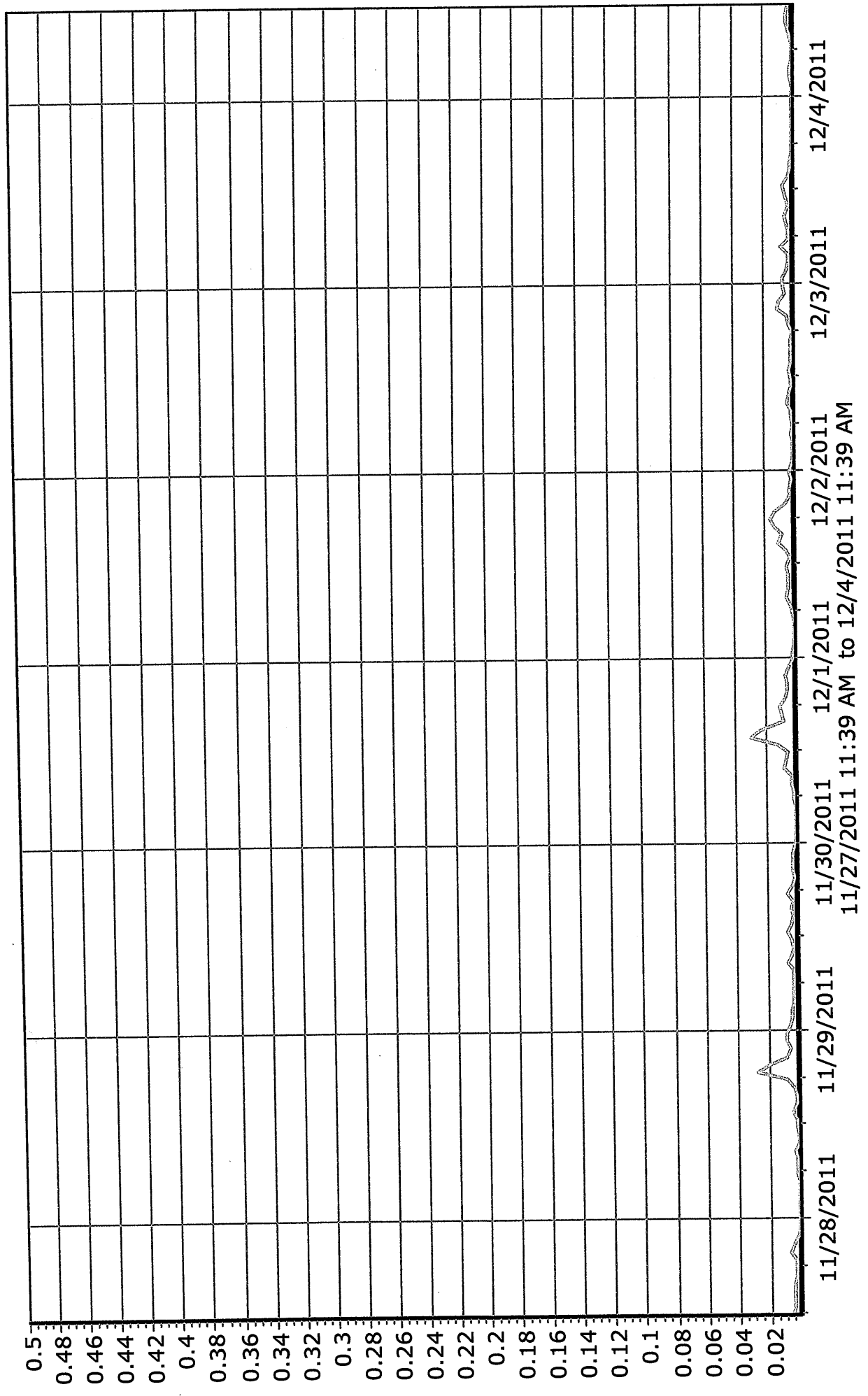
— Flow (mgd)



6-098D

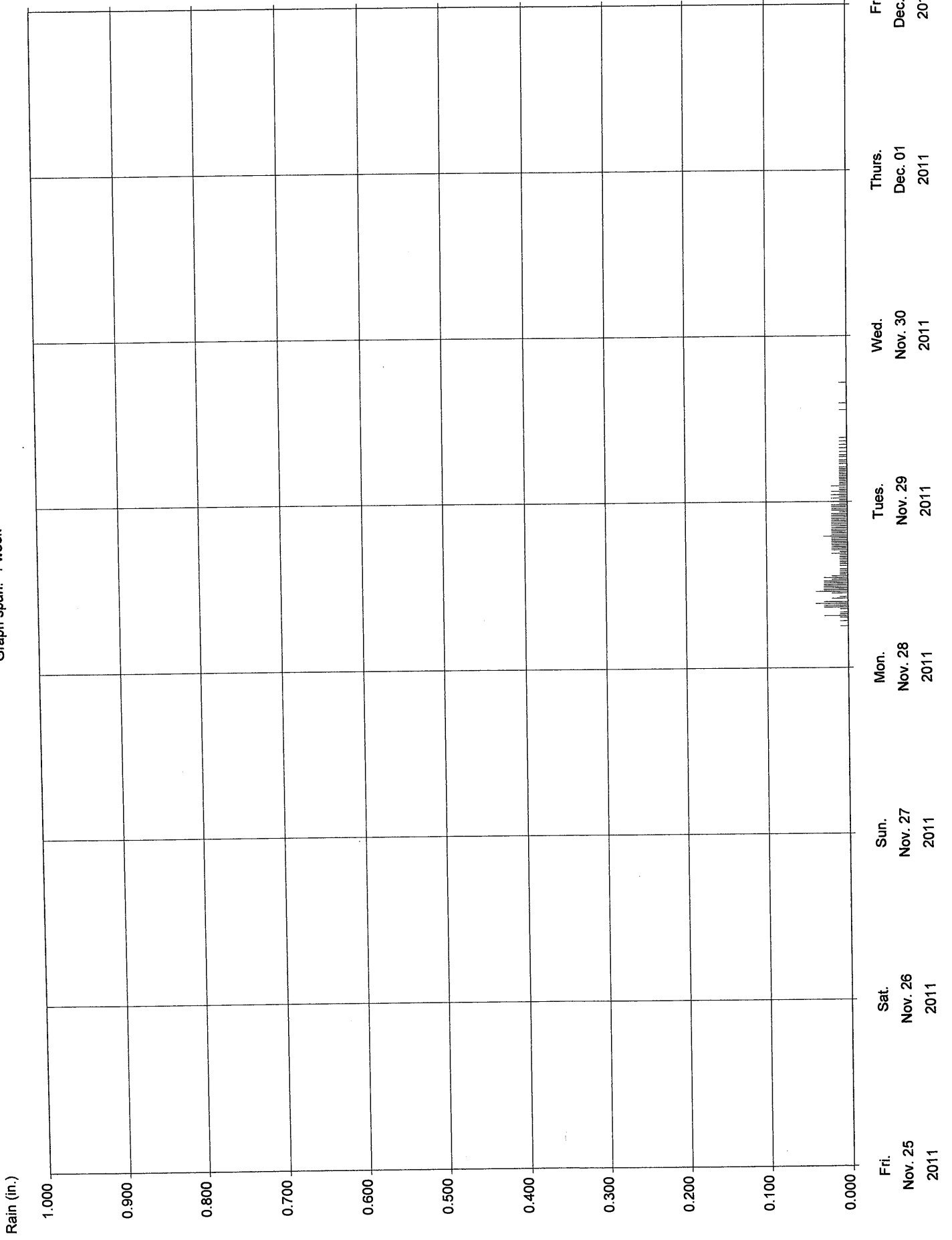
Wet Weather Event 11-28-11 to 11-29-11

Flow (mgd)



Rain 6-098D 11-28-11 to 11-29-11
Site Id: 00000000 File name: 00000000.000

Graph span: 1 week



Taylors Flow Meter Data Sheet

M 6-098D
Raintall Plot 3
Dec 27, 2011

System Data

Meter Location: <u>6-098D</u>	Pipe Size (in.): <u>8-Inch</u>
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Inch-Miles of Sewer Upstream of Meter						
Pipe Size (in.)	Length (ft.)	Inch-Miles		Pipe Size (in.)	Length (ft.)	Inch-Miles
8	3,988	6.04		24		0.00
10		0.00		27		0.00
12		0.00		30		0.00
14		0.00		36		0.00
15		0.00		42		0.00
16		0.00		48		0.00
18		0.00		54		0.00
20		0.00		60		0.00
21		0.00		72		0.00
Total =						6.04

Dry Weather Flow

Average Daily Flow calculated from the following dates: From: <u>12/11/11</u> To: <u>12/16/11</u>	Avg. Daily Flowrate = <u>3,000</u> gpd Avg. Flow Depth = <u>0.300</u> inches Peak Hourly Flowrate = <u>20,000</u> gpd Peak Factor = <u>6.67</u>
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Notes: _____

Completed By: EC HLM

Date: 7-31-13

- computer calculated (formula)

Taylors Flow Meter Data Sheet

Rainfall and I/I Event Duration

Rainfall: Start: 12/27/11 1:45 End: 12/27/11 10:15

Max. 24-hour Total: 1.32 in. Storm Total: 1.32 in.

I/I Event: Start: 12/27/11 1:00 End: 12/29/11 0:00

Dates and times that rainfall and I/I begin and end.

Wet Weather Event - I/I Analysis

Peak Flow Depth = 0.9 inches

I/I Event Duration = 47 hours

☐ Manhole Surcharged (Level exceeded pipe dia.)

I/I Volume = 7,833 gallons

Peak Hourly Flowrate = 21,000 gpd

Inflow and Infiltration Breakdown (optional)

Avg. Dry Weather Flow = 3,000 gpd

Dry Weather Infiltration = 1,000 gpd

Peak Factor = 7.00

Rainfall Induced Infiltration = 3,000 gpd

Avg. Wet Weather Flow = 6,000 gpd

Total Infiltration = 4,000 gpd

Avg. I/I Flow = 4,000 gpd

Infiltration Rate = 662 gpd/idm

Inch-Diameter Miles = 6.04 idm

Inflow = 0 gpd

I/I Rate = 662 gpd/idm

Inflow Rate = 0 gpd/idm

Notes:

Completed By ECN/CH

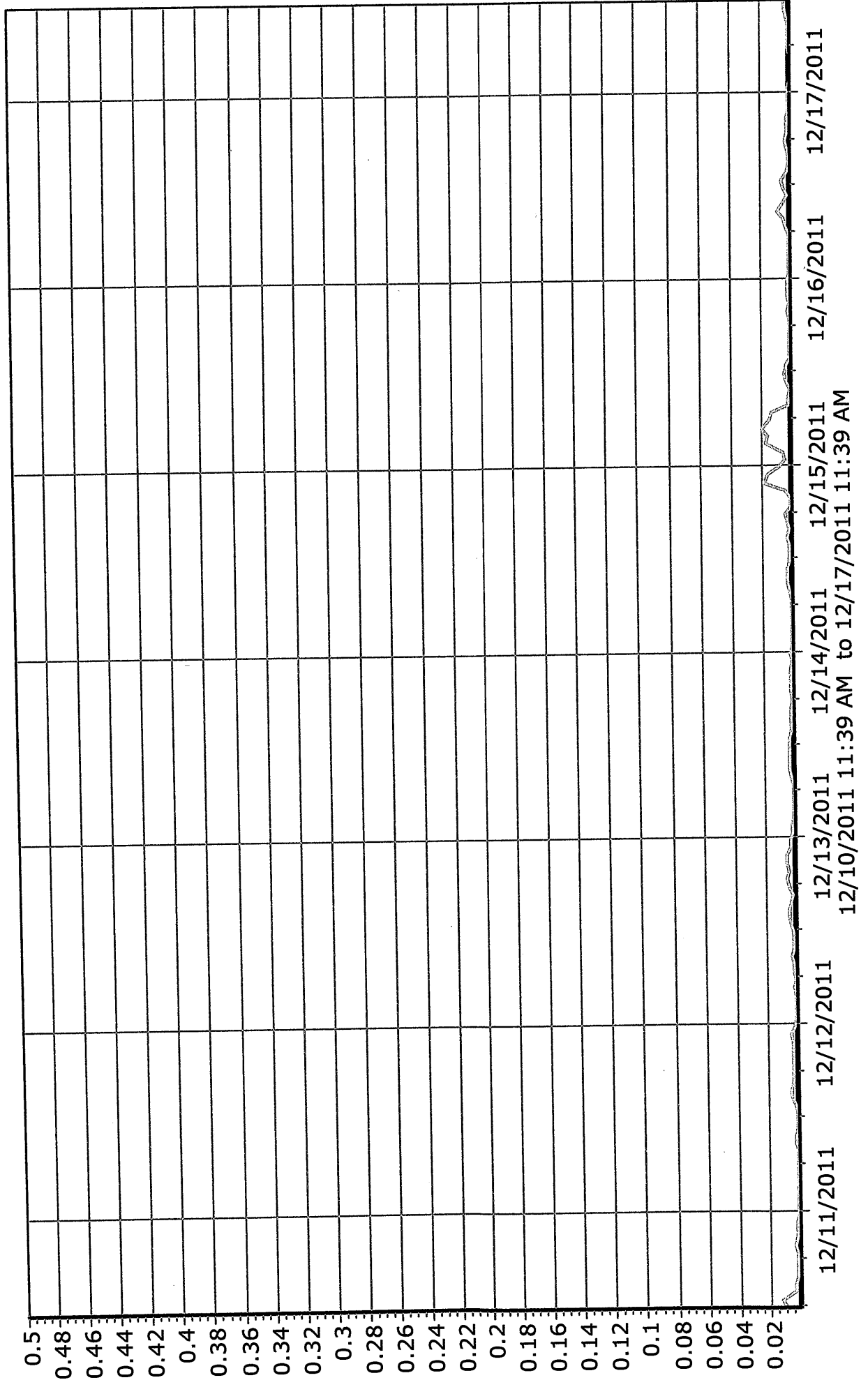
Date: 7-31-13

- computer calculated (formula)

6-098D

Dry Weather Flow Dec. 2011

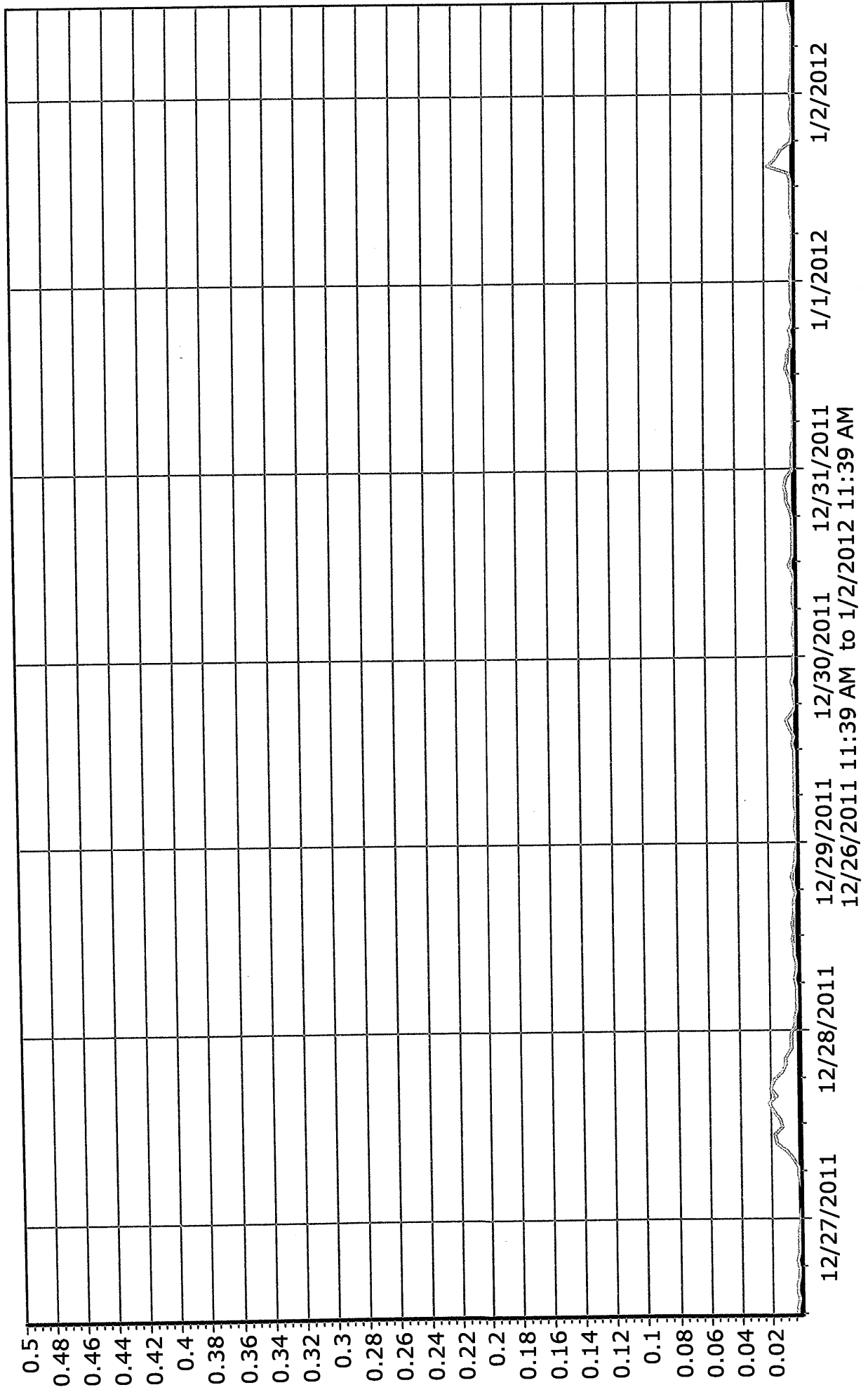
Flow (mgd)



