

CITY OF NEWTON
IN BOARD OF ALDERMEN
PUBLIC FACILITIES COMMITTEE AGENDA
SPECIAL MEETING

WEDNESDAY, OCTOBER 1, 2014

Meeting to start immediately following a brief Finance Committee meeting scheduled at 6:45 PM. The Public Facilities Committee will start no later than 7:15 PM.

Room 209

ITEMS SCHEDULED FOR DISCUSSION:

- #131-13 ALD. CROSSLEY, FULLER, SALVUCCI, JOHNSON, CICCONE requesting periodic updates and discussion, at the discretion of the members of the Public Facilities Committee or the Commissioner of Public Works, on the condition functioning, operations and management of all elements of the City sewer, water and storm water systems including the following:
- Water meters
 - Implementation of the ten project area strategic plan to remove infiltration in the City sewer system
 - Implementation of the long range strategic plan to repair and replace City water mains, especially to correct for fire flow
 - Status of the City's Private Inflow Removal Program to resolve and disconnect illegal storm water connections to the City sewer system
 - Current billing practices
 - Rates analyses needed to facilitate an informed comparison of billing options to include the following options either alone or in combination: seasonal rates, second meters, tiered rates, frequency of billing, low income credits. [03/23/13 @ 11:13 AM]
- #153-13 PUBLIC FACILITIES COMMITTEE requesting periodic updates on the progress of the citywide storm water system assessment needed to define the scope of repairs to the system, as well as methods of financing the assessment and an accounting of the storm water enterprise fund. [04/02/13 @ 11:02 AM]

ITEMS NOT SCHEDULED FOR DISCUSSION:

- #341-14 REFERRED TO PS&T AND PUBLIC FACILITIES COMMITTEES
TRANSPORTATION DIVISION, requesting presentation of the Washington Street Access Improvement Study provided by the Central Transportation Planning Staff. [08/29/14 @ 11:08 AM]

The location of this meeting is handicap accessible and reasonable accommodations will be provided to persons requiring assistance. If you need a special accommodation, *please contact John Lojek, at least two days in advance of the meeting: jlojek@newtonma.gov, or 617-796-1064. For Telecommunications Relay Service dial 711.*

- #328-14 ALD. ALBRIGHT, DANBERG, & LAREDO requesting a review of double poles in Newton including a random sampling of ten double on the north side and ten double poles on the south side of Newton to determine which utility is holding up the removal of double poles. [08/19/14 @ 9:16 AM]
- #312-14 ALD. ALBRIGHT, BAKER, BLAZAR, HESS-MAHAN, JOHNSON, LAREDO and LEARY requesting discussion of proposal to purchase and install electronic bulletin boards on the exterior of City properties, including consideration of such issues as the possible distraction of passersby, the precedent of allowing electronic displays which may invite imitation by private landowners, and the visual impact on public open spaces, as well as how the installation would fit with the law or policy of Newton's sign code, and consideration of possible alternative means to help fulfill the worthy goal of providing public information to those who may need it. [07-17-14 @ 10:24 AM]
- #189-14 PUBLIC FACILITIES COMMITTEE requesting periodic updates on the Zervas Elementary School Project. [04/17/14 @ 10:48 PM]
- #188-14 PUBLIC FACILITIES COMMITTEE requesting periodic updates on the Cabot Elementary School Project. [04/17/14 @ 10:48 PM]

REFERRED TO PROGRAMS & SERVICES AND PUBLIC FACILITIES COMMITTEES

- #119-14 ALD. ALBRIGHT AND CROSSLEY requesting discussion with the Inspectional Services Department to explain the development of short and long term plans to identify and correct buildings, sidewalks, playgrounds, etc...that do not conform to American Disability Act (ADA) standards. The discussion should include information on how improvements will be incorporated into the Capital Improvement Plan or if less than \$75,000 into a comprehensive budget plan to correct ADA deficiencies. [03/12/14 @ 4:18 PM]
- #62-14 ALD. CROSSLEY, HESS-MAHAN, ALBRIGHT AND SALVUCCI requesting a report from the administration on the status of the City strategy to meet its obligations as a Department of Energy Resources Green Community, to reduce municipal energy consumption by 20% over five years, particularly regarding advancing the implementation of the building energy audits program recommending energy efficiency measures in existing buildings, and how that strategy is incorporated into the capital improvement plan. [02/24/14 @ 6:35 PM]
- #14-14 ALD. ALBRIGHT, JOHNSON & NORTON requesting a discussion of the snow removal operations during the last storm including information on the use of brine and how it worked, the effectiveness of the new snow melter, snow dumping, and what can be done to make city sidewalks safe in the event of an ice storm. [12/20/13 @ 4:21 PM]

