CITY OF NEWBURYPORT
DEPARTMENT OF PUBLIC SERVICES
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To: President & Members of the Newburyport City Council

From: David Hanlon, Chairman, Board of Sewer Commissioners
E. Larry Kelley, Chairman, Board of Water Commissioners

Subject: Review of Second Meter Policy

Date: September 23, 2013

Copy: The Honorable Donna Holaday, Mayor

In light of the order sponsored by Councilors Herzog and Cronin, which recommends a revision to the 1997 policy that prohibits second meters, the Boards of Water and Sewer Commissioners recently met in Joint Session to review the proposed revisions.

Based on an extensive evaluation of the impact of allowing second meters, it is our opinion that a change in policy, at this time, is not in the best interest of the vast majority of Newburyport users and ratepayers. As such, we strongly recommend that there be no change to the existing policy on second meters.

The two boards, in making this decision, reviewed the following:

- Current policy
- Survey of other communities/systems
- State regulations and requirements regarding water conservation
- Increased capital & operations cost of second meters
- Would second meters accurately show a user's true cost?
- Impact of second meters on the sewer rate
- Impact of second meters on those who are unable to install a second meter
- Alternatives to utilizing City supplied water for irrigation
- Recommendations

Below we have provided a discussion of the above referenced topics:

Current Policy

In November of 1997, the Board of Sewer Commissioners adopted policies relative to auxiliary (i.e. second) meters. The policy provided that "sewer billing shall be based on the total amount of water that passes through the initial meter. Use of a second meter for the purpose of deducting the water that passes through this auxiliary meter from the consumption used for the sewer bill, shall not be allowed."

Since the adoption in 1997, the Sewer Commission has reviewed the policy on numerous occasions, however has not found it prudent to make any changes. It is important to note that any action impacting the manner in which water is metered would require the approval of the Board of Water Commissioners.

The Sewer Commission does, however, allow for the one-time abatement of sewer charges in certain cases; such as when a user fills a swimming pool for the first time or in the event of a catastrophic event that causes abnormally high water usage, which does not pass through the sewer system.

Survey of Other Communities

A survey of communities in calendar year 2008 found that thirty-four (34) communities allow second meters for irrigation and twenty-five (25) do not allow second meters.

In 2005 the Town of Reading placed a moratorium on the installation of second meters. The Town of Wakefield followed in 2011 and the Town of Stoneham in 2012. Most recently, the City of Melrose stopped allowing second meters in July of 2013.

State Regulations and Requirements

In June of 2012, the Executive Office of Energy and Environmental Affairs and Water Resources Commission, in conjunction with MassDEP, released updated Water Conservation Standards, originally published in July of 2006. The Standards state that public suppliers, such as Newburyport, must "meet or demonstrate steady progress toward meeting residential water use of 65 gallons per capita per day (gpcd), including both indoor and outdoor use."

This is a very difficult standard to meet. In fact, there are over 100 (+) Massachusetts water suppliers who do not meet the standard and must develop and implement compliance and conservation plans in order to achieve the 65 gallons per person per day average. DEP will implement enforcement action on those water suppliers that are above the 65 gallons per person per day average and who do not make demonstrable progress towards achieving this standard.

Over the past year, Newburyport's consumption has been 57 gpcd, on average, however has been as high as 71 gpcd, on average, during summer months. Refer to Attachment C for DEP-Reviewed Performance Standards for Massachusetts Public Water Suppliers (Region 3).

Increased Capital & Operations Cost of Second Meters

Although a portion of the cost associated with an expanded second meter program would be recovered, the expansion would require an appropriation by the City Council to cover the cost for the purchase of meters and remote readers, staff to install meters, added billing cost, added cost for monitoring the added meters, added administrative cost and added maintenance cost for operating the system. It is estimated that an appropriation for the upfront additional capital cost to cover a quarter of the system (meters, remotes, installation) would be approximately $540,000[1]. The approximate additional annual

[1] Assumes one quarter of users install second meters at a cost of $270 per meter.

operating cost (billing, administration, collections, inspections) associated with a change in the policy would be $29,200[2] for the first year.

Would Second Meters accurately show a user's true cost?