6-098D

Wet Weather Event 12-27-11

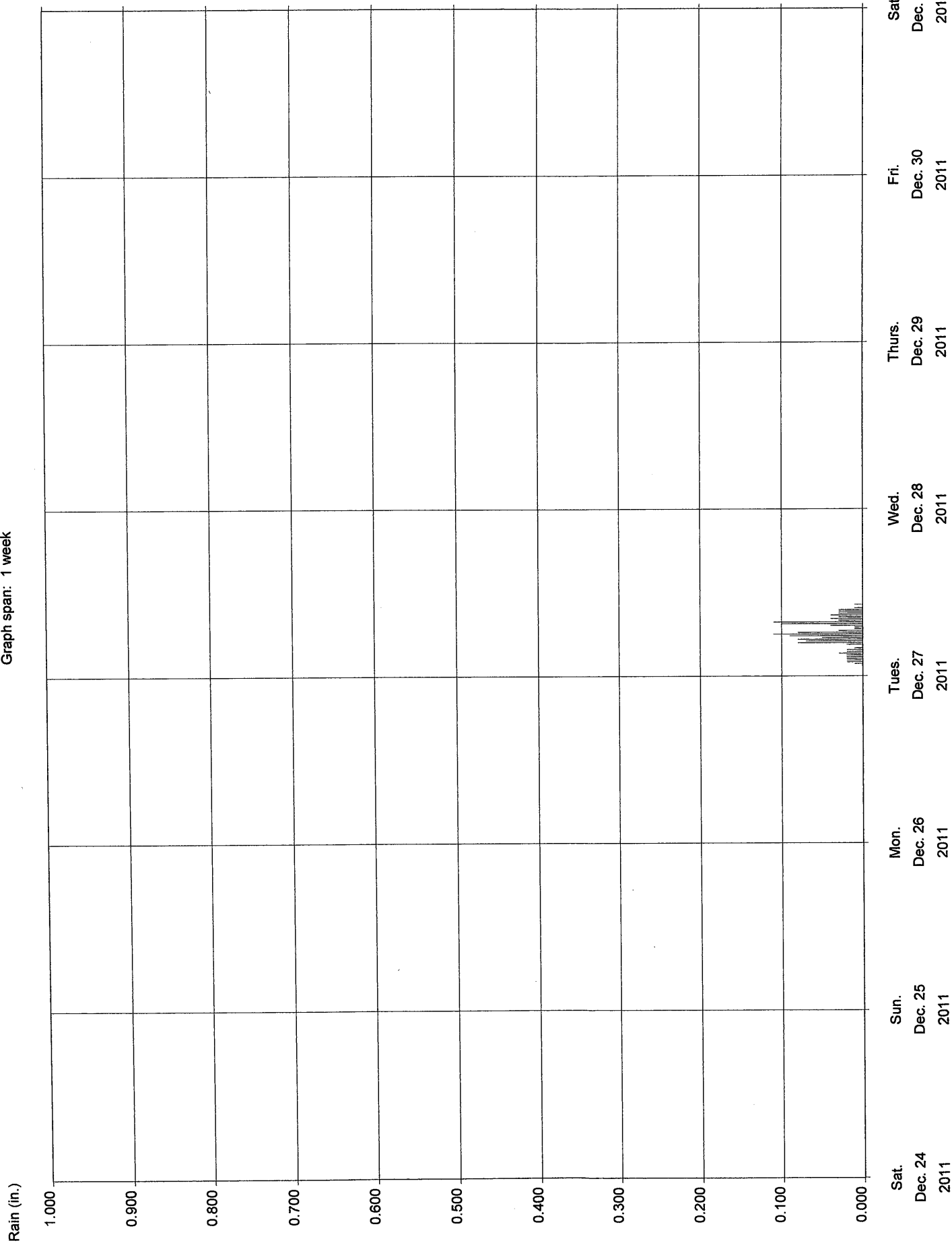
Flow (mgd)



Rain 6-098D 12-27-11

Site Id: 00000000 File name: 00000000.000

Graph span: 1 week



Taylors Flow Meter Data Sheet

MH 6-164
containing
April 15, 2011

System Data

Meter Location: <u>6-164</u>	Pipe Size (in.): <u>8-Inch</u>
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Inch-Miles of Sewer Upstream of Meter						
Pipe Size (in.)	Length (ft.)	Inch-Miles		Pipe Size (in.)	Length (ft.)	Inch-Miles
8	2,958	4.48		24		0.00
10		0.00		27		0.00
12		0.00		30		0.00
14		0.00		36		0.00
15		0.00		42		0.00
16		0.00		48		0.00
18		0.00		54		0.00
20		0.00		60		0.00
21		0.00		72		0.00
Total =						4.48

Dry Weather Flow

<p>Average Daily Flow calculated from the following dates:</p> <p>From: <u>04/24/11</u></p> <p>To: <u>04/29/11</u></p>	<p>Avg. Daily Flowrate = <u>4,277</u> gpd</p> <p>Avg. Flow Depth = <u>0.300</u> inches</p> <p>Peak Hourly Flowrate = <u>37,080</u> gpd</p> <p>Peak Factor = <u>8.67</u></p>
--	---

Notes: _____

Completed By: EC McAllister

Date: 7-31-13

- computer calculated (formula)

Taylor's Flow Meter Data Sheet

Rainfall and I/I Event Duration

Rainfall:	Start: <u>4/15/11 21:15</u>	End: <u>4/16/11 12:30</u>
Max. 24-hour Total:	<u>1.46</u> in.	Storm Total: <u>1.46</u> in.
I/I Event:	Start: <u>4/15/11 20:30</u>	End: <u>4/17/11 0:00</u>

Dates and times that rainfall and I/I begin and end.

Wet Weather Event - I/I Analysis

Peak Flow Depth = <u>0.5</u> inches	I/I Event Duration = <u>28</u> hours
<input type="checkbox"/> Manhole Surcharged (Level exceeded pipe dia.)	I/I Volume = <u>2,032</u> gallons
Peak Hourly Flowrate = <u>12,297</u> gpd	<u>Inflow and Infiltration Breakdown (optional)</u>
Avg. Dry Weather Flow = <u>4,277</u> gpd	Dry Weather Infiltration = <u>360</u> gpd
Peak Factor = <u>2.88</u>	Rainfall Induced Infiltration = <u>1,300</u> gpd
Avg. Wet Weather Flow = <u>5,659</u> gpd	Total Infiltration = <u>1,660</u> gpd
Avg. I/I Flow = <u>1,742</u> gpd	Infiltration Rate = <u>371</u> gpd/idm
Inch-Diameter Miles = <u>4.48</u> idm	Inflow = <u>82</u> gpd
I/I Rate = <u>389</u> gpd/idm	Inflow Rate = <u>18</u> gpd/idm

Notes: _____

Completed By E C Melt

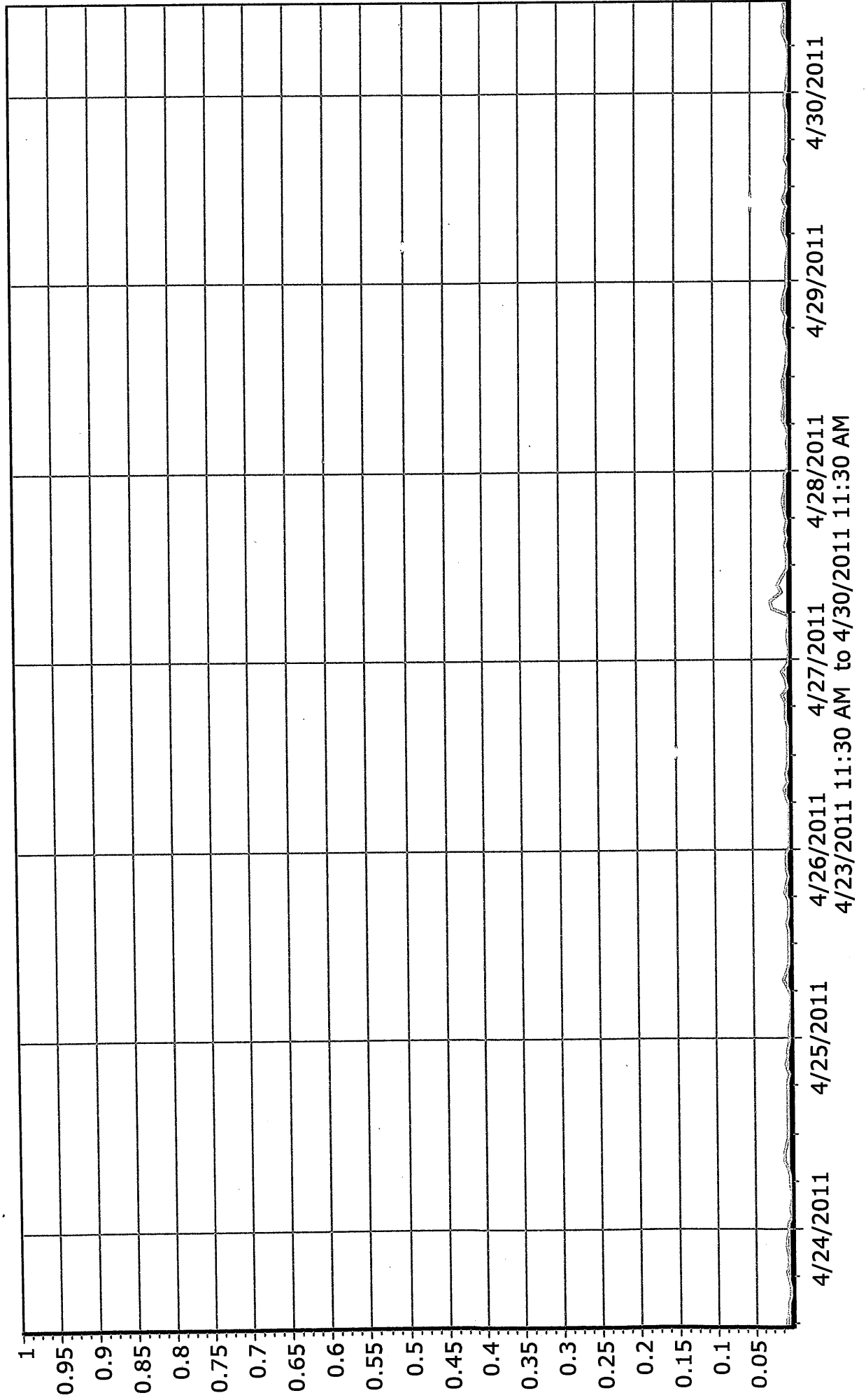
Date: 7-31-13

- computer calculated (formula)

6-164

Dry Weather Flow April 2011

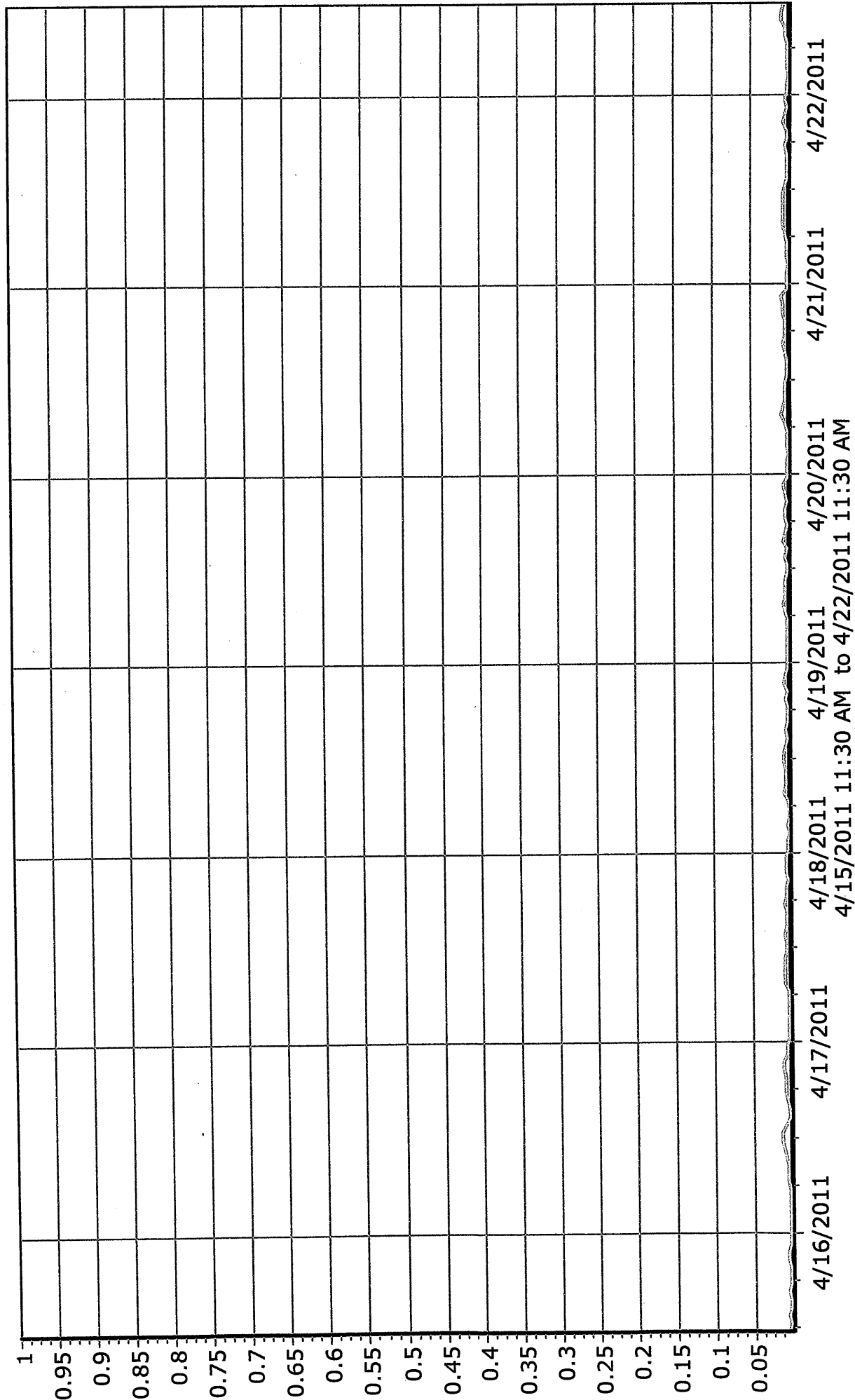
Flow (mgd)



6-164

Wet Weather Event 4-16-11

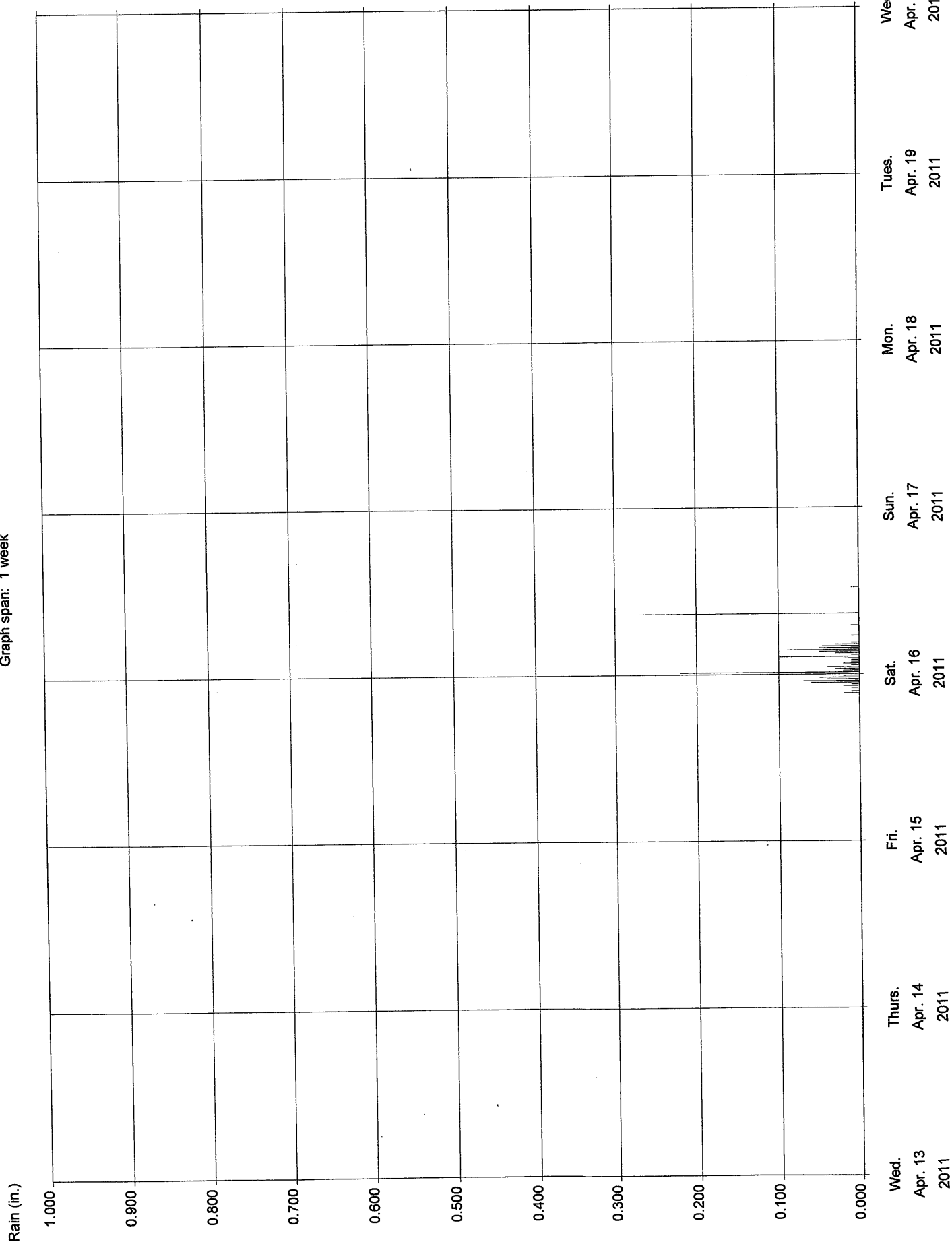
Flow (mgd)



6-164 Rain 4-16-11

Site Id: 00000000 File name: 00000000.000

Graph span: 1 week



Taylors Flow Meter Data Sheet

M14 6-164
Rd All Event 2
May 22, 2011

System Data

Meter Location: <u>6-164</u>	Pipe Size (in.): <u>8-Inch</u>
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Inch-Miles of Sewer Upstream of Meter							
Pipe Size (in.)	Length (ft.)	Inch-Miles		Pipe Size (in.)	Length (ft.)	Inch-Miles	
8	2,958	4.48		24		0.00	
10		0.00		27		0.00	
12		0.00		30		0.00	
14		0.00		36		0.00	
15		0.00		42		0.00	
16		0.00		48		0.00	
18		0.00		54		0.00	
20		0.00		60		0.00	
21		0.00		72		0.00	
Total =						4.48	

Dry Weather Flow

<p>Average Daily Flow calculated from the following dates:</p> <p>From: <u>04/24/11</u></p> <p>To: <u>04/29/11</u></p>	<p>Avg. Daily Flowrate = <u>4,277</u> gpd</p> <p>Avg. Flow Depth = <u>0.300</u> inches</p> <p>Peak Hourly Flowrate = <u>37,080</u> gpd</p> <p>Peak Factor = <u>8.67</u></p>
--	---

Notes: _____

Completed By: _____

Date: _____

- computer calculated (formula)

Taylor's Flow Meter Data Sheet

Rainfall and I/I Event Duration

Rainfall: Start: 5/26/11 18:45 End: 5/27/11 12:15

Max. 24-hour Total: 1.14 in. Storm Total: 1.14 in.