#417-13 PUBLIC FACILITIES COMMITTEE requesting that the Administration provide updates on the progress of the Angier Elementary School project. [11/21/13 @ 9:16 AM]

#200-13(2) ALD. JOHNSON proposing amendment(s) to Chapter 27 of the city ordinances relative to signs on sidewalks, traffic islands, and other city property to establish an application process for placing signs (sandwich boards, placards, and showboards), which includes requirements, timelines for posting and removal of signs. [02/26/14 @ 9:07 AM]

REFERRED TO PUBLIC FACILITIES AND FINANCE COMMITTEES

#41-13 ALD. CROSSLEY, FULLER AND SALVUCCI requesting a discussion with the administration to review how the city inventories, plans for, budgets and accounts for needed smaller capital expenditures (currently set at under \$75,000), which are excluded from the Capital Improvement Plan (CIP); how to make these non-CIP capital maintenance items visible, and how to integrate them with the overall planning, CIP, and budgeting processes. [01/14/13 @ 5:02 PM]

REFERRED TO PROG & SERV, PUB. FAC., ZAP, AND FINANCE COMMITTEES

#256-12 ALD. HESS-MAHAN, SANGIOLO & SWISTON proposing an ordinance promoting economic development and the mobile food truck industry in the City of Newton. [08/06/12 @ 4:46 PM]

#246-12 RECODIFICATION COMMITTEE recommending Sec. 25-1, which requires a permit to create a trench, be reviewed to determine if a new section relative to excavation should be established to regulate unsafe excavation beyond the regulation of trenches, as the City Engineer has advised that all trenches are excavations, but not all excavations are trenches, which amendment would replace **Sec. 20-53. Excavations; protection; erection of barriers.**, which was deleted as part of recodification because it conflicted with Sec. 25-1.

#245-12 RECODIFICATION COMMITTEE recommending that Chapter 11, RECYCLING AND TRASH as most recently amended by Ordinance Z-68 and Z-87, dated 6/21/10 and 5/16/11, respectively, be reviewed and be amended as necessary.

#301-12(2) PUBLIC FACILITIES COMMITTEE requesting updates on the progress of the Carr School Renovation Project.

REFERRED TO PROG. & SERV AND PUBLIC FACILITIES COMMITTEES

#36-12 ALD. CROSSLEY & FULLER requesting Home Rule legislation or an ordinance to require inspections of private sewer lines and storm water drainage connections prior to settling a change in property ownership, to assure that private sewer lines are functioning properly and that there are no illegal storm water connections to the city sewer mains.

- A) Sewer lines found to be compromised or of inferior construction would have to be repaired or replaced as a condition of sale;
 - B) Illegal connections would have to be removed, corrected, and re-inspected in accordance with current city ordinances and codes, as a condition of sale.
- [01/24/12 @ 8:07 AM]

REFERRED TO PS&T AND PUBLIC FACILITIES COMMITTEES

- #413-11 ALD. CICCONE, SALVUCCI, GENTILE & LENNON updating the Public Facilities and Public Safety & Transportation Committees on the progress of renovations to the city's fire stations. [11-17-11 @ 11:07 AM]

REFERRED TO PS&T, PUBLIC FACILITIES AND FINANCE COMMITTEES

- #310-10(2) ALD. DANBERG, BLAZAR, KALIS, SCHWARTZ, ALBRIGHT, HESS-
(#409-12) MAHAN, RICE, COTE, LEARY, AND NORTON requesting amendments to Sec. 26-8D of the City of Newton Ordinances to modify and make permanent the trial program for removal of snow and ice from sidewalks and to provide for enforcements and fines for violations. [09/10/14 @ 2:12 PM]

- #367-09 PUBLIC FACILITIES COMMITTEE requesting discussion with the Law Department on how to resolve the dispute with NStar regarding whose responsibility it is to repair the streetlight connection between the manhole and the base of the streetlight. [10/21/09 @ 9:00 PM]

