SICTA
Sea Isle City Taxpayers Association, Inc.
www.sicta.org P.O. Box 82, Sea Isle City, NJ 08243-0082

MUA Treatment Cost Research

Research Results

1) SIC projected to pump 411.7M gallons in 2009 with MUA charges of $2,922,584.

- Average cost equates to $7.10 per 1,000 gallons

2) Majority of MUA charges to us are based on 6/15 to 9/15 volume flows.

	Charges	SIC Flows	Avg
MUA "Fixed"	$2,602,631	170.7	$15.25
MUA "Variable"	$319,953	411.7	$0.78
MUA Total	$2,922,584		

3) Summer Flow (6/15 to 9/15) is very expensive!

	SIC 2009	Avg	Charges	
Flows 6/15-9/15	170.7	$16.03	$2,735,268	Note: $16.03 = $15.25 + $0.78
Flows Other	241.0	$0.78	$187,316	
Flows Total	411.7	$7.10	$2,922,584	
Summer / Total	41%			

4) SIC sewage flow spikes in the summer, but Infiltration / Inflow (I&I) does not!

(e.g. 2008 had relatively less summer I&I and would create lower 2009 average costs)

	2008 Overall Flows			2008 I&I Flows (est.)		
	SIC	Avg	09 Charges	SIC	Avg	09 Charges
Flows 6/15-9/15	171.1	$16.03	$2,742,032	30.2	$16.03	$483,718
Flows Other	253.5	$0.78	$197,039	134.2	$0.78	$104,325
Flows Total	424.6	$6.92	$2,939,071	164.4	$3.58	$588,043
Summer / Total	40%			18%		

Possible Implications

A) Reducing our MUA charges significantly must include:

1) Reducing our flows faster than other municipalities, or we will make no progress.

2) Strongly focussing on 6/15 to 9/15 flows to get the biggest bang for our investments.

B) I&I treatment costs still significant, but somewhat less than the previously projected.

C) To be most effective, I&I investments should focus on 6/15 to 9/15 flow sources.

Can we determine which I&I sources differ by season to concentrate our efforts?

D) Depending on the seasonality of the I&I sources, investments to reduce other sewage flows may have greater benefits (e.g. low-flow fixtures for municipal or other large users).

I&I is still important, but every I&I efforts should not necessarily be first in line for investment.

E) Enhanced flow measurements needed to improve our understanding and actions.

1) Meter readings for all Municipal facilities. **Note: 54MG pumped but not metered**

2) Monthly readings of all meters. **Note: Does not change billings**

F) SIC needs initiatives to promote water conservation and retrofitting.

1) Use data on buildings by age and low flow fixtures to estimate possible reductions.

2) Institute a program to subsidize retrofitting of low flow fixtures, where appropriate.

3) Change rate structure to surcharge larger users without low flow fixtures.

4) Are all Municipal facilites using low flow fixtures? (buildings, restrooms, marina,etc.)

G) Our W&S utility bills treat all flows throughout the year equally, even though we now know that sewage costs differ significantly. An improved rate structure should have bills that follow the cost for providing service. Otherwise, water conservation / cost reduction efforts will not be motivated.

DRAFT

TABLE 1: COMPARISON OF MONTHLY/YEARLY FLOWS FOR 48-MONTH STUDY PERIOD

2005	Water Pumped (MG) (1)	Sewage Metered (MG) (2)	85% Water (MG) (3)	Estimated I/I (MG) (4)
Jan	13.94	22.06	11.85	10.21
Feb	11.75	21.72	9.99	11.73
Mar	11.67	25.60	9.92	15.68
Apr	16.36	23.59	13.91	9.68
May	22.51	32.82	19.13	13.69
Jun	35.94	40.93	30.54	10.39
Jul	63.73	65.91	54.17	11.75
Aug	60.73	61.77	51.62	10.15
Sep	31.83	32.16	27.06	5.10
Oct	16.08	29.06	13.67	15.39
Nov	13.88	22.07	11.79	10.28
Dec	11.30	24.43	9.60	14.83
TOT	**309.71**	**402.13**	**263.3**	**138.88**