I/I Event: Start: 5/26/11 8:00 AM End: 5/27/11 8:00 AM
4/15/11 20:30 4/17/11 0:00

Dates and times that rainfall and I/I begin and end.

Wet Weather Event - I/I Analysis

Peak Flow Depth = 0.4 inches

I/I Event Duration = 30 hours

☐ Manhole Surcharged (Level exceeded pipe dia.)

I/I Volume = -829 gallons

Peak Hourly Flowrate = 8,150 gpd

Inflow and Infiltration Breakdown (optional)

Avg. Dry Weather Flow = 4,277 gpd

Dry Weather Infiltration = 360 gpd

Peak Factor = 1.91

Rainfall Induced Infiltration = 0 gpd

Avg. Wet Weather Flow = 3,254 gpd

Total Infiltration = 360 gpd

Avg. I/I Flow = -663 gpd

Infiltration Rate = 80 gpd/idm

Inch-Diameter Miles = 4.48 idm

Inflow = -1,023 gpd

I/I Rate = -148 gpd/idm

Inflow Rate = -228 gpd/idm

Notes: _____

Completed By

EC Hall

Date:

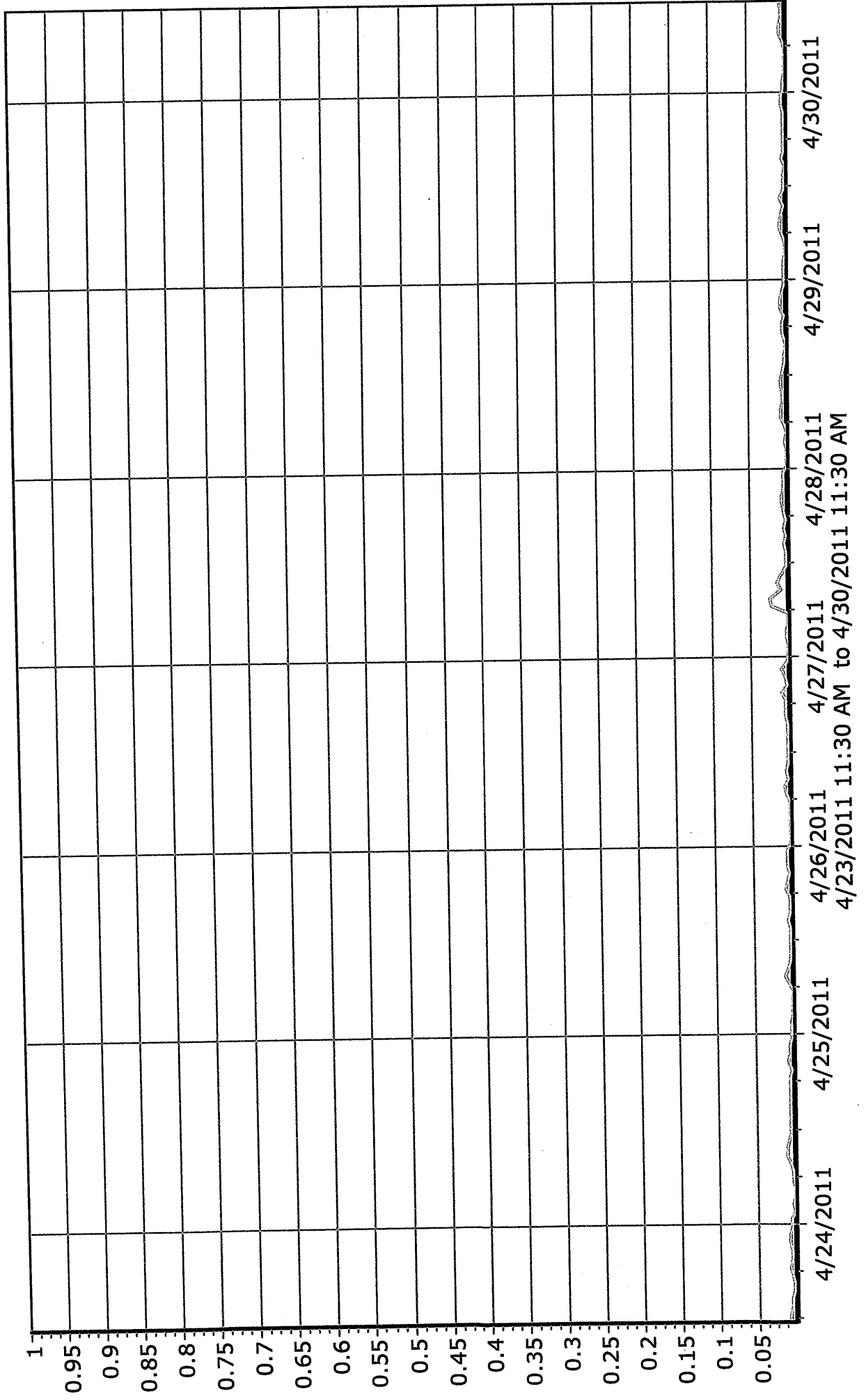
7-31-13

- computer calculated (formula)

6-164

Dry Weather Flow April 2011

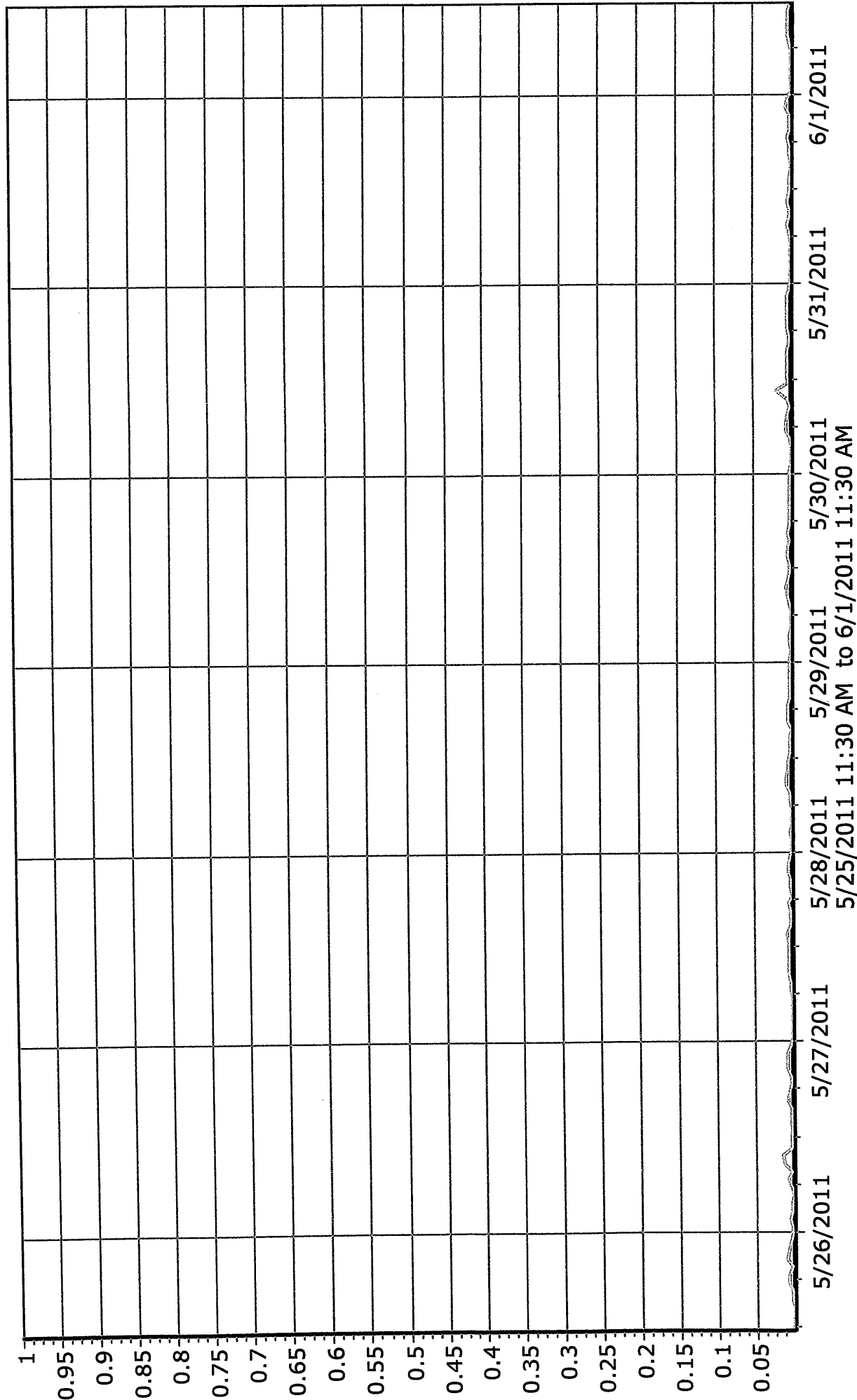
— Flow (mgd)



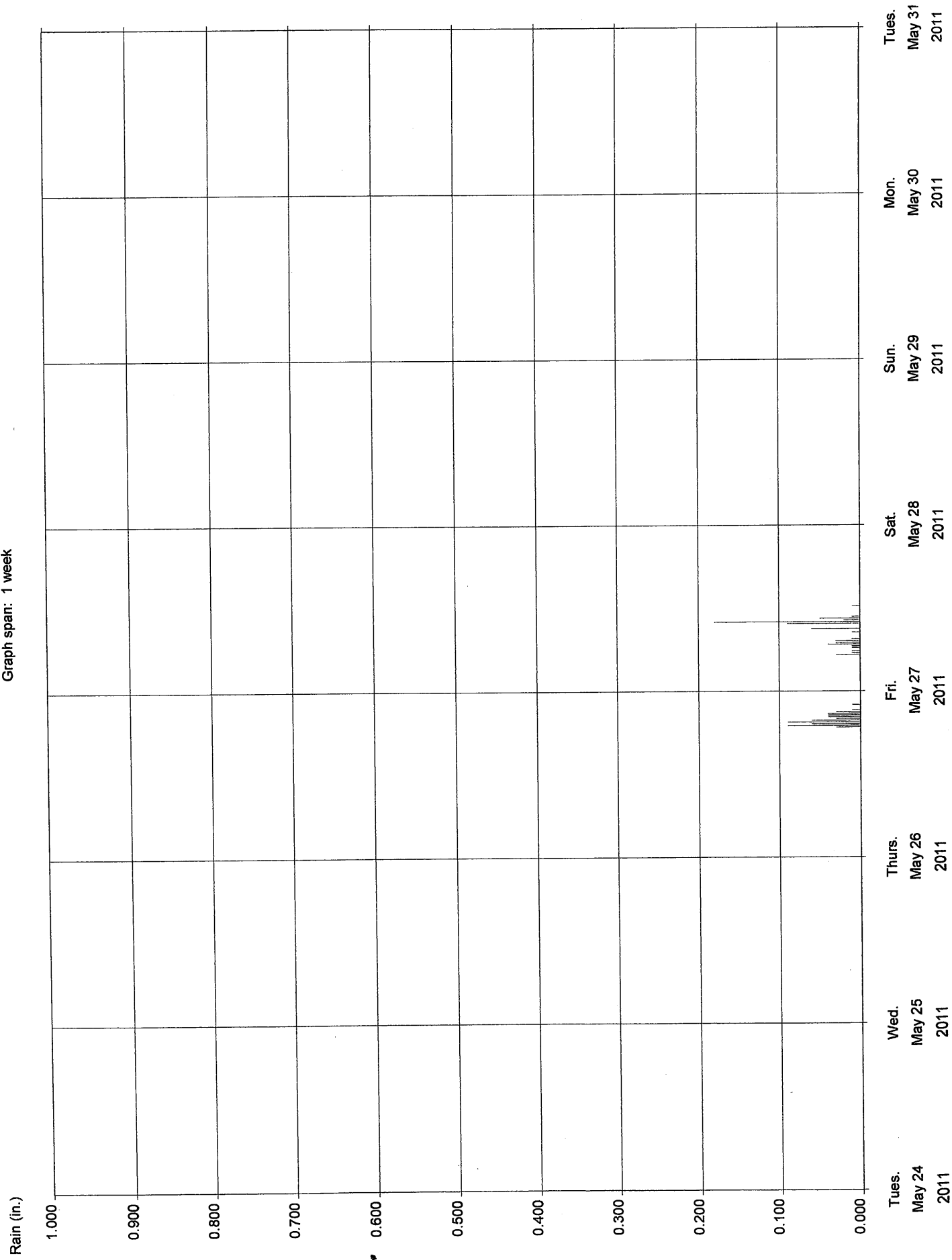
6-164

Wet Weather Event 5-26-11 to 5-27-11

Flow (mgd)



Graph span: 1 week



Taylors Flow Meter Data Sheet

MH 6-164
Point #11 Port 3
July 25, 2011

System Data

Meter Location: <u>6-164</u>	Pipe Size (in.): <u>8-Inch</u>
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Inch-Miles of Sewer Upstream of Meter						
Pipe Size (in.)	Length (ft.)	Inch-Miles		Pipe Size (in.)	Length (ft.)	Inch-Miles
8	2,958	4.48		24		0.00
10		0.00		27		0.00
12		0.00		30		0.00
14		0.00		36		0.00
15		0.00		42		0.00
16		0.00		48		0.00
18		0.00		54		0.00
20		0.00		60		0.00
21		0.00		72		0.00
Total =						4.48

Dry Weather Flow

<p>Average Daily Flow calculated from the following dates:</p> <p>From: <u>06/26/11</u></p> <p>To: <u>07/01/11</u></p>	<p>Avg. Daily Flowrate = <u>3,197</u> gpd</p> <p>Avg. Flow Depth = <u>0.200</u> inches</p> <p>Peak Hourly Flowrate = <u>10,584</u> gpd</p> <p>Peak Factor = <u>3.31</u></p>
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Notes: _____

Completed By: _____

E. C. Miller

Date: _____

7-31-13

- computer calculated (formula)

Taylors Flow Meter Data Sheet

Rainfall and I/I Event Duration

Rainfall: Start: 7/25/11 14:15 End: 7/25/11 20:45

Max. 24-hour Total: 1.12 in. Storm Total: 1.12 in.

I/I Event: Start: 7/25/11 13:30 End: 7/27/11 0:00

Dates and times that rainfall and I/I begin and end.

Wet Weather Event - I/I Analysis

Peak Flow Depth = 0.3 inches

I/I Event Duration = 34 hours

☐ Manhole Surcharged (Level exceeded pipe dia.)