- #253-07 ALD. LINSKY ALBRIGHT, JOHNSON, HARNEY, SANGIOLO, SALVUCCI, MANSFIELD, BURG, SCHNIPPER requesting (1) a review as to how provisions of applicable ordinances, specifically 5-58, were implemented during the course of the Newton North project, and (2) consider proposed revisions of 5-58 including, but not limited to:
- (a) timely provision of documentation by the public building department to the Board of Aldermen and Design Review Committee;
 - (b) establishment of liaison committees to facilitate communications and input from neighborhoods affected by projects subject to this ordinance;
 - (c) approval of final design plans by the Board of Aldermen of projects subject to this ordinance;
 - (d) oversight during the construction phase of projects subject to this ordinance by appropriate Board committee(s) both in respect to approval of change orders as well as design changes; and
 - (e) generation of a required record detailing the entire construction process by the public building department to guide present and future oversight of projects subject to this ordinance.
 - (f) establishment of a committee to provide oversight for public building construction and renovation during all phases of planning, design and construction. [08/07/07 @ 3:12 PM]

Respectfully submitted,

Deborah Crossley, Chairman

City of Newton



DEPARTMENT OF PUBLIC WORKS

OFFICE OF THE COMMISSIONER

1000 Commonwealth Avenue
Newton Centre, MA 02459-1449

Setti D. Warren
Mayor

September 26, 2014

To: Public Facilities Committee

From: David F. Turocy, Commissioner of Public Works

Re: Water/Sewer/Stormwater Rate Restructuring

The Water/Sewer/Stormwater Infrastructure Committee, consisting of members of the Public Works Department, Executive Office and Board of Aldermen have had extensive deliberations over the methodology used to bill customers for water/sewer usage, as well as stormwater management. We are proposing significant changes to the rate structure for both of these programs and will provide our justification for these changes, and offer opportunity for questions and further discussion.

Water/Sewer Rates

The City has a 3-tiered rate structure for both water and sewer that is designed to encourage water conservation. Water is measured at individual residences and businesses through a newly replaced system of water meters and transponders; and sewer usage is extrapolated solely from water usage. Since all water is assessed sewer charges, even though much of it is used outdoors and does not contribute to the sewer volume, the appropriateness of that methodology can be called into question. We are proposing the allowance of 2nd (irrigation) water meters that will preclude outdoor water use from being assessed sewer charges, while adjusting the tier structure to, among other goals, dampen the impact of these changes on rate payers.

Stormwater Rates

When the City created a Stormwater Fee in 2006 to address the needs of the drainage network, it did so with a fixed fee that assumes one rate for residents and a second rate for commercial and businesses. Over time, that rate has been proven to be insufficient to meet the needs of the City's stormwater program, and also does not reflect the vastly different amounts that individual properties contribute to the stormwater network. We are in the process of conducting an Assessment of the City's Stormwater Infrastructure, with a focus on 3 primary areas: localized flooding, stream maintenance, and culvert maintenance to better define the city's needs. An Executive Summary of our consultant's (Weston & Sampson) work to date is included with this memo. We are proposing the restructure of our stormwater fee to one that is based on impervious surface, area from which water does not re-charge but rather gets transmitted into the city's drainage network, rather than simply two fixed rates.

Public Works and the Executive Office are appreciative of the support we have received from the Board of Aldermen in developing our Utilities Infrastructure Strategic Plan for improvement, and mindful of our commitment to stabilize annual rate increases without exceeding 4% increase per year. We have evaluated these restructuring proposals within that framework and are presenting them together so as to show the comprehensive impact of both of these utilities charges to the community.

Stormwater Infrastructure Improvement Plan - Executive Summary Newton, MA

The ongoing assessment and maintenance of drainage infrastructure and associated waterways is critical to protecting flood-prone areas and improving water quality. Like many communities, the City of Newton's stormwater system is old and faces challenges related to stormwater quantity and quality; system maintenance and upgrades; and localized flooding. While the City completes projects to address some of these issues, the City requires a comprehensive plan to address all of their stormwater needs to effectively invest limited financial resources. The City is currently in the process of developing a multi-year Stormwater Infrastructure Improvement Plan, which will allow the City to plan and prioritize stormwater projects, and have the funding necessary to complete the work. With the extensive requirements of the National Pollutant Discharge Elimination System Phase II Small Municipal Separate Storm Sewer Systems (MS4s) General Permit (NPDES Phase II Permit), the value of having such a plan has become even more apparent. The plan will be consistent with the City's existing multi-year plans that invest in water and sewer infrastructure.