Second meters would not accurately show a user's true cost as there are extraneous flows that enter the sewer system from a user's location. As an example, many homeowners have sump pumps connected to the sewer system, older homes sewer services have cracks and separated joints that take in ground water some of which comes from irrigation systems, and added flows brought into the home are added to the system.

Impact of Second Meters on the Sewer Rate

The impact on the sewer rate is counter-productive as a change in policy to allow second meters only shifts the financial burden to those homeowners who do not install second meters (i.e. those who elect not to use the City's potable water to irrigate their lawn for financial, environmental, or other reasons). Additionally, the water that is used for watering lawns and which enters the system through cracks in services and mains would not be accounted for.

A change in the second meter policy would increase the sewer rate. The revenue collected will not impact homeowners equally as homes that do not install second meters will pay a higher cost for the system. We estimate that the average household using little to no City potable water for outside irrigation would see their annual water/sewer bill increase by $106 as a result of the change.

Impact of second meters on those who are unable to take advantage of a second meter program or utilize non-potable water for irrigation

As stated on numerous occasions, a change in policy would impact those who are unable to take advantage of the second meter program. It would also adversely impact those who utilize non-potable water for irrigation, such as rainwater. The rain barrel program in Newburyport has been a huge success, with the largest participation per capita in the state. Allowing second meters would largely eliminate any savings that the rain barrel customers have realized as a result of utilizing non-potable water to irrigate their lawns and gardens.

Alternatives to utilizing City supplied water for irrigation

The Department of Public Services routinely recommends alternatives to utilizing City supplied water for irrigation, such as the installation of a well or participation in the rain barrel program, as mentioned in the last paragraph.

Recommendation

On August 28, 2013, the Board of Sewer Commissioners, in Joint Session with the Board of Water Commissioners, voted not to recommend a change in the current second meter policy at this time for the reasons referenced above. Additionally, the Board recommends that this policy be reviewed again in 2018.

[2] Based on FY2014 salary data for administrative and water distribution staff.

ATTACHMENT A

SEWER REVENUE IMPACT OF ALLOWING SECOND METERS

	CURRENT POLICY	WITH SECOND METERS
RATE REVENUE		
Metered Usage (cu. ft.) (1)	67,000,000	56,280,000
Tier One Usage (cu. ft.)	46,900,000	39,396,000
Tier One Rate (per 100 cu. ft.)	$6.95/100	$6.95/100
Tier One Revenue	$3,259,550	$2,738,022
Tier Two Usage (cu. ft.)	20,100,000	16,884,000
Tier Two Rate (per 100 cu. ft.)	$7.70/100	$7.70/100
Tier Two Revenue	$1,548,590	$1,300,816
Sub-Total Rate Revenue	**$4,808,140**	**$4,038,838**
OTHER REVENUE SOURCES		
Fixed Charges (2)	$551,376	$551,376
Other Fees	$112,000	$112,000
Use of Retained Earnings	$835,000	$835,000
Sub-Total Other Revenue Sources	**$1,498,376**	**$1,498,376**
TOTAL REVENUE	**$6,306,516**	**$5,537,214**
TOTAL FY2014 BUDGET	**$6,306,516**	**$6,306,516**
SURPLUS/(DEFICIT)	**$0**	**($769,302)**

(1) Assumes 16% of Newburyport treated water is used outdoors. Based on FY2013 usage.

(2) Revenue generated from Fixed Customer Charge at $18/quarter.

ATTACHMENT B

IMPACT OF SECOND METERS ON RESIDENTIAL WATER/SEWER BILLS

Based on Average Household Use of 7,750 cubic feet per year

		CURRENT POLICY			WITH SECOND METER			INCREASE/ (DECREASE)		
	% of City Water Used Outdoors	**Water**	**Sewer**	**Total**	**Water**	**Sewer**	**Total**	**Water**	**Sewer**	**Total**
No City Water Used Outdoors	0.0%	$355	$539	**$894**	$355	$645	**$1,000**	$0	$106	**$106**
Low User (First Quartile)	1.8%	$355	$539	**$894**	$355	$633	**$988**	$0	$94	**$94**
Typical User (Median)	10.6%	$355	$539	**$894**	$355	$576	**$931**	$0	$38	**$38**
High User (Upper Quartile)	22.0%	$355	$539	**$894**	$355	$503	**$858**	$0	($36)	**($36)**
Tier 1 Rate (per HCF):		$4.58	$6.95	**$11.53**	$4.58	$8.32	**$12.90**	$0.00	$1.37	**$1.37**
Tier 2 Rate (per HCF):		$5.33	$7.70	**$13.03**	$5.33	$9.06	**$14.39**	$0.00	$1.36	**$1.36**