I/I Volume = -1,224 gallons

Peak Hourly Flowrate = 7,070 gpd

Inflow and Infiltration Breakdown (optional)

Avg. Dry Weather Flow = 4,277 gpd

Dry Weather Infiltration = 749 gpd

Peak Factor = 1.65

Rainfall Induced Infiltration = 0 gpd

Avg. Wet Weather Flow = 2,664 gpd

Total Infiltration = 749 gpd

Avg. I/I Flow = -864 gpd

Infiltration Rate = 167 gpd/ldm

Inch-Diameter Miles = 4.48 idm

Inflow = -1,613 gpd

I/I Rate = -193 gpd/ldm

Inflow Rate = -360 gpd/ldm

Notes:

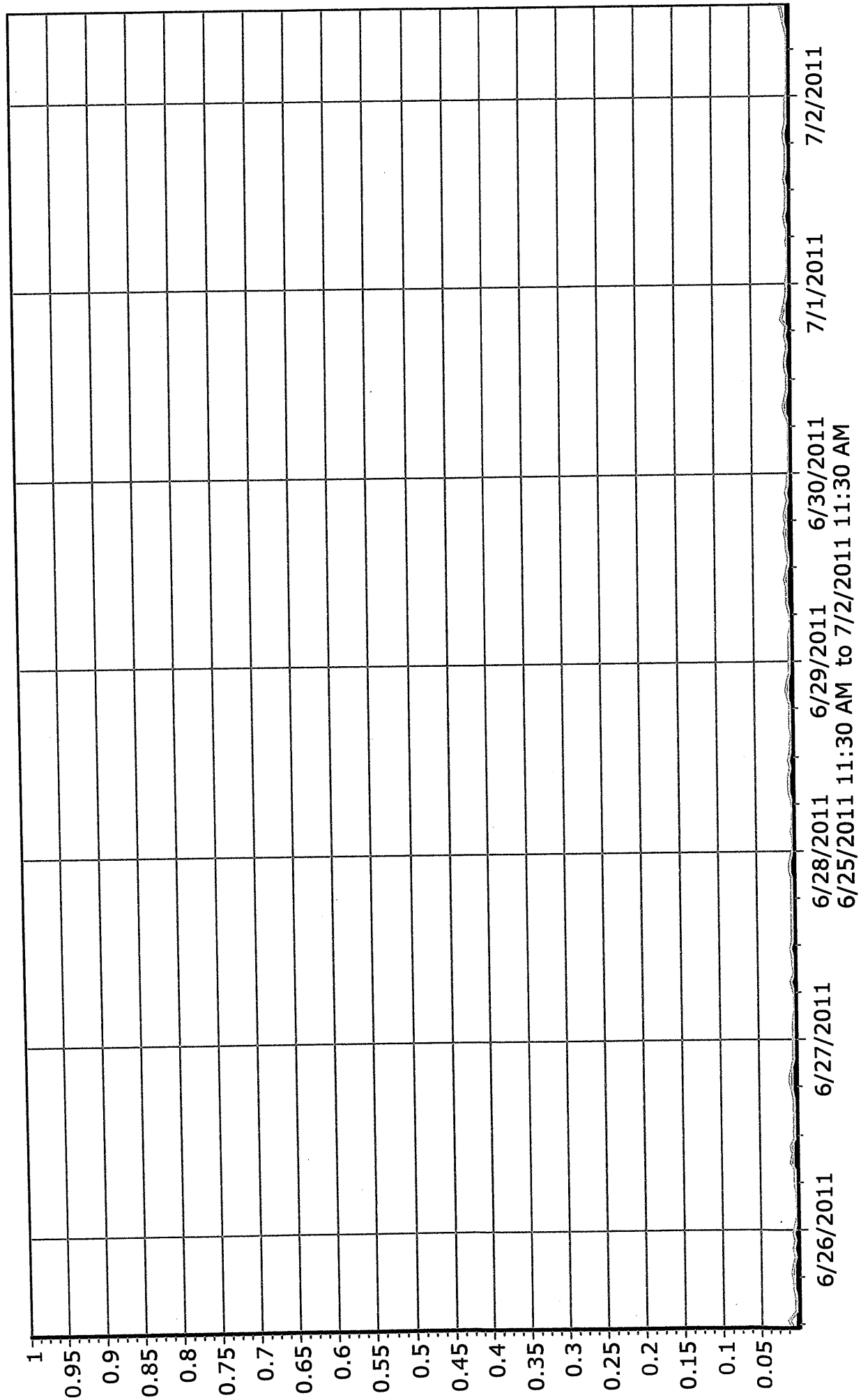
Completed By EC [Signature]

Date: 7-31-13

- computer calculated (formula)

Dry Weather Flow June 2011

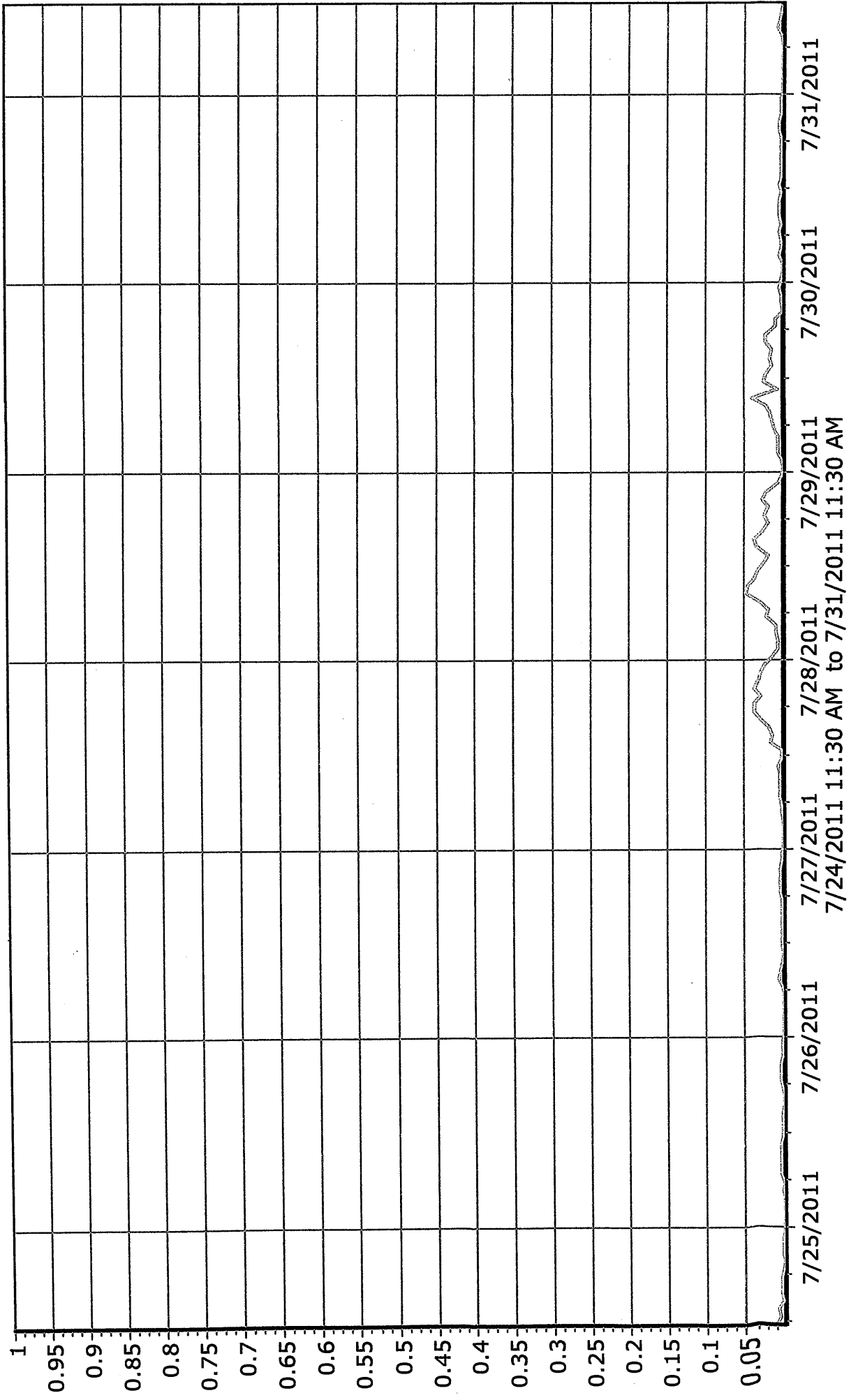
Flow (mgd)



6-164

Wet Weather Event 7-25-11

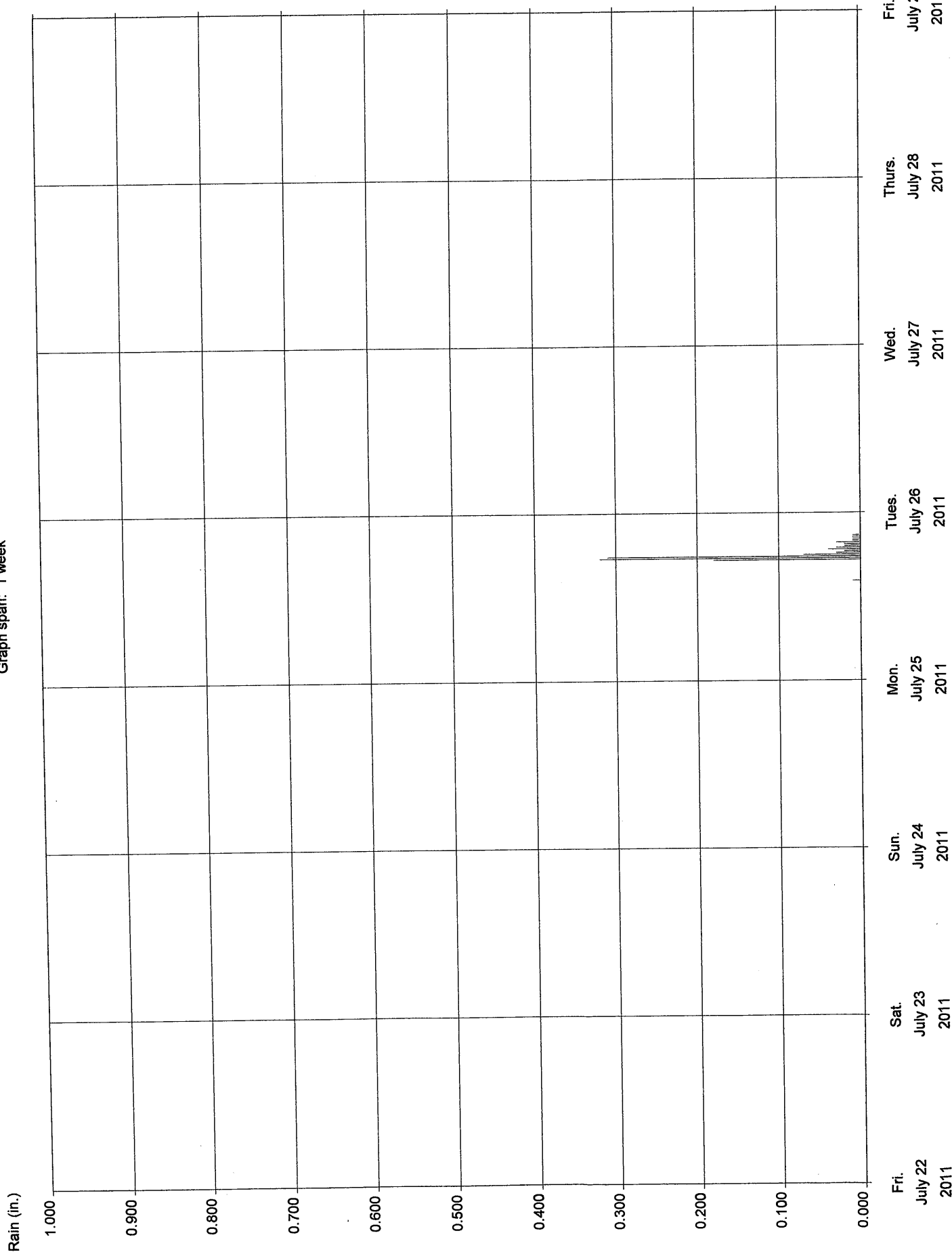
— Flow (mgd)



6-164 Rain 7-25-11

Site Id: 00000000 File name: 00000000.000

Graph span: 1 week



Taylor's Sewer District Flow Meter Data Sheet

Dry Weather
Rainfall and I/I Event Duration

MH 7-339
Re. All Event 1
March 2, 2012

Dry Weather
Rainfall: Start: 4-8-12 End: 4-13-12
Max 24-hour Total: _____ in. Storm Total: _____ in.
I/I Event: Start: _____ End: _____
Dates and times that rainfall and I/I begin and end.

~~Wet~~ Weather Event - I/I Analysis

Peak Flow Depth = 4.8 inches I/I Event Duration = _____ hours
☐ Manhole Surcharged (Level exceeded pipe dia.) I/I Volume = _____ 0 gallons
Peak Hourly Flowrate = 495,000 gpd Inflow and Infiltration Breakdown (optional)
Avg. Dry Weather Flow = 128,000 gpd Dry Weather Infiltration = 35,000 gpd
Peak Factor = _____ 0.00 Rainfall Induced Infiltration = _____ gpd
Avg. Wet Weather Flow = _____ gpd Total Infiltration = _____ 0 gpd
Avg. I/I Flow = _____ 0 gpd Infiltration Rate = _____ 0 gpd/idm
Inch-Diameter Miles = _____ idm Inflow = _____ 0 gpd
I/I Rate = _____ 0 gpd/idm Inflow Rate = _____ 0 gpd/idm

Notes: _____

Completed By E C M

Date: 7-31-12

- computer calculated (formula)

Taylors Sewer District Flow Meter Data Sheet

MH 7-339
Plan A/I Event 1
March 2012

Rainfall and I/I Event Duration

Rainfall:	Start: <u>3-2-12</u>	End: <u>3-8-12</u>
	Max. 24-hour Total: <u>1.8</u> in.	Storm Total: _____ in.
I/I Event:	Start: <u>3-2-12</u>	End: <u>3-5-12</u>

Dates and times that rainfall and I/I begin and end.

Wet Weather Event - I/I Analysis

Peak Flow Depth = <u>1.5</u> inches	I/I Event Duration = _____ hours
<input type="checkbox"/> Manhole Surcharged (Level exceeded pipe dia.)	I/I Volume = _____ 0 gallons
Peak Hourly Flowrate = <u>150,000</u> gpd	<u>Inflow and Infiltration Breakdown (optional)</u>
Avg. Dry Weather Flow = <u>126,000</u> gpd	Dry Weather Infiltration = _____ gpd
Peak Factor = <u>1.50</u>	Rainfall Induced Infiltration = _____ gpd
Avg. Wet Weather Flow = <u>60,000</u> gpd	Total Infiltration = _____ 0 gpd
Avg. I/I Flow = _____ 0 gpd	Infiltration Rate = _____ 0 gpd/idm
Inch-Diameter Miles = _____ idm	Inflow = _____ 0 gpd
I/I Rate = _____ 0 gpd/idm	Inflow Rate = _____ 0 gpd/idm

Notes: _____

Completed By ECTHLL

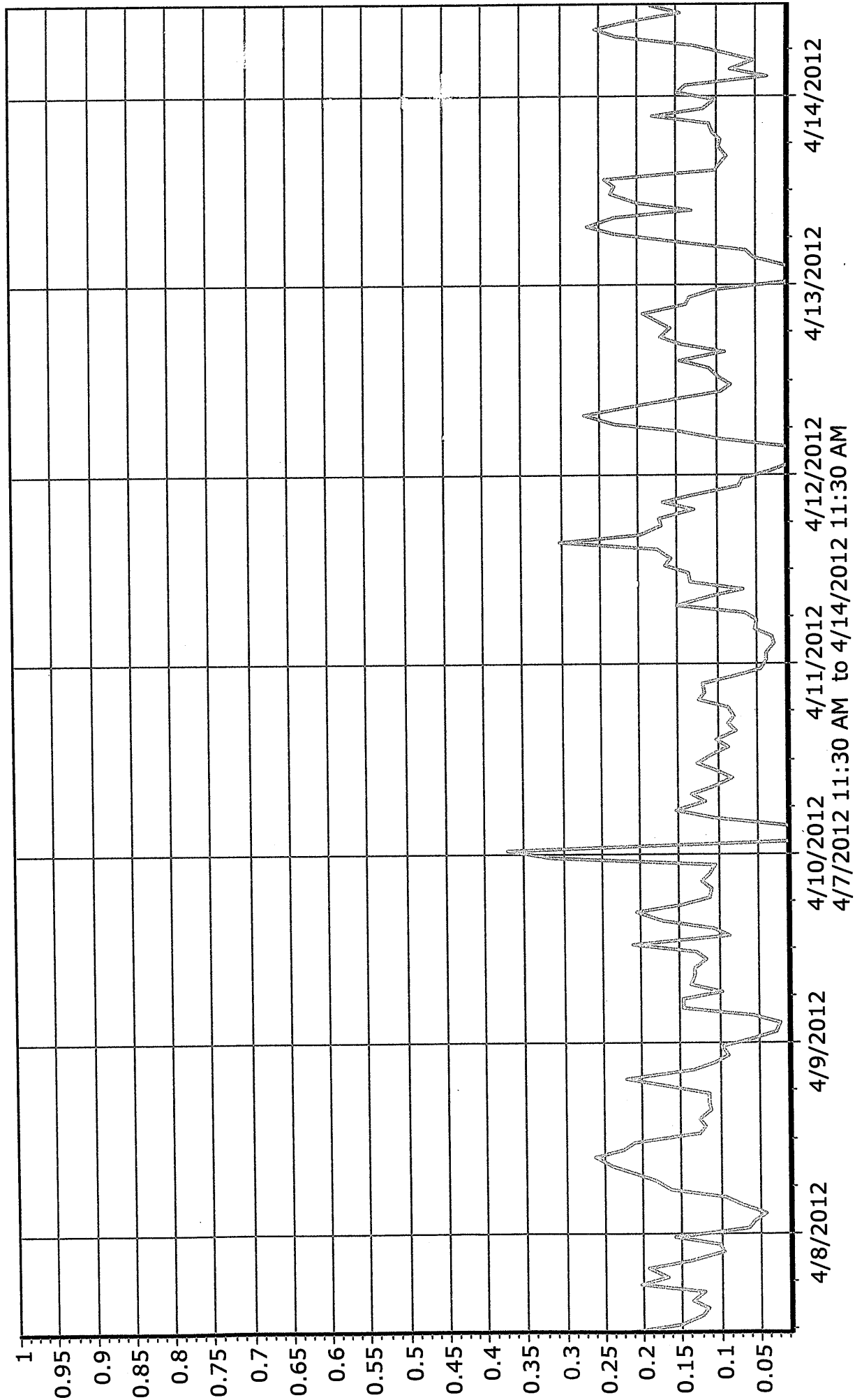
Date: 7-31-13

- computer calculated (formula)