A steering committee is currently guiding the plan's development, gathering information from municipal staff and the general public. To date, the Committee has collected and reviewed extensive information regarding the condition of the City's drainage system. This includes historical information, as well as information from recent field reconnaissance. Some of the historical data includes drainage system inspection, operation and maintenance data; in-system sampling data, and water quality data for nearby receiving waters; and information regarding best management practices implemented in compliance with the six minimum control measures of the 2003 NPDES Phase II permit.

To enhance the planning process, the Committee conducted a walking stream survey of each stream in Newton to document existing stream conditions, including the condition of culverts. The walking stream survey included over 14 miles of waterways. Using the condition information collected, the Committee developed a list of recommended improvements. Recommendations include: removal of debris within the stream bed and on nearby embankments, including fallen trees; removal of sediment in the stream bed and at culverts; structural evaluation, rehabilitation and maintenance of culverts; and repair of failing retaining walls. The Committee quantified each improvement to develop planning level costs.

Additional field reconnaissance included an evaluation of areas with localized flooding. Public works and engineering staff developed a list of priority flooding locations. Site visits were conducted at each location to define the problem, and create a list of tasks that may be required to implement a solution. The Committee developed estimated costs for evaluation, design and construction at each location.

In addition to those projects identified through the review of historical data and through field reconnaissance, the Committee also developed projects to satisfy compliance with the anticipated requirements of the pending NPDES Phase II Permit. Planning level cost estimates were developed for each proposed NPDES project.

The Committee has established a methodology and rating criteria to prioritize the comprehensive list of projects developed. The Committee will prioritize each project based on its probability of failure and consequence of failure. Probability of failure is based on two factors: the age of the asset and the condition of the asset. Consequence of failure will look at the potential impacts related to failure of the asset, including: public health and safety, property damage, cost of deferred maintenance, number of people influenced, traffic severity, and City development priorities. The Committee is currently in the

process of rating and prioritizing each project using the established methodology. The regulatory timeline for implementation of projects associated with the pending NPDES Phase II Permit will play a significant role in the scope and prioritization of projects.

Once consensus is reached regarding how projects are prioritized within the plan, the Committee will develop a multi-year Stormwater Infrastructure Improvement Plan. The Committee will analyze the financial impacts of the proposed Stormwater Infrastructure Improvement Plan, and develop a cash flow diagram to assess the plan's compatibility with the City's existing stormwater fee, and other available funding sources.