ATTACHMENT C

DEP-REVIEWED PERFORMANCE STANDARDS FOR MASSACHUSETTS PUBLIC WATER SUPPLIERS

2006 through 2011
PWS = Public Water Supplier
RGPCD = Residential Gallons per Capita Day (Massachusetts Standard = 65 gal/capita/day)*
UAW = Unaccounted for Water (Massachusetts Standard = 10%)**
See notes at bottom for further explanation of data.

		RGPCD (gal/capita/day)							UAW (%)						
PWSID	PWS Name	2006	2007	2008	2009	2010	2011	Avg.	2006	2007	2008	2009	2010	2011	Avg.
3007000	AMESBURY WATER DEPARTMENT	68	62	53	48	48	53	55	10	5	16	4	17	8	10
3009000	ANDOVER WATER DEPARTMENT	79	65	69	65	69	61	68	2	11	4		16	26	12
3010000	ARLINGTON WATER DEPARTMENT		64	61	58	61	58	60		19	30	34	26	32	28
3014000	ASHLAND WATER & SEWER DEPARTMENT	68	62	61	58	56	55	60	16	19	8	10	7	9	12
3023000	BEDFORD WATER DEPARTMENT	73	63	68	64	62	55	64	9	12	4	10	14	18	11
3026000	BELMONT WATER DEPARTMENT	105	116	81	78	72	77	88	5	7	3	2	14	6	6
3030000	BEVERLY WATER DEPARTMENT	57	59	55	53	58	55	56	10	16	13	7	14	15	13
3031000	BILLERICA WATER DEPARTMENT	69	74	63	72	67	68	69	17	6	21	4	2	1	9
3035000	BOSTON WATER & SEWER COMMISSION	46	51	43	43	42	41	44	15	12	10	11	9	10	11
3046000	BROOKLINE WATER & SEWER DIV.	65	72	67	62	63	62	65	14	12	12	15	12	13	13
3048000	BURLINGTON WATER DEPARTMENT	54	56	49	44	60	53	53	22	11	26	25	10	11	18
3205001	BYFIELD WATER DISTRICT	62	50	45	43	54	44	50	11	7	2	9	2	7	6
3049000	CAMBRGE WATER DEPARTMENT	57	53	50	46	51	48	51	10	18	13	21	13	14	15
3056000	CHELMSFORD WATER DISTRICT	67	69	62	59	64	61	64	18	18	22	25	7	9	17
3057000	CHELSEA WATER DEPARTMENT	49	49	72	48	42	42	50	6	4	12	-6	8	10	6
3067000	CONCORD WATER DEPARTMENT	69	70	63	60	68	63	66	6	8	12	10	8	9	9
3071000	DANVERS WATER DEPARTMENT	56	59	62	52	54	54	56	9	8	5	12	6	7	8
3073000	DEDHAM WESTWOOD WATER DISTRICT	55	58	62	53	57	56	57	29	27	15	26	24	21	24
3078006	DOVER WATER COMPANY INC	83	95	83	73	86	74	82	8	2	6	3	11	16	8
3079000	DRACUT WATER SUPPLY DISTRICT	64	63	58	58	70	58	62	6	8	8	8	6	11	8
3056001	EAST CHELMSFORD WATER DISTRICT	75	79	76	61	62	57	68	6			0		5	4
3092000	ESSEX DPW WATER DIVISION	58	61	61	60	62	58	60	15	13	16	15	11	9	13
3093000	EVERETT WATER DEPARTMENT	90	78		69	71	75	77	22	14	21	10	12	11	15
3100000	FRAMINGHAM WATER DEPARTMENT	116	61	60	58	63	55	69	12	9	13	1	13	16	11
3105000	GEORGETOWN WATER DEPARTMENT	64	71	64	59	67	59	64	5	6	20	3	6	7	8
3107000	GLOUCESTER DPW - WATER SUPPLY	81	59	47	46	51	49	56	28	30	25	25	23	24	26
3116000	GROVELAND WATER DEPARTMENT	62	59	55	50	53	53	55	3	0	3	10	15	2	6
3119000	HAMILTON WATER DEPARTMENT	56	46	57	45	44	42	48	9	20	28	14	14	14	17
3128000	HAVERHILL DPW	86	71	66	58	64	64	68	3	14	14	17	14	6	11
3144000	IPSWICH WATER DEPARTMENT	55	54	51	50	52	52	52	10	10	10	8	12	11	10
3079001	KENWOOD WATER DISTRICT			74	67		30	57			6	2	26	24	15
3149000	LAWRENCE WATER WORKS	52	42	46	39	38	43	43	10	17		9	8	9	11
3155000	LEXINGTON WATER DEPARTMENT	122	70	72	56	77	67	77	8	8	13	42	10	7	15