7-339

Dry Weather Flow April. 2012

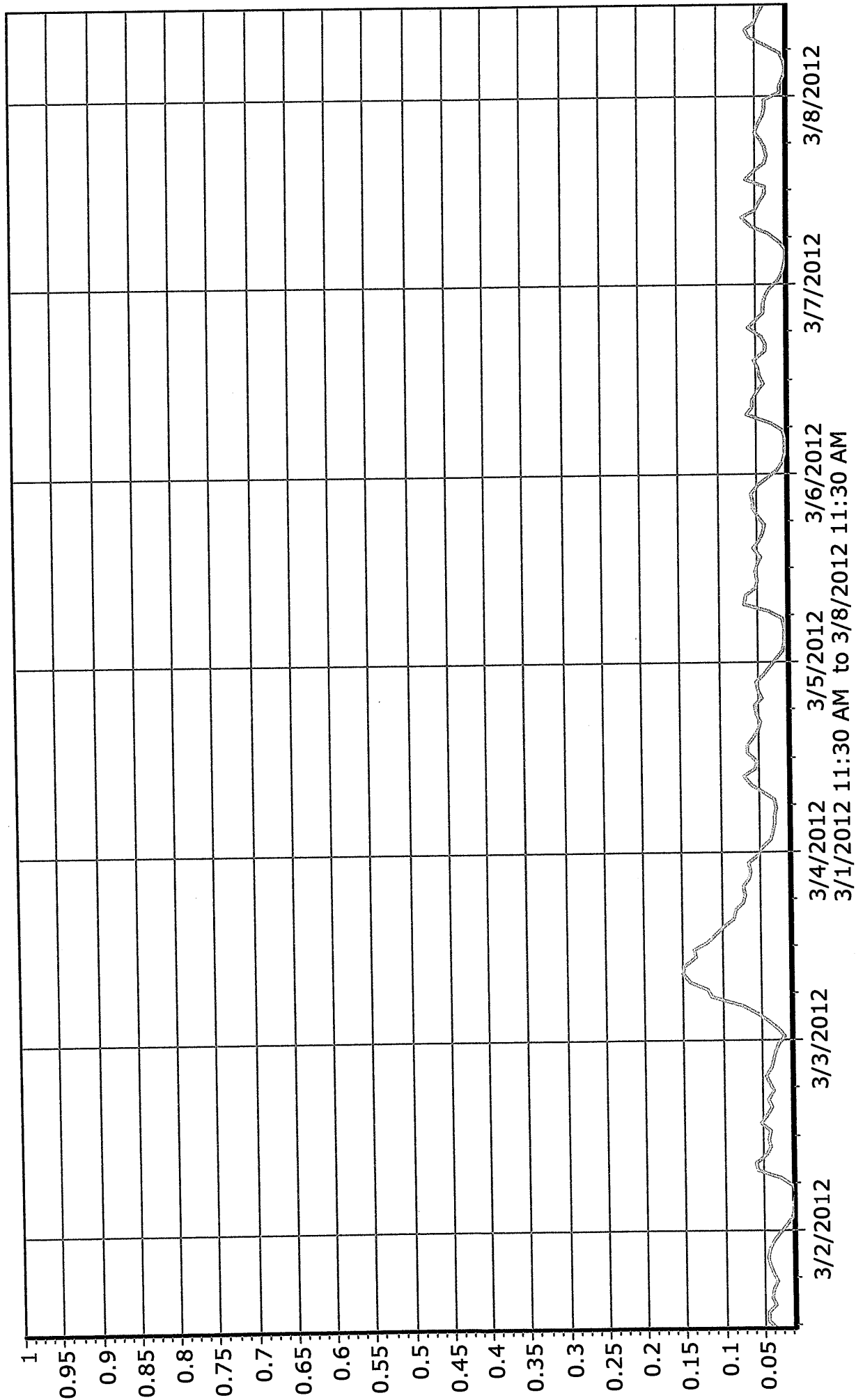
— Flow (mgd)



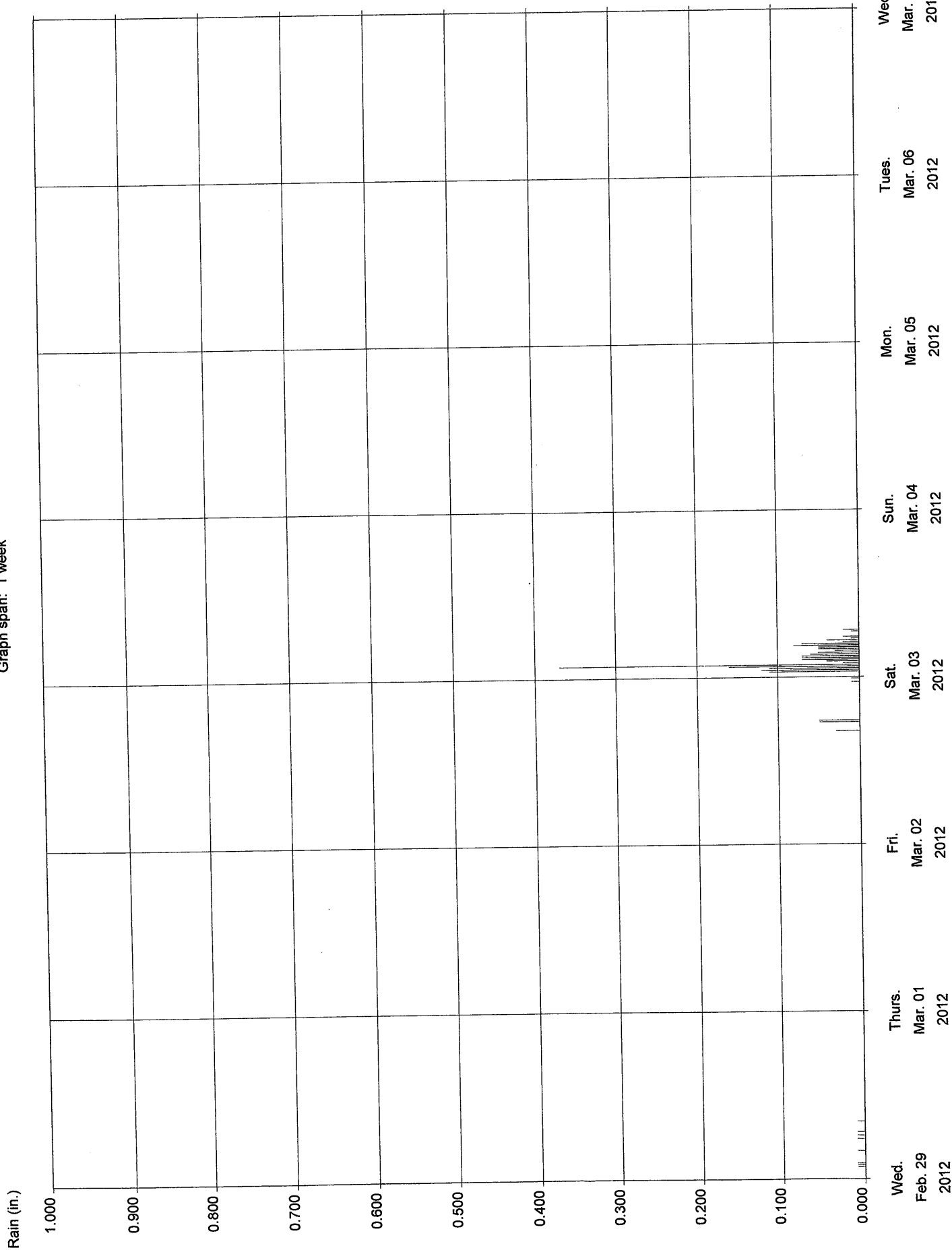
7-339

Wet Weather Event 3-2-12 to 3-3-12

— Flow (mgd)



Rain 7-339 3-2-12 to 3-3-12
 Site Id: 00000000 File name: 00000000.000
 Graph span: 1 week



Taylor's Sewer District Flow Meter Data Sheet

MH 7-339
Rainfall Event 2
March 30, 2012

Rainfall and I/I Event Duration

Rainfall:	Start: <u>3-30-12</u>	End: <u>3-31-12</u>
Max. 24-hour Total:	<u>1.83</u> in.	Storm Total: _____ in.
I/I Event:	Start: <u>3-30-12</u>	End: <u>4-1-12</u>

Dates and times that rainfall and I/I begin and end.

Wet Weather Event - I/I Analysis

Peak Flow Depth = <u>5.5</u> inches	I/I Event Duration = _____ hours
<input type="checkbox"/> Manhole Surcharged (Level exceeded pipe dia.)	I/I Volume = _____ 0 gallons
Peak Hourly Flowrate = <u>222,000</u> gpd	<u>Inflow and Infiltration Breakdown (optional)</u>
Avg. Dry Weather Flow = <u>14,000</u> gpd	Dry Weather Infiltration = _____ gpd
Peak Factor = <u>1.76</u>	Rainfall Induced Infiltration = _____ gpd
Avg. Wet Weather Flow = _____ gpd	Total Infiltration = _____ 0 gpd
Avg. I/I Flow = _____ 0 gpd	Infiltration Rate = _____ 0 gpd/idm
Inch-Diameter Miles = _____ idm	Inflow = _____ 0 gpd
I/I Rate = _____ 0 gpd/idm	Inflow Rate = _____ 0 gpd/idm

Notes: _____

Completed By EC [Signature]

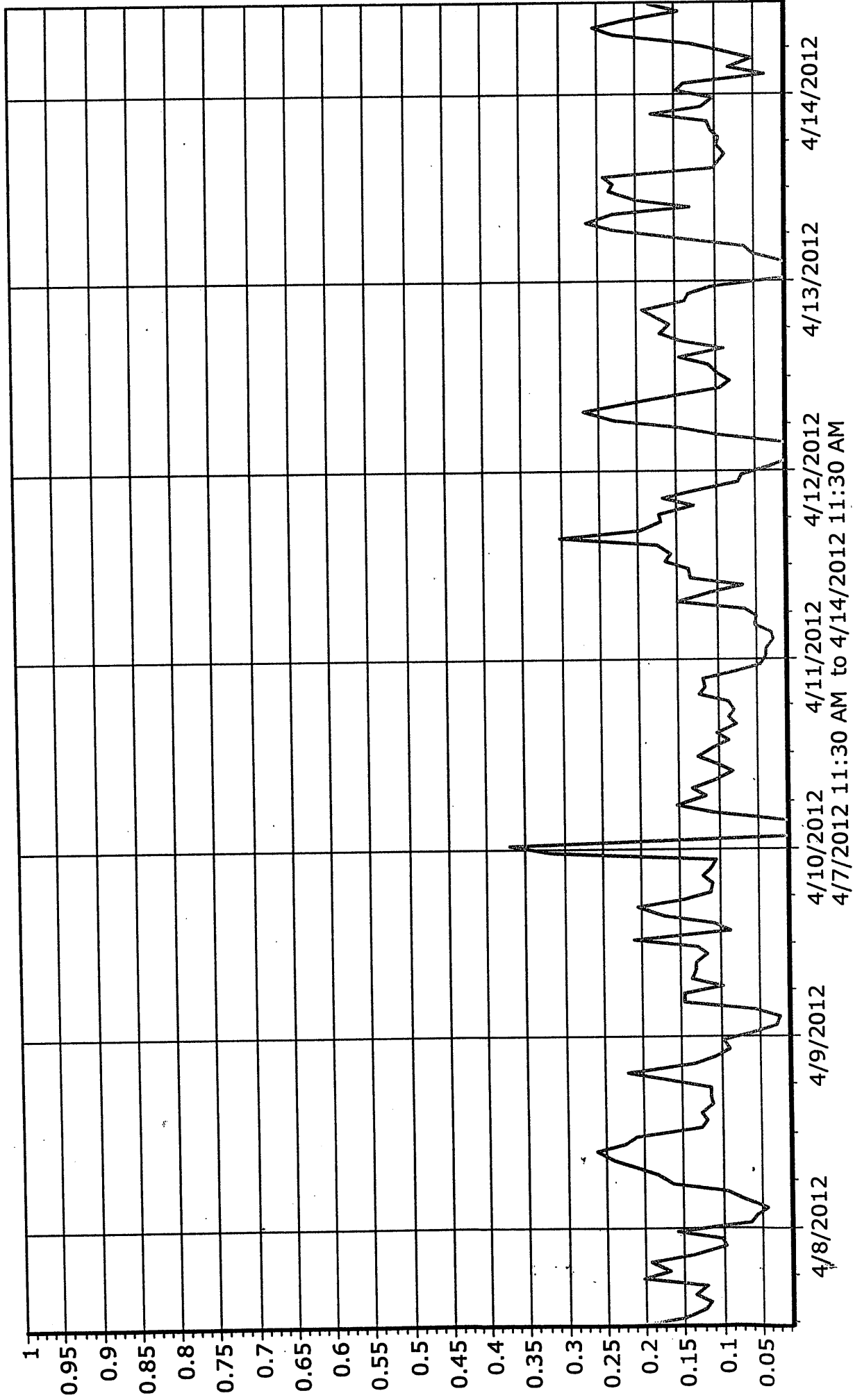
Date: 7-31-13

- computer calculated (formula)

7-339

Dry Weather Flow April. 2012

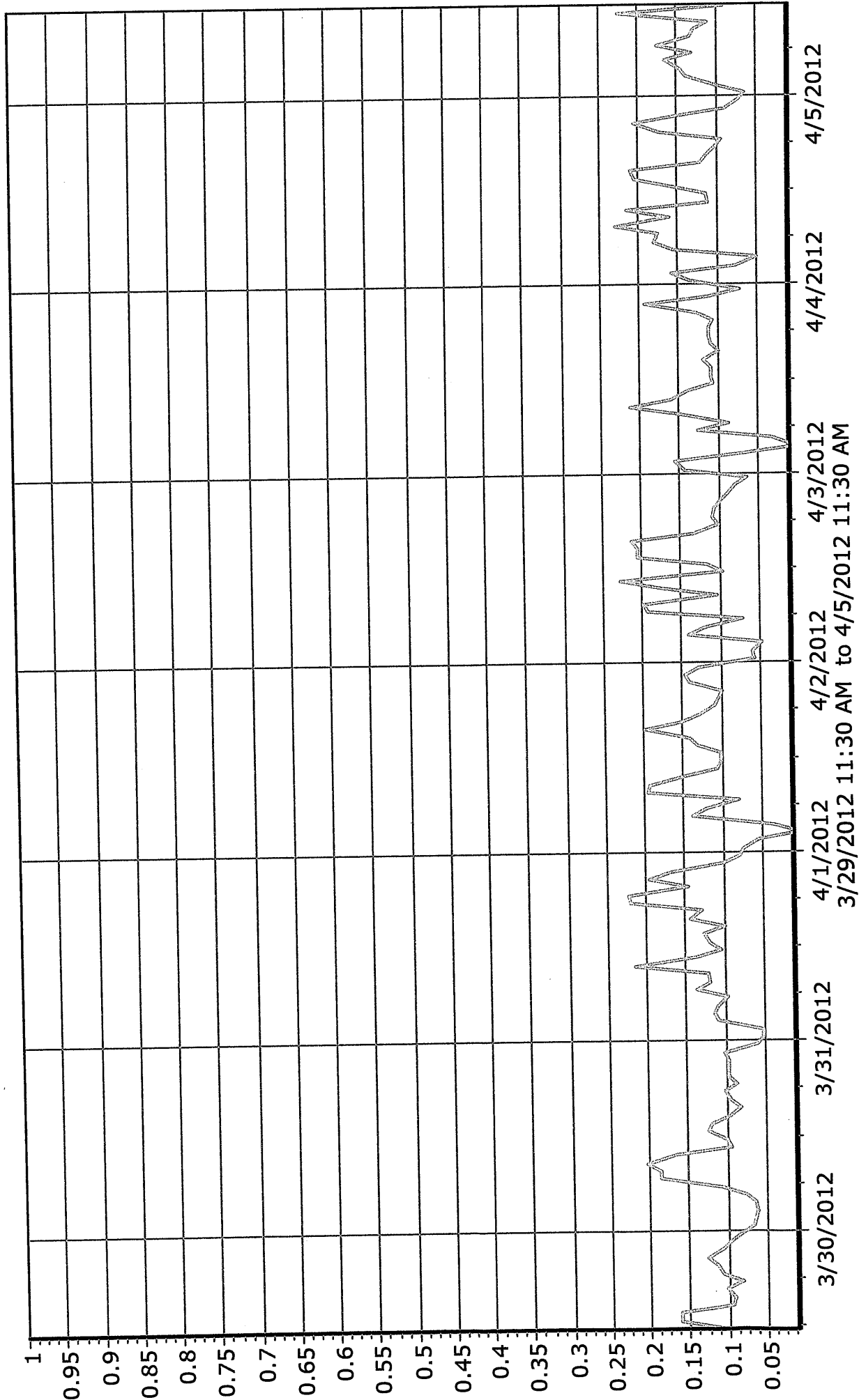
— Flow (mgd)



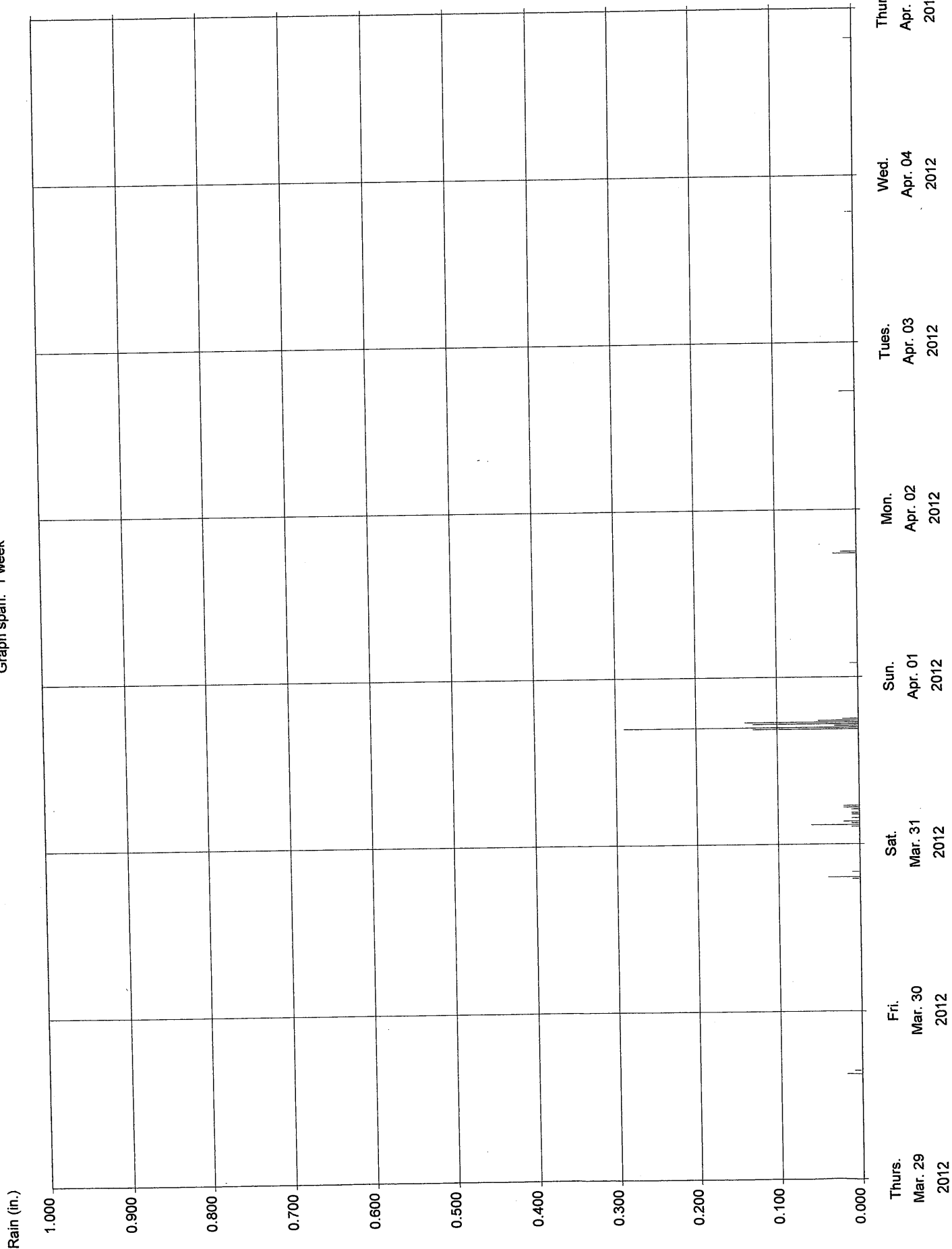
7-339

Wet Weather Event 3-30-12 to 3-31-12

— Flow (mgd)



Rain 7-339 3-30-12 to 3-31-12
 Site Id: 00000000 File name: 00000000.000
 Graph span: 1 week



Taylors Sewer District Flow Meter Data Sheet

MH 7-339
P. 11 Event 3
Apr 5, 2012

Rainfall and I/I Event Duration

Rainfall:	Start: <u>4-5-12</u>	End: <u>4-6-12</u>
	Max. 24-hour Total: <u>1.04</u> in.	Storm Total: _____ in.
I/I Event:	Start: <u>4-5-12</u>	End: <u>4-7-12</u>
Dates and times that rainfall and I/I begin and end.		