RATE STRUCTURE WITH 2ND METERS



City of Newton, Massachusetts

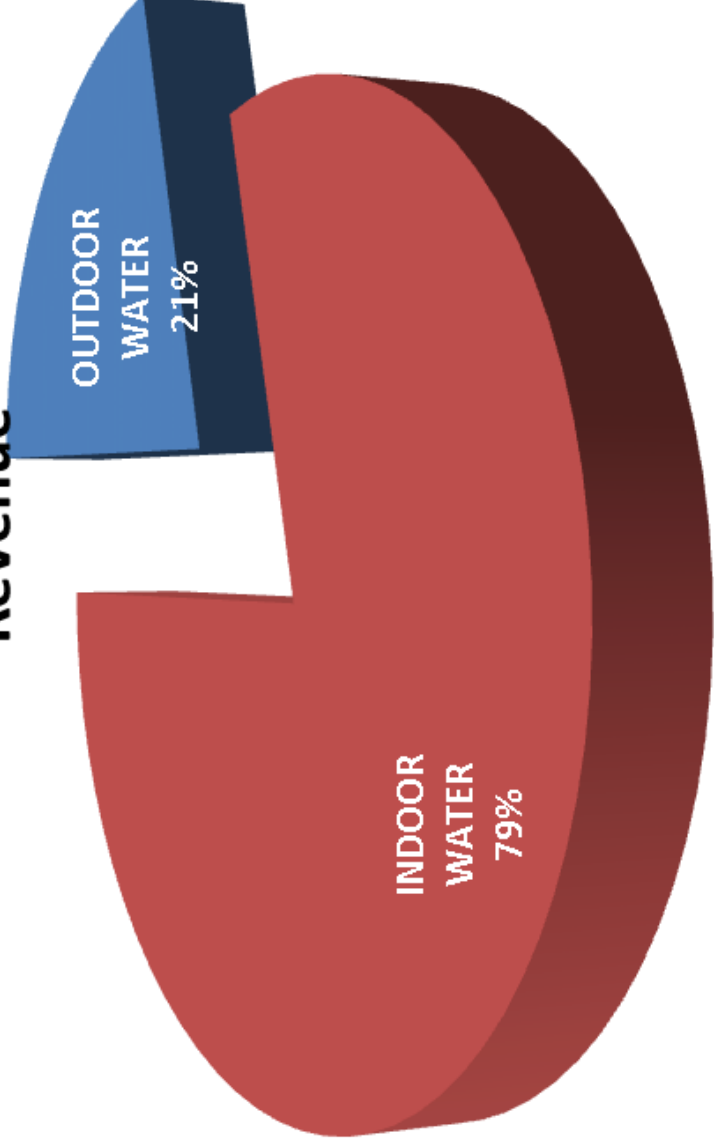
Setti D. Warren, Mayor

October 1, 2014

APPROXIMATELY 650,000 HCF'S OR 21%

Outdoor Water = \$6,700,000 of Sewer

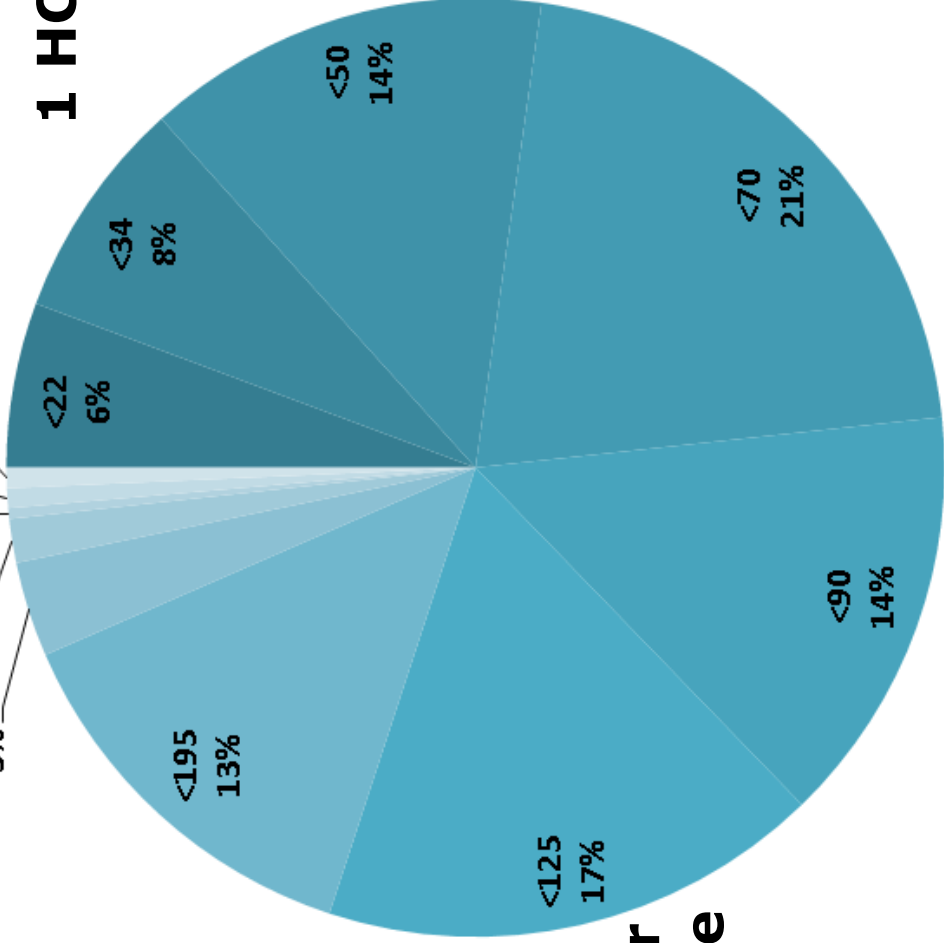
Revenue



How Much Water Do People Use??