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See notes at bottom for further explanation of data.

		RGPCD (gal/capita/day)							UAW (%)						
PWSID	PWS Name	2006	2007	2008	2009	2010	2011	Avg.	2006	2007	2008	2009	2010	2011	Avg.
3157000	LINCOLN WATER DEPARTMENT	70	75	76	66	77	68	72	15	24	22	22	24	26	22
3160000	LOWELL WATER TREATMENT FACILITY	31	33	25	24	23	24	27	23	18	24	30	25	28	25
3163000	LYNN WATER & SEWER COMMISSION	56	58	55	53	53	53	55	28	28	34	38	35	35	33
3164000	LYNNFIELD CENTER WATER DISTRICT	68	71	69	65	69	68	68	14	16	9	14	10	7	12
3164001	LYNNFIELD WATER DIST.	82	100	91	76	92	81	87	14	16	20	12	10	6	13
3165000	MALDEN DPW WATER DEPARTMENT	81	35	61	58	59	55	58	35	33	20	25	24	29	28
3166000	MANCHESTER WATER DEPARTMENT	95	97	89	80	101	97	93	1	2	7	8	4	6	5
3168000	MARBLEHEAD WATER DEPARTMENT	67	76	71	66	73	68	70	14	13	12	15	9	8	12
3176000	MEDFORD WATER DEPARTMENT	94	52	67		64	61	68	21	15	24		23	26	22
3178000	MELROSE WATER DEPARTMENT		51	55	49	51	50	51		21	8	9	19	18	15
3180000	MERRIMAC WATER DEPARTMENT	70	56	54	45	50	45	53	6	10	9	12	5	11	9
3181000	METHUEN WATER DEPARTMENT	64	71	68	59	67	64	66	14	13	16	12	13	6	12
3184000	MIDDDLETON WATER DEPARTMENT	65	72	66	64	65	63	66							
3189000	MILTON WATER DEPARTMENT		65		58	64		62		26		22	13		20
3196000	NAHANT WATER DEPARTMENT	86	91	83	72	90	69	82	4	3	4	6	-7	21	5
3198000	NATICK DEPARTMENT OF PUBLIC WORKS	65	68	63	60	64	59	63	16	10	8	6	9	8	10
3199000	NEEDHAM DEPARTMENT OF PUBLIC WORKS	66	78	67	62	69	67	68	1	26	7	4	8	5	9
3206000	NEWBURYPORT WATER WORKS	60	54	63	52	56	55	57	9	11	4	6	16	10	9
3207000	NEWTON WATER DEPARTMENT	56	65	61	49	55	54	57	24	17	18	23	26	24	22
3210000	NORTH ANDOVER WATER DEPARTMENT	57	58	62	61	64	61	61	15	16	16	14	13	13	15
3056002	NORTH CHELMSFORD WATER DISTRICT	59	63	58	57	62	59	60	7	12	9	12	13	10	11
3213000	NORTH READING WATER DEPARTMENT	61	68	65	60	65	75	66	17	14	15	18	17	16	16
3229000	PEABODY WATER DEPARTMENT	66	62	64	59	61	58	62	29	22	13	19	18	16	20
3243000	QUINCY WATER DEPARTMENT	73	74	47	46	62	44	58	15	31	17	18	20	19	20
3246000	READING DPW	52	54	51	48	51	47	51	9	9	9	6	4	1	6
3248000	REVERE WATER DEPARTMENT	52		41	38	42	42	43	23		27	25	25	25	25
3252000	ROCKPORT WATER TREATMENT PLANT	59	58	54	51	53	51	54	19	15	12	5	1	8	10
3254000	ROWLEY WATER DEPARTMENT	56	65	51	58	60	61	59		4	29	4	7	1	9
3258000	SALEM DPW WATER DEPARTMENT	72	68	70	72	74	70	71	18	18	15	14	16	16	16
3259000	SALISBURY WATER COMPANY	62	64	58	56	59	55	59	30	23	20		23	33	26
3262000	SAUGUS WATER DEPARTMENT				57		64	61				25		24	25
3274000	SOMERVILLE WATER DEPARTMENT		67	54	53	50	50	55		21	21	16	15	14	17
3284000	STONEHAM WATER DEPARTMENT	61	60	61	58	65	64	62	12	11	12	13	14	10	12