Wet Weather Event - I/I Analysis

Peak Flow Depth = _____ inches	I/I Event Duration = _____ hours
<input type="checkbox"/> Manhole Surcharged (Level exceeded pipe dia.)	I/I Volume = _____ 0 gallons
Peak Hourly Flowrate = <u>253,000</u> gpd	<u>Inflow and Infiltration Breakdown (optional)</u>
Avg. Dry Weather Flow = <u>128,000</u> gpd	Dry Weather Infiltration = _____ gpd
Peak Factor = <u>6.2</u>	Rainfall Induced Infiltration = _____ gpd
Avg. Wet Weather Flow = <u>151,000</u> gpd	Total Infiltration = _____ 0 gpd
Avg. I/I Flow = _____ 0 gpd	Infiltration Rate = _____ 0 gpd/idm
Inch-Diameter Miles = _____ idm	Inflow = _____ 0 gpd
I/I Rate = _____ 0 gpd/idm	Inflow Rate = _____ 0 gpd/idm

Notes: _____

Completed By _____

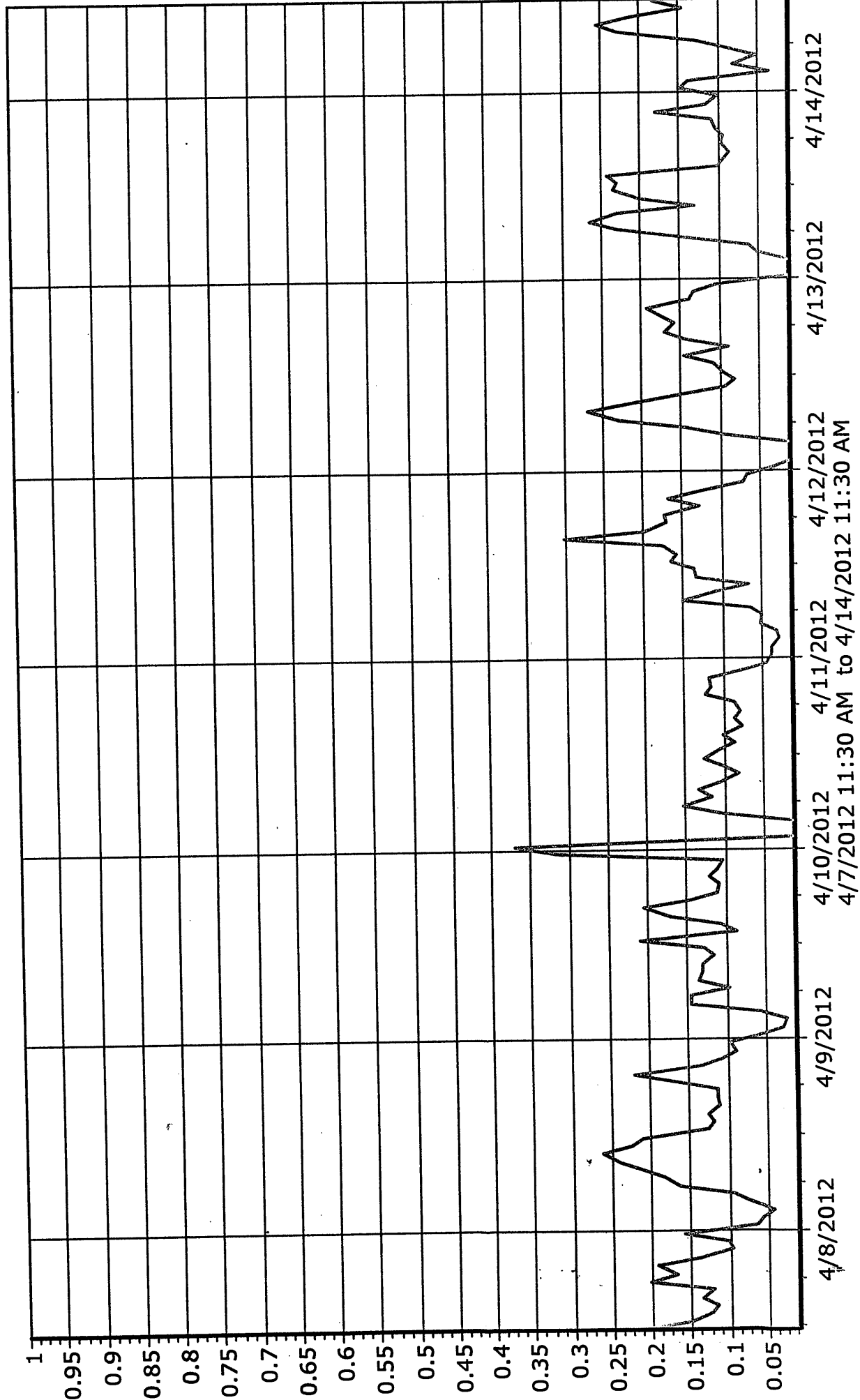
Date: 7-31-13

- computer calculated (formula)

7-339

Dry Weather Flow April. 2012

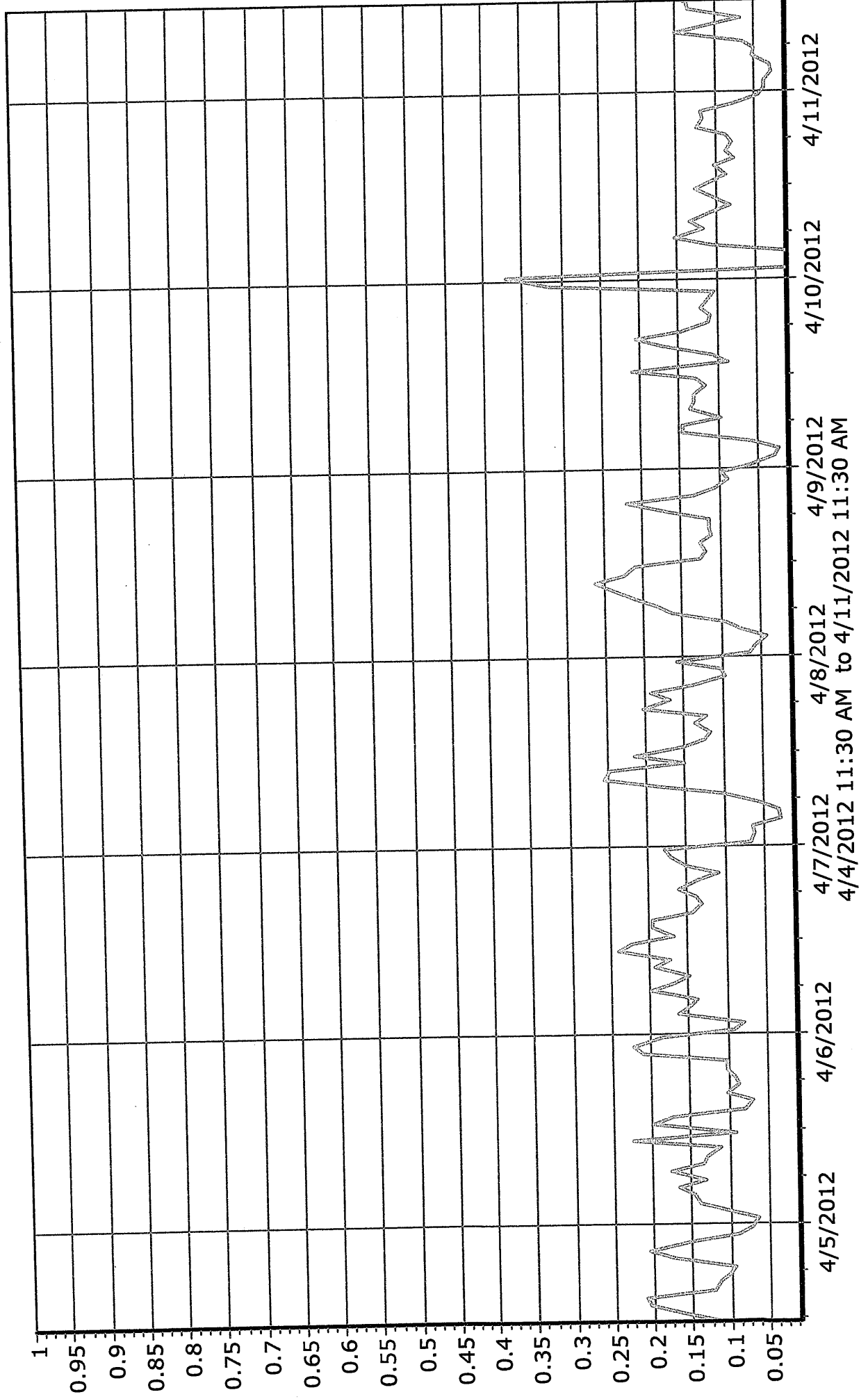
— Flow (mgd)



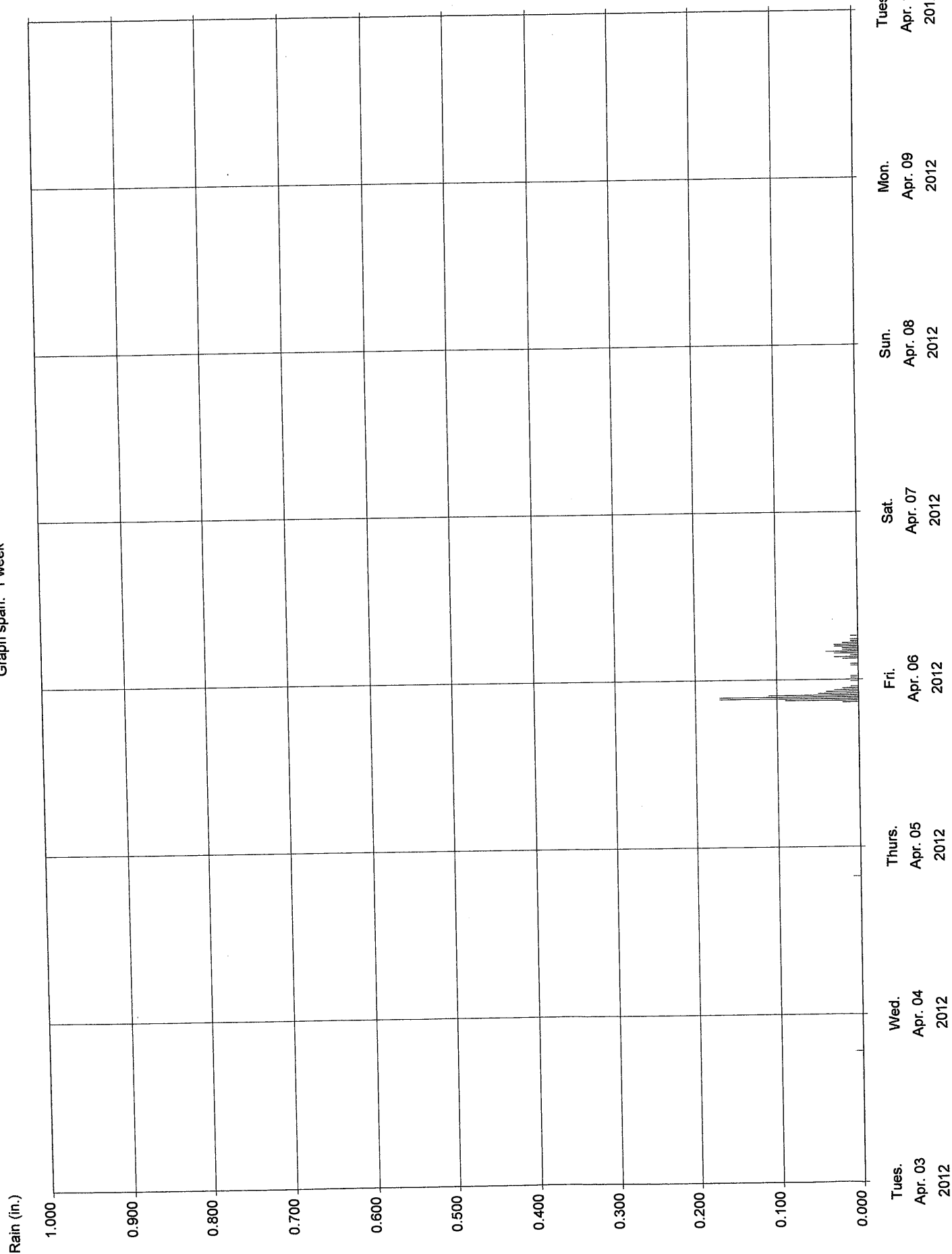
7-339

Wet Weather Event 4-5-12 to 4-6-12

Flow (mgd)



Rain 7-339 4-5-12 to 4-6-12
Site Id: 00000000 File name: 00000000.000
Graph span: 1 week



Taylors Flow Meter Data Sheet

MH 7-511
Lambert Grant 1
March 12, 2012

System Data

Meter Location: <u>7-511</u>	Pipe Size (in.): <u>8-Inch</u>
------------------------------	--------------------------------

Inch-Miles of Sewer Upstream of Meter						
Pipe Size (in.)	Length (ft.)	Inch-Miles		Pipe Size (in.)	Length (ft.)	Inch-Miles
8	23,045	34.92		24		0.00
10		0.00		27		0.00
12		0.00		30		0.00
14		0.00		36		0.00
15		0.00		42		0.00
16		0.00		48		0.00
18		0.00		54		0.00
20		0.00		60		0.00
21		0.00		72		0.00
Total =						34.92

Dry Weather Flow

<p>Average Daily Flow calculated from the following dates:</p> <p>From: <u>04/08/12</u></p> <p>To: <u>04/13/12</u></p>	<p>Avg. Daily Flowrate = <u>88,000</u> gpd</p> <p>Avg. Flow Depth = <u>1.500</u> inches</p> <p>Peak Hourly Flowrate = <u>205,000</u> gpd</p> <p>Peak Factor = <u>2.33</u></p>
--	---

Notes: _____

Completed By: _____

EC JLM

Date: _____

7-31-13

- computer calculated (formula)

Taylor's Flow Meter Data Sheet

Rainfall and I/I Event Duration

Rainfall: Start: 3/2/12 16:15 End: 3/3/12 6:45

Max. 24-hour Total: 1.80 in. Storm Total: 1.8 in.

I/I Event: Start: 3/2/12 15:15 End: 3/4/12 3:00

Dates and times that rainfall and I/I begin and end.

Wet Weather Event - I/I Analysis

Peak Flow Depth = 2.5 inches

I/I Event Duration = 34 hours

☐ Manhole Surcharged (Level exceeded pipe dia.)