<275 3% <425 2% <525 <1000 0% >1000 1%

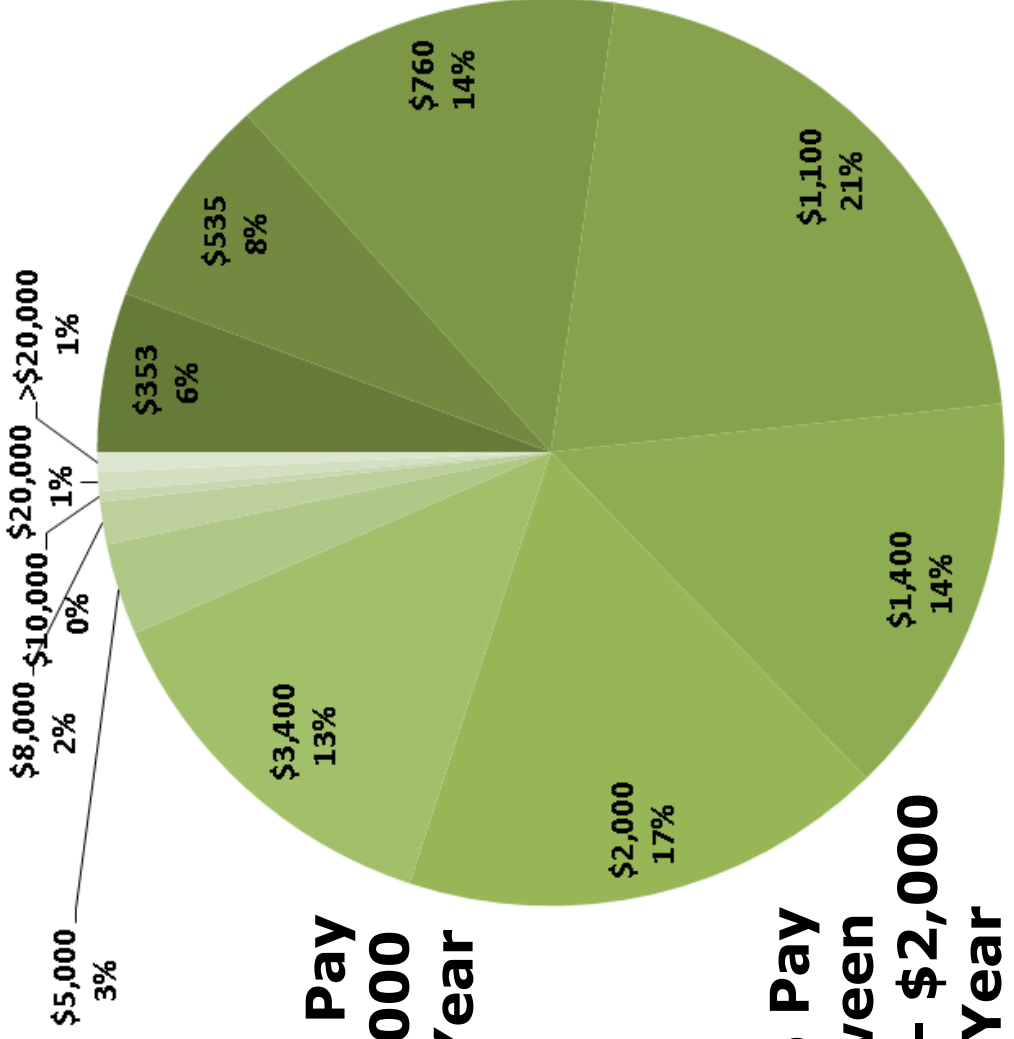
1 HCF = 748 Gals



80% of Water Customers Use <125 HCF's Per Year

63% of Water Customers Use <90 HCF's

How Much Do Most People Pay



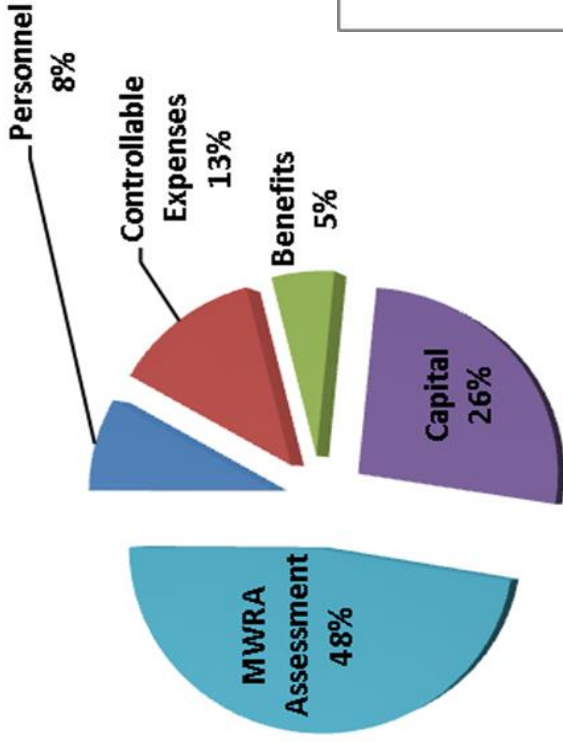
**80% Pay
<\$2,000
Per Year**

**44% Pay
between
\$1,000 - \$2,000
per Year**

**36% Pay
<\$1,000
Per Year**

WATER & SEWER BUDGETS

Water Budget - \$22 Million