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		RGPCD (gal/capita/day)							UAW (%)						
PWSID	PWS Name	2006	2007	2008	2009	2010	2011	Avg.	2006	2007	2008	2009	2010	2011	Avg.
3288000	SUDBURY WATER DISTRICT	77	76	65	73	70	61	70	7	6	10	4	8	9	7
3291000	SWAMPSCOTT WATER DEPARTMENT	109	91	81	87	83	80	89	6	15	10	5	10	8	9
3295000	TEWKSBURY DPW WATER DEPARTMENT	49	52	46	44	48	50	48	23	24	21	23	14	11	19
3298000	TOPSFIELD WATER DEPARTMENT	61	59	57	53	51	56	56	7	10	5	12	10	13	10
3301000	TYNGSBORO WATER DISTRICT	66	67	65	61	73	62	66	4	3	5	4	3	3	4
3305000	WAKEFIELD WATER DEPARTMENT	64	65	60	58	61	61	62	9	6	6	4	5	4	6
3308000	WALTHAM WATER DEPARTMENT			66	67	65	60	65			30	32	33	33	32
3314000	WATERTOWN WATER DEPARTMENT	55	62	65	58	59	60	60	22	14	11	14	13	15	15
3315000	WAYLAND WATER DEPARTMENT	87	87	70	70	65	65	74	17	21	16	18	24	23	20
3317000	WELLESLEY WATER DEPARTMENT	75	75	66	58	61	57	65	18	14	18	17	16	16	17
3320000	WENHAM WATER DEPARTMENT	63	73	67	61	59	60	64	17	19	12	18	12	20	16
3324000	WEST NEWBURY WATER DEPARTMENT	62	54	58	53	51	52	55	15	25	9	10	18	10	15
3330000	WESTFORD WATER DEPARTMENT	68	71	64	60	74	68	68	14	12	5	6	6	7	8
3333000	WESTON WATER DEPARTMENT	112	135	96	96	109	100	108	5	4	8	6	15	11	8
3342000	WILMINGTON WATER & SEWER DEPARTMENT	53	54	50	51	56	54	53	2	6	8	9	9	7	7
3344000	WINCHESTER WATER DEPARTMENT	63	72	64	63	73	68	67	12	12	9	9	9	9	10
3346000	WINTHROP WATER DIVISION,		63	75	75	53	57	65		20	21		21	22	21
3347000	WOBURN DEPARTMENT PUBLIC WORKS	98	96	98	88	96	87	94	9	21	7	12	13	9	12
	REGION 3 AVERAGE	69	67	63	59	63	59	63	13	14	14	13	13	14	14

*Residential Gallons per Capita Day is the average number of gallons used per resident per day over the calendar year. Massachusetts state standard = 65 gal/capita/day.

** Unaccounted for Water is the percent of water that cannot be accounted for by the PWS. UAW may be due to water loss through leaks (actual losses), differences between master meter and service meter totals (paper losses) and/or unmetered municipal uses such as fire fighting. Massachusetts state standard = 10%.

Blank values indicates that there was insufficient data to calculate a value. Reasons include system not 100% metered or master meter malfunction.