I/I Volume = 79,333 gallons

Peak Hourly Flowrate = 244,000 gpd

Inflow and Infiltration Breakdown (optional)

Avg. Dry Weather Flow = 88,000 gpd

Dry Weather Infiltration = 20,000 gpd

Peak Factor = 2.77

Rainfall Induced Infiltration = 36,000 gpd

Avg. Wet Weather Flow = 124,000 gpd

Total Infiltration = 56,000 gpd

Avg. I/I Flow = 56,000 gpd

Infiltration Rate = 1,604 gpd/idm

Inch-Diameter Miles = 34.92 idm

Inflow = 0 gpd

I/I Rate = 1,604 gpd/idm

Inflow Rate = 0 gpd/idm

Notes:

Completed By

EC MIA

Date:

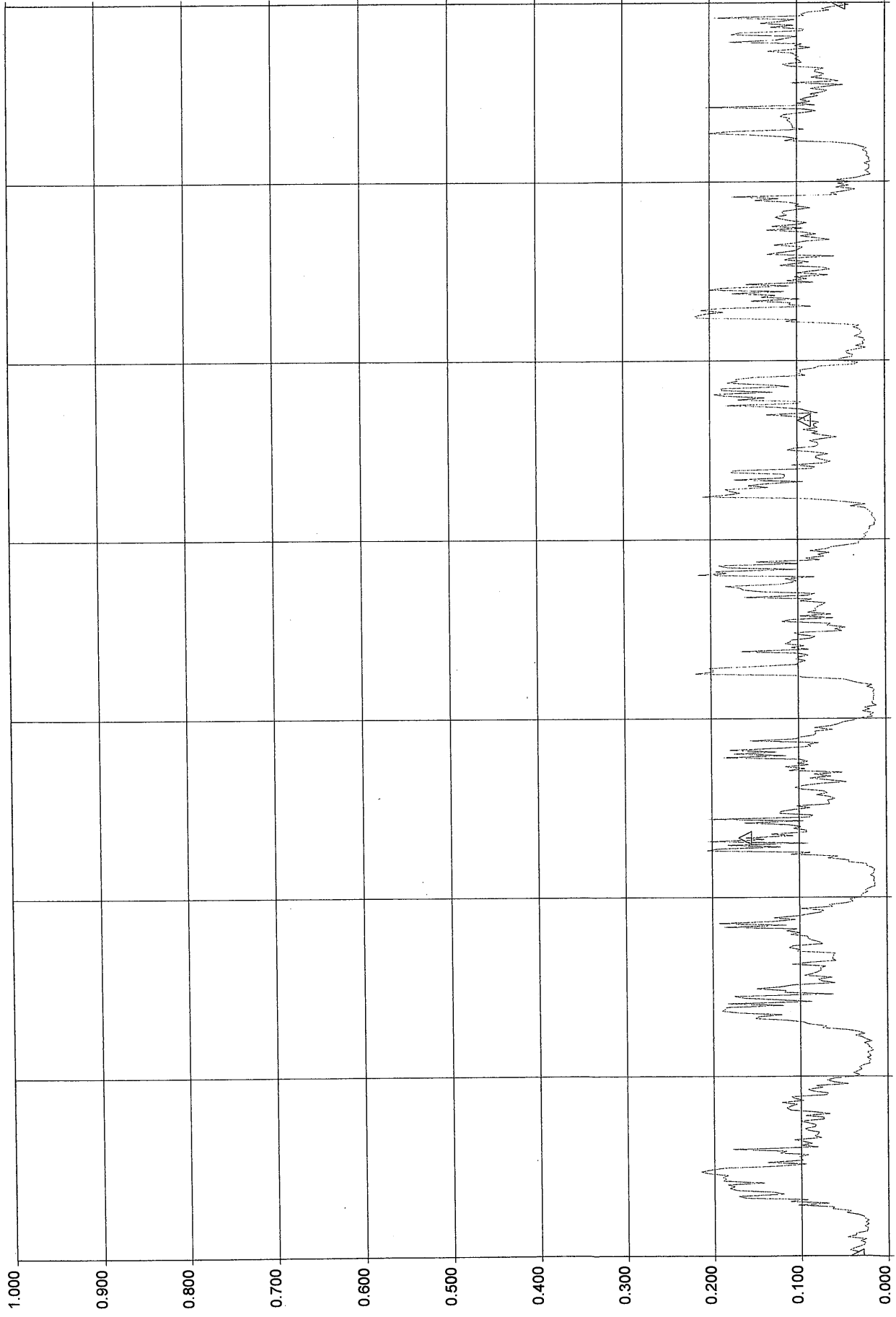
7-31-13

- computer calculated (formula)

Soccer Field Dry Weather Flow April 2012
Site Id: 00007511 File name: 00007511.000

Graph span: 1 week

△ Flow 1 (mgd)

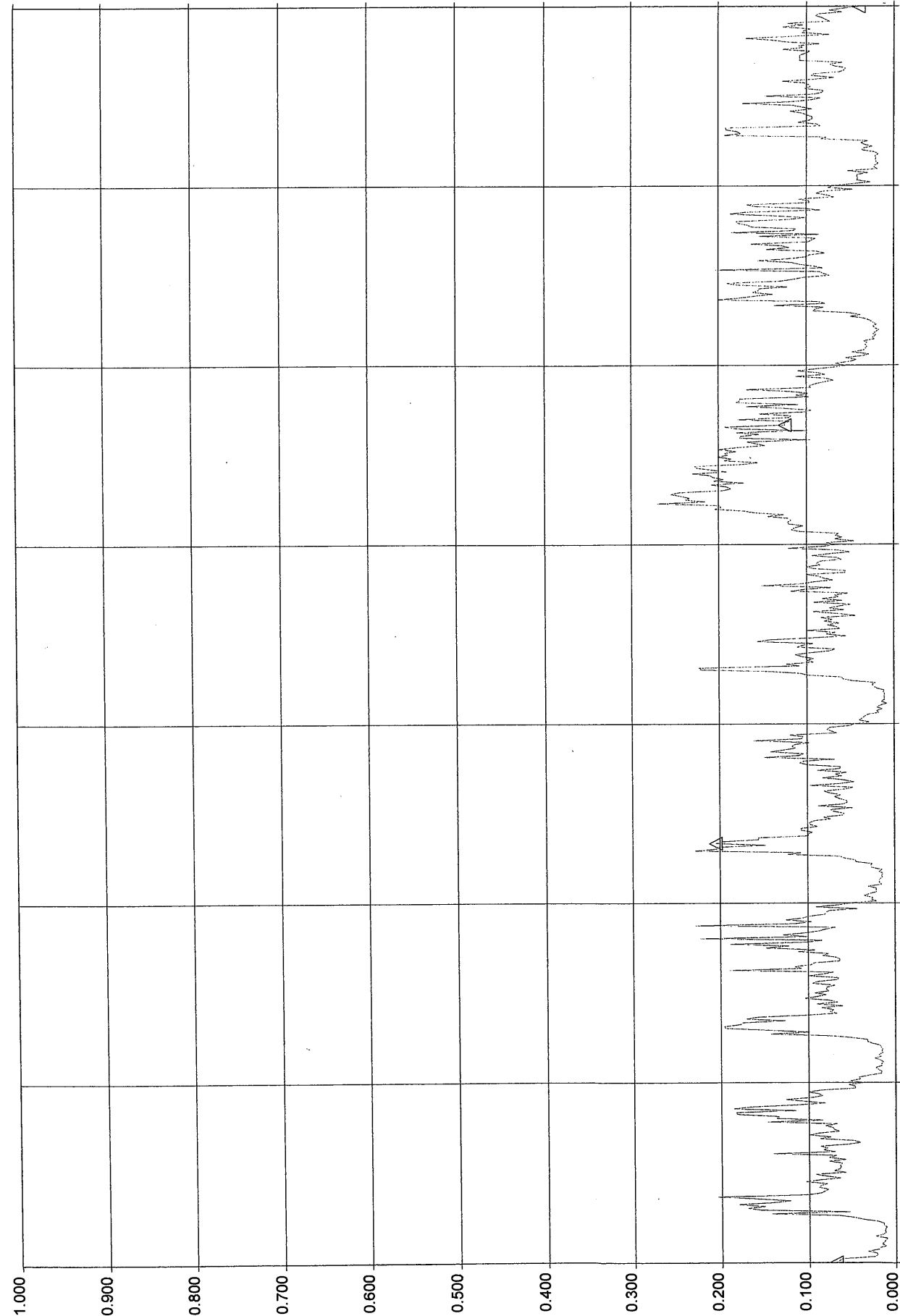


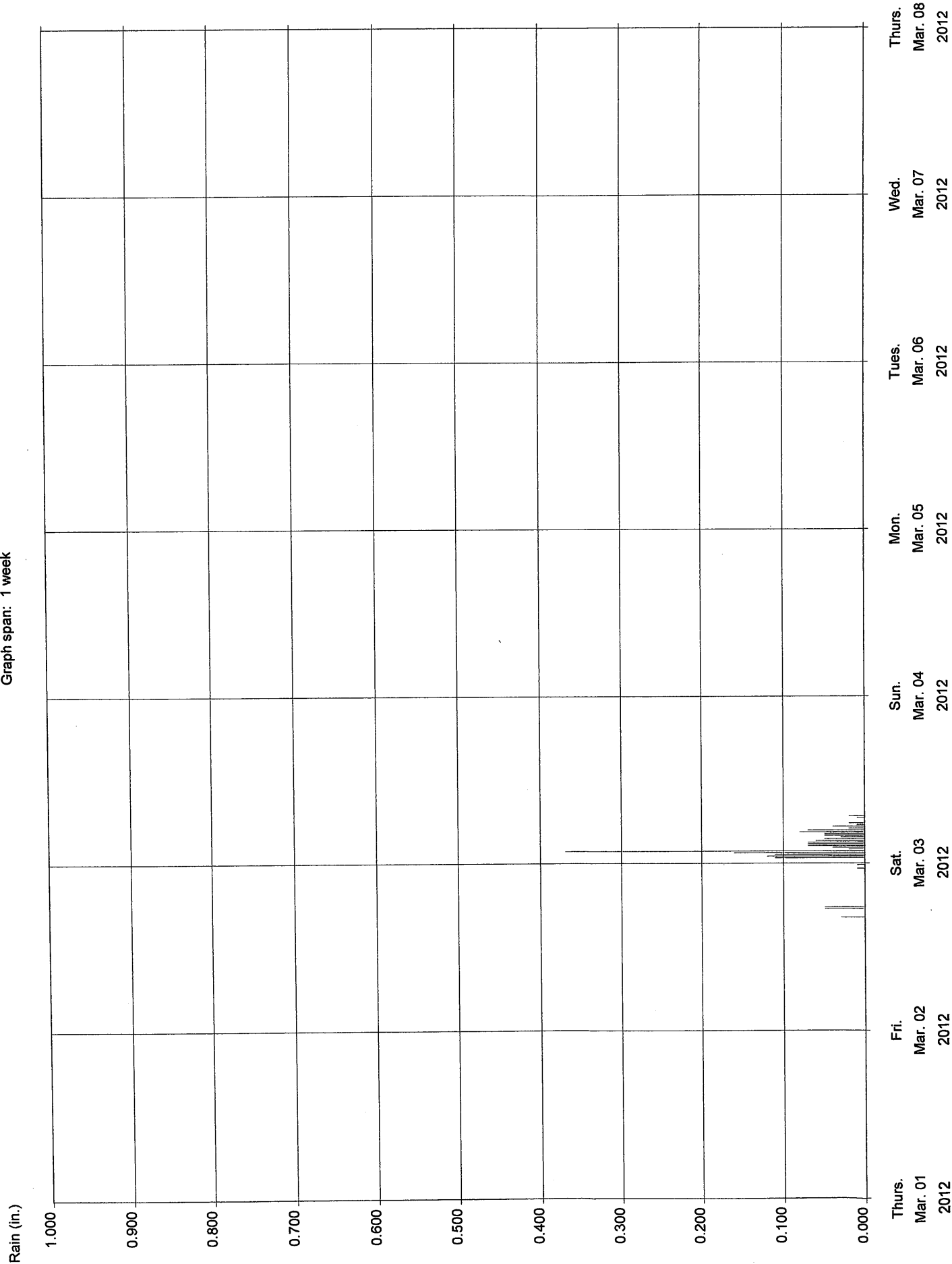
Soccer Field Wet Weather Event 3-2-12 to 3-3-12

Site Id: 00007511 File name: 00007511.000

Graph span: 1 week

△ Flow 1 (mgd)





Taylors Flow Meter Data Sheet

MH 7-511
Revised 11/15/12
March 30, 2012

System Data

Meter Location: <u>7-511</u>	Pipe Size (in.): <u>8-Inch</u>
------------------------------	--------------------------------

Inch-Miles of Sewer Upstream of Meter							
Pipe Size (in.)	Length (ft.)	Inch-Miles		Pipe Size (in.)	Length (ft.)	Inch-Miles	
8	23,045	34.92		24		0.00	
10		0.00		27		0.00	
12		0.00		30		0.00	
14		0.00		36		0.00	
15		0.00		42		0.00	
16		0.00		48		0.00	
18		0.00		54		0.00	
20		0.00		60		0.00	
21		0.00		72		0.00	
					Total =	34.92	

Dry Weather Flow

<p>Average Daily Flow calculated from the following dates:</p> <p>From: <u>04/08/12</u></p> <p>To: <u>04/13/12</u></p>	<p>Avg. Daily Flowrate = <u>88,000</u> gpd</p> <p>Avg. Flow Depth = <u>1.500</u> inches</p> <p>Peak Hourly Flowrate = <u>205,000</u> gpd</p> <p>Peak Factor = <u>2.33</u></p>
--	---

Notes: _____

Completed By: ECM

Date: 7-31-13

- computer calculated (formula)

Taylors Flow Meter Data Sheet

Rainfall and I/I Event Duration

Rainfall: Start: 3/30/12 19:00 End: 3/31/12 18:00

Max. 24-hour Total: 1.03 in. Storm Total: 1.03 in.

I/I Event: Start: 3/30/12 18:00 End: 4/1/12 4:00

Dates and times that rainfall and I/I begin and end.

Wet Weather Event - I/I Analysis

Peak Flow Depth = 2.2 inches

I/I Event Duration = 34 hours

☐ Manhole Surcharged (Level exceeded pipe dia.)

I/I Volume = 32,583 gallons

Peak Hourly Flowrate = 204,000 gpd

Inflow and Infiltration Breakdown (optional)

Avg. Dry Weather Flow = 88,000 gpd

Dry Weather Infiltration = 20,000 gpd

Peak Factor = 2.32

Rainfall Induced Infiltration = 3,000 gpd

Avg. Wet Weather Flow = 91,000 gpd

Total Infiltration = 23,000 gpd

Avg. I/I Flow = 23,000 gpd

Infiltration Rate = 659 gpd/idm

Inch-Diameter Miles = 34.92 idm

Inflow = 0 gpd

I/I Rate = 659 gpd/idm

Inflow Rate = 0 gpd/idm

Notes:

Completed By

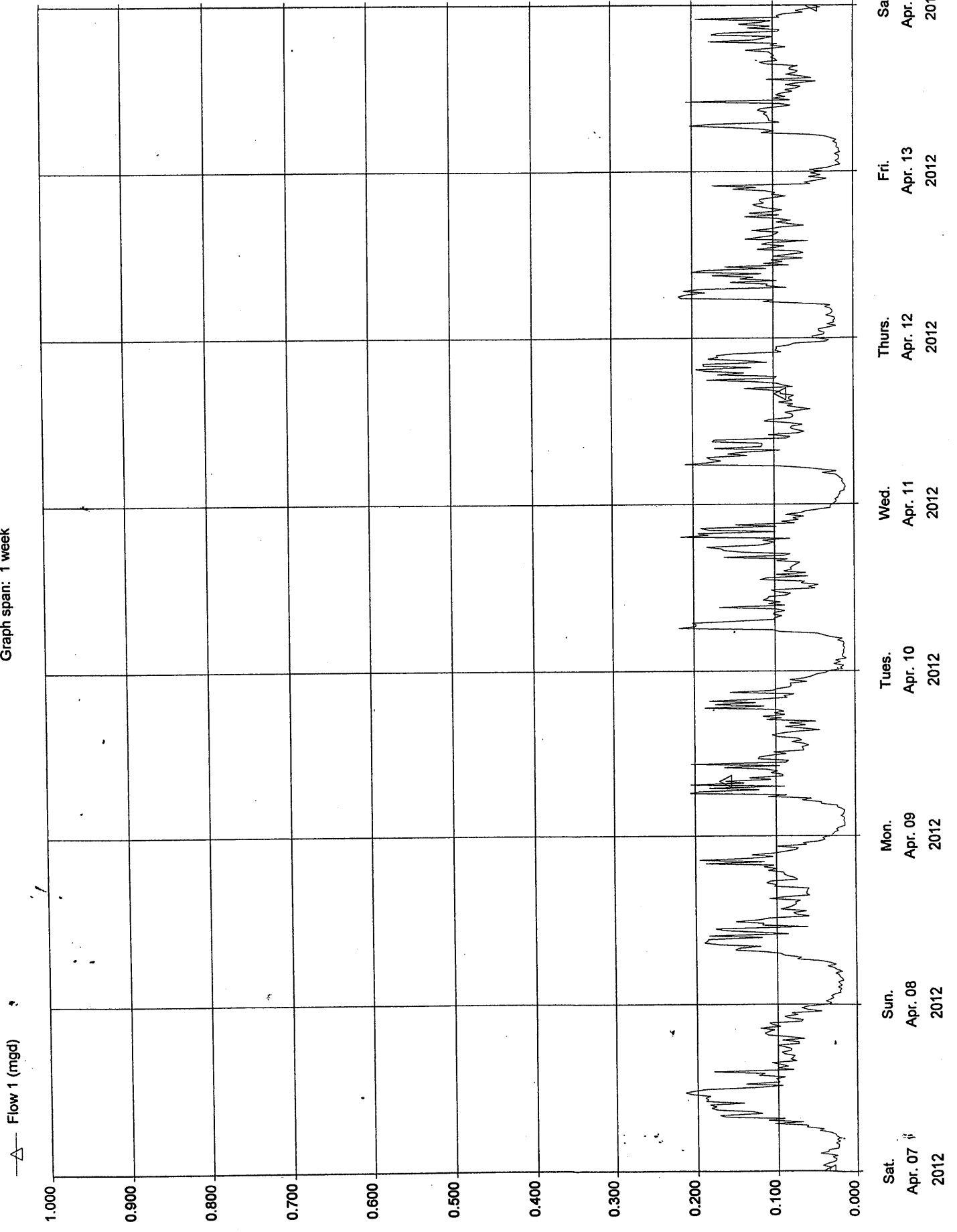
Ec Hddu

Date:

7-31-13

- computer calculated (formula)

Soccer Field Dry Weather Flow April 2012
Site Id: 00007511 File name: 00007511.000
Graph span: 1 week