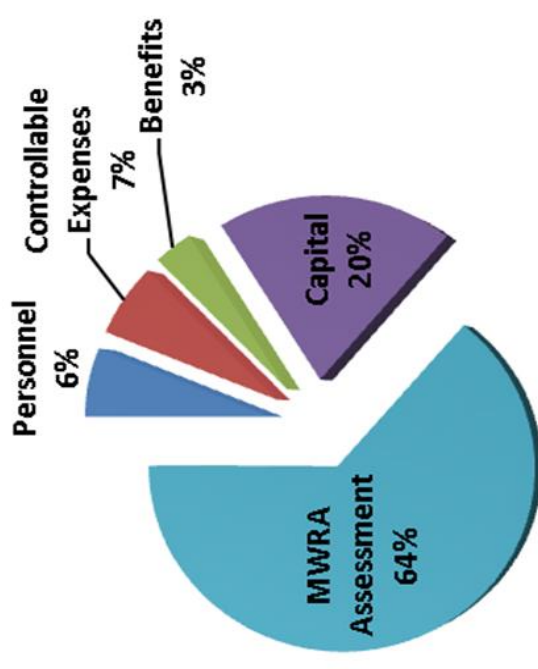
MWRA Sewer Assessments:

Population – 46.3%

Flow – 38.4%

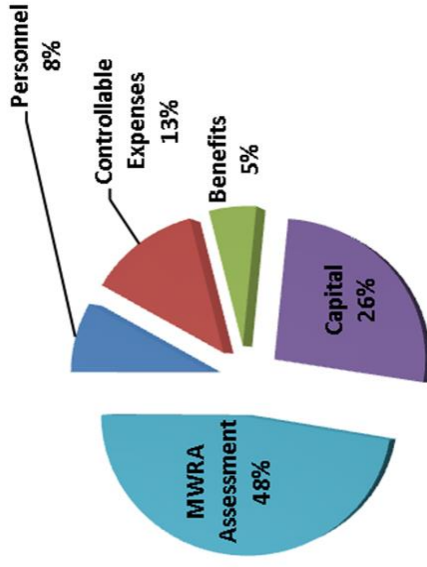
Strength of Flow – 15.3%

Sewer Budget - \$32 Million

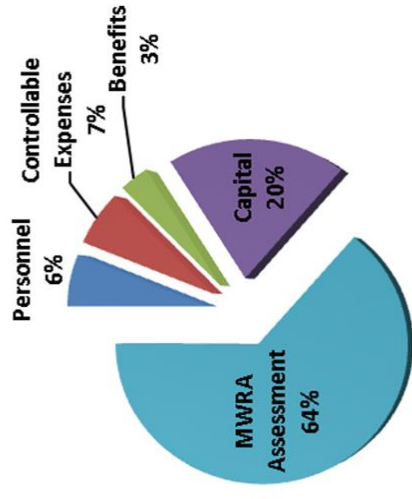


WATER & SEWER BUDGETS

Water Budget - \$22 Million



Sewer Budget - \$32 Million



MWRA ASSESSMENT

NO FIXED COSTS

HOWEVER,

\$10 MILLION

≈\$312 PER RESIDENCE

FIXED COSTS