2006	Water Pumped (MG) (1)	Sewage Metered (MG) (2)	85% Water (MG) (3)	Estimated I/I (MG) (4)
Jan	10.63	28.13	9.04	19.10
Feb	9.14	21.13	7.77	13.36
Mar	8.16	17.79	6.94	10.86
Apr	9.04	20.77	7.68	13.08
May	18.32	30.38	15.57	14.80
Jun	29.17	40.42	24.79	15.62
Jul	61.72	65.08	52.46	12.62
Aug	59.68	59.36	50.73	8.63
Sep	25.93	38.15	22.04	16.11
Oct	14.23	29.48	12.10	17.38
Nov	11.53	28.98	9.80	19.18
Dec	10.41	21.99	8.85	13.14
TOT	**267.97**	**401.65**	**227.8**	**173.88**

2007	Water Pumped (MG) (1)	Sewage Metered (MG) (2)	85% Water (MG) (3)	Estimated I/I (MG) (4)
Jan	11.08	22.50	9.42	13.08
Feb	12.45	19.13	10.58	8.55
Mar	8.19	23.49	6.96	16.52
Apr	7.89	25.95	6.71	19.24
May	17.87	29.65	15.19	14.46
Jun	30.53	43.70	25.95	17.75
Jul	55.01	61.84	46.76	15.08
Aug	56.30	60.29	47.86	12.44
Sep	27.15	33.45	23.08	10.38
Oct	16.01	25.38	13.61	11.77
Nov	11.84	21.25	10.06	11.19
Dec	10.98	26.16	9.33	16.83
TOT	**265.30**	**392.79**	**225.5**	**167.29**

2008	Water Pumped (MG) (1)	Sewage Metered (MG) (2)	85% Water (MG) (3)	Estimated I/I (MG) (4)
Jan	10.98	22.58	9.33	13.24
Feb	9.65	23.08	8.20	14.88
Mar	11.69	23.48	9.94	13.54
Apr	12.78	22.58	10.86	11.71
May	22.85	39.97	19.42	20.55
Jun	37.66	45.30	32.01	13.28
Jul	66.10	64.67	56.19	8.48
Aug	67.05	66.18	56.99	9.19
Sep	27.56	35.16	23.43	11.74
Oct	17.07	24.95	14.51	10.44
Nov	11.86	26.68	10.08	16.60
Dec	10.86	29.99	9.23	20.76
TOT	**306.11**	**424.60**	**260.2**	**164.41**

NOTES:
(1) City of Sea Isle City Metered Well Water Pumping Records, Prepared by the Public Works Department
(2) County Sanitary Sewer Meter Records, Prepared by the Cape May County Municipal Utilities Authority
(3) Calculated Water Theoretically Entering Sewer System [85% of Pumped Water (1)]
(4) Estimated Excess Flow (I/I) [Sewage Metered (2) minus 85% Water (3)]

Source: Maser Consulting P.A. April 2009 Draft Report

			Overall Flows			I&I Flows (est.)
	SIC	Avg	09 Charges	SIC	Avg	09 Charges
2005						
Flows 6/15-9/15	163.7	$16.03	$2,624,148	29.6	$16.03	$475,143
Flows Other	238.4	$0.78	$185,291	109.2	$0.78	$84,899
Flows Total	402.1	$6.99	$2,809,439	138.9	$4.03	$560,042
Summer / Total	41%			21%		
2006						
Flows 6/15-9/15	163.7	$16.03	$2,624,148	37.1	$16.03	$594,871
Flows Other	237.9	$0.78	$184,918	136.8	$0.78	$106,295
Flows Total	401.7	$6.99	$2,809,066	173.9	$4.03	$701,166
Summer / Total	41%			21%		
2007						
Flows 6/15-9/15	160.7	$16.03	$2,575,744	41.6	$16.03	$666,515
Flows Other	232.1	$0.78	$180,379	125.7	$0.78	$97,699
Flows Total	392.8	$7.02	$2,756,123	167.3	$4.57	$764,214
Summer / Total	41%			25%		
2008						
Flows 6/15-9/15	171.1	$16.03	$2,742,032	30.2	$16.03	$483,718
Flows Other	253.5	$0.78	$197,039	134.2	$0.78	$104,325
Flows Total	424.6	$6.92	$2,939,071	164.4	$3.58	$588,043
Summer / Total	40%			18%		