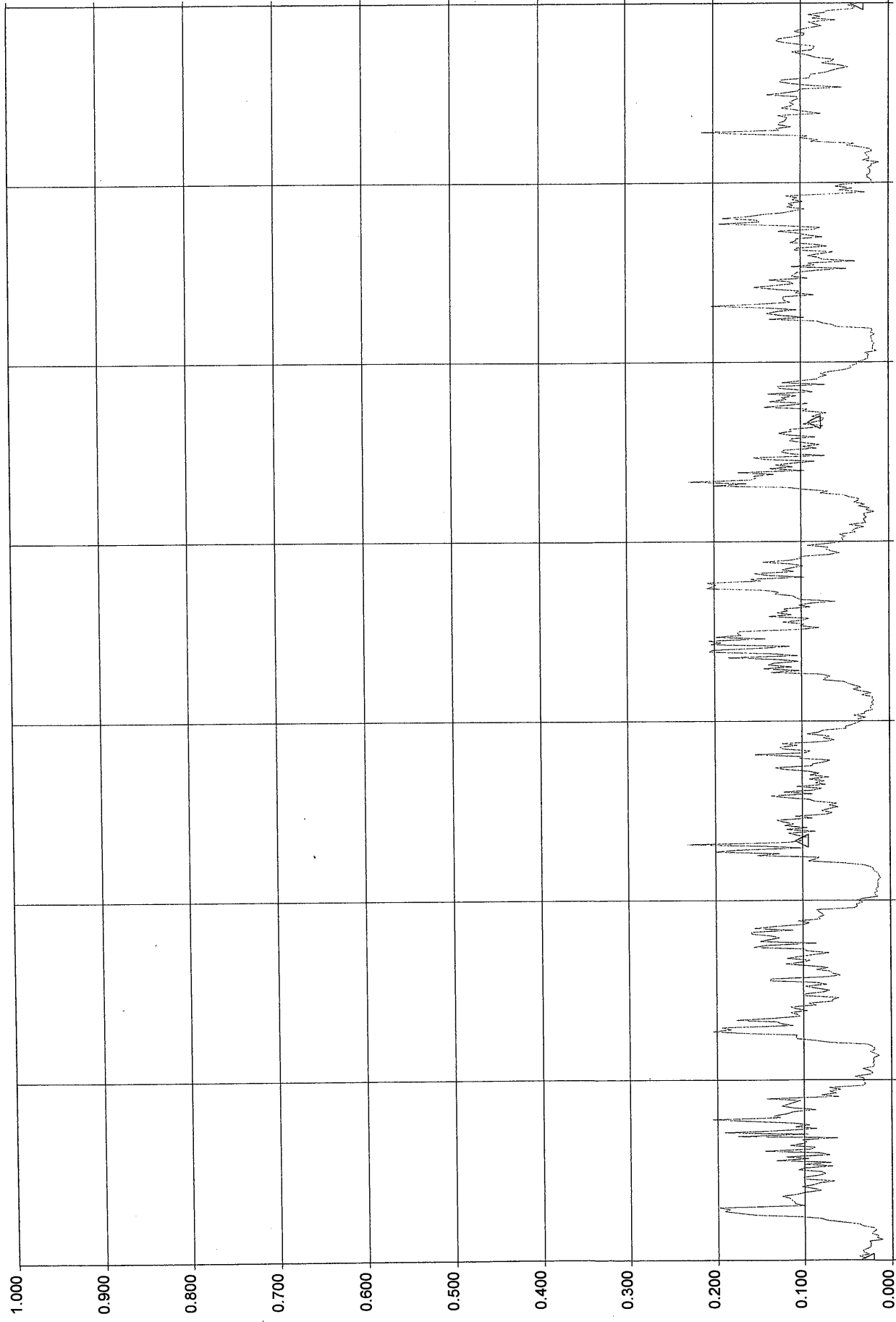


Soccer Field Wet Weather Event 3-30-12 to 3-31-12

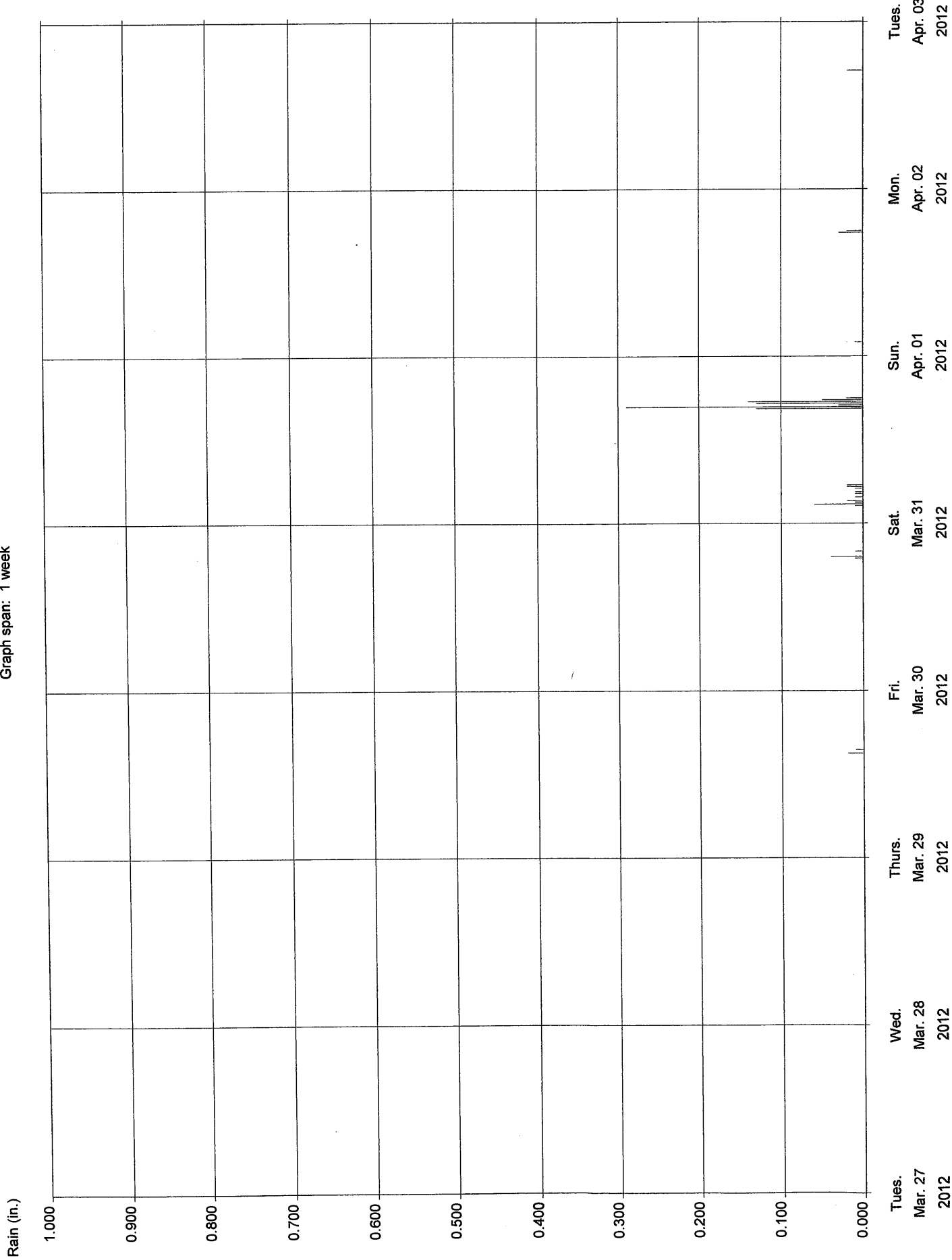
Site Id: 00007511 File name: 00007511.000

Graph span: 1 week

△ Flow 1 (mgd)



Rain 7-511 3-30-12 to 3-31-12
Site Id: 00000000 File name: 00000000.000
Graph span: 1 week



Taylors Flow Meter Data Sheet

MH. 7-511
for All Event 3
March 5, 2012

System Data

Meter Location: <u>7-511</u>	Pipe Size (in.): <u>8-Inch</u>
------------------------------	--------------------------------

Inch-Miles of Sewer Upstream of Meter							
Pipe Size (in.)	Length (ft.)	Inch-Miles		Pipe Size (in.)	Length (ft.)	Inch-Miles	
8	23,045	34.92		24		0.00	
10		0.00		27		0.00	
12		0.00		30		0.00	
14		0.00		36		0.00	
15		0.00		42		0.00	
16		0.00		48		0.00	
18		0.00		54		0.00	
20		0.00		60		0.00	
21		0.00		72		0.00	
					Total =	34.92	

Dry Weather Flow

<p>Average Daily Flow calculated from the following dates:</p> <p>From: <u>04/08/12</u></p> <p>To: <u>04/13/12</u></p>	<p>Avg. Daily Flowrate = <u>88,000</u> gpd</p> <p>Avg. Flow Depth = <u>1.500</u> inches</p> <p>Peak Hourly Flowrate = <u>205,000</u> gpd</p> <p>Peak Factor = <u>2.33</u></p>
--	---

Notes: _____

Completed By: EC 9401

Date: 7-31-13

- computer calculated (formula)

Taylor's Flow Meter Data Sheet

Rainfall and I/I Event Duration

Rainfall: Start: 4/5/12 20:45 End: 4/6/12 6:15

Max. 24-hour Total: 1.04 in. Storm Total: 1.04 in.

I/I Event: Start: 4/5/12 20:00 End: 4/7/12 4:00

Dates and times that rainfall and I/I begin and end.

Wet Weather Event - I/I Analysis

Peak Flow Depth = 2.1 inches

I/I Event Duration = 31 hours

☐ Manhole Surcharged (Level exceeded pipe dia.)

I/I Volume = 28,417 gallons

Peak Hourly Flowrate = 189,000 gpd

Inflow and Infiltration Breakdown (optional)

Avg. Dry Weather Flow = 88,000 gpd

Dry Weather Infiltration = 20,000 gpd

Peak Factor = 2.15

Rainfall Induced Infiltration = 2,000 gpd

Avg. Wet Weather Flow = 90,000 gpd

Total Infiltration = 22,000 gpd

Avg. I/I Flow = 22,000 gpd

Infiltration Rate = 630 gpd/idm

Inch-Diameter Miles = 34.92 idm

Inflow = 0 gpd

I/I Rate = 630 gpd/idm

Inflow Rate = 0 gpd/idm

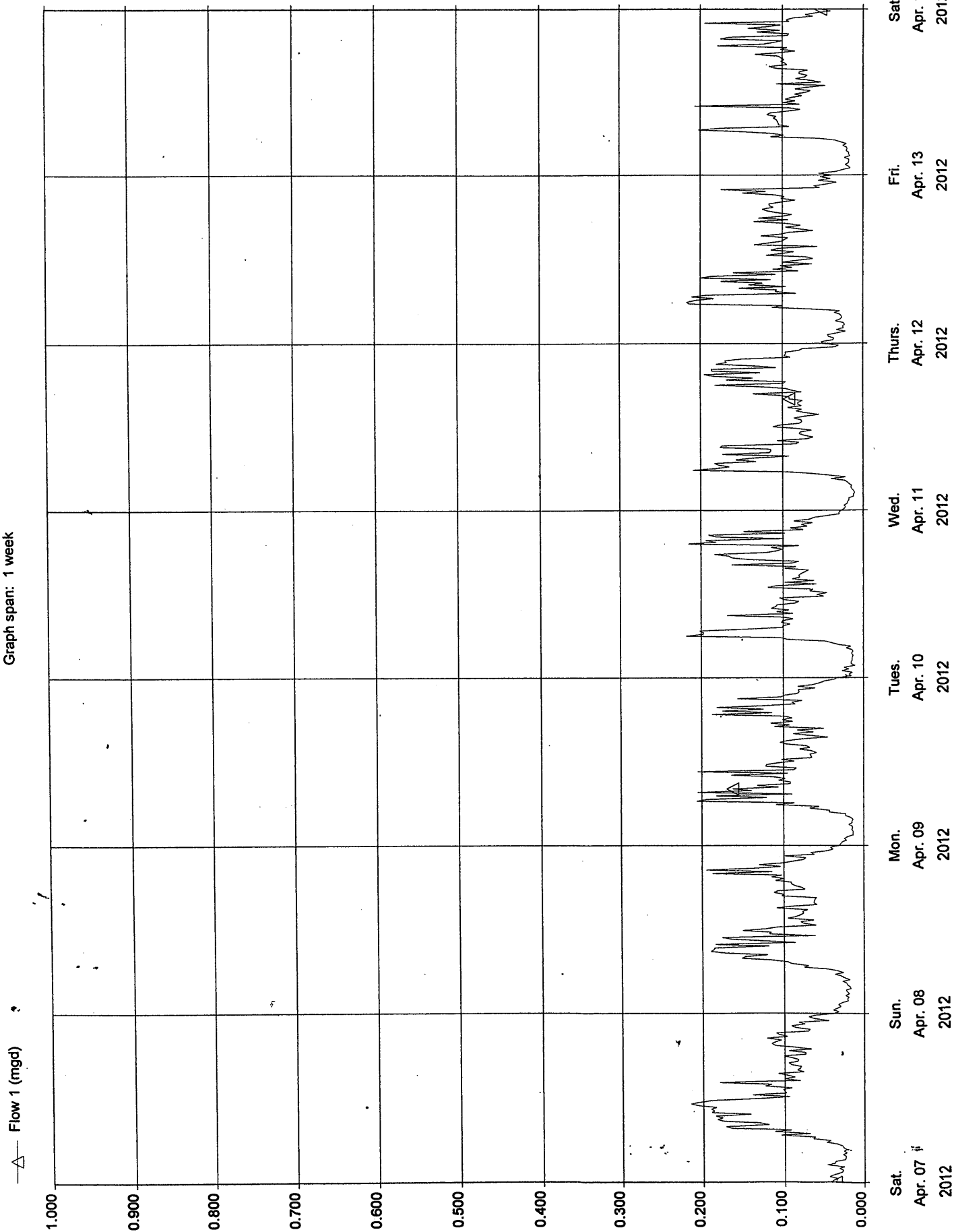
Notes:

Completed By EC Melia

Date: 7-31-13

- computer calculated (formula)

Soccer Field Dry Weather Flow April 2012
Site Id: 00007511 File name: 00007511.000
Graph span: 1 week

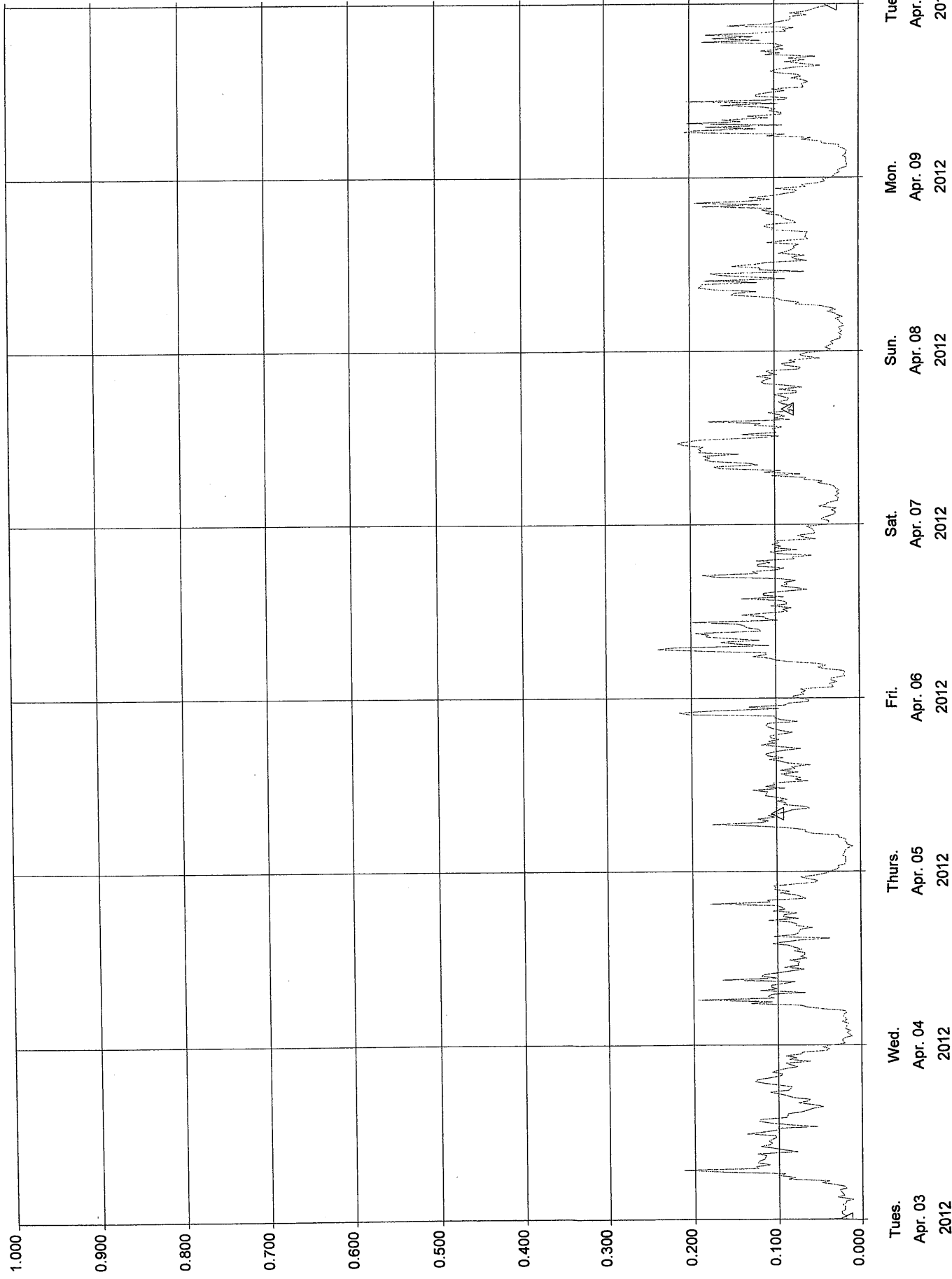


Soccer Field Wet Weather Event 4-5-12 to 4-6-12

Site Id: 00007511 File name: 00007511.000

Graph span: 1 week

△ Flow 1 (mgd)



Rain 7-511 4-5-12 to 4-6-12
 Site Id: 00000000 File name: 00000000.000
 Graph span: 1 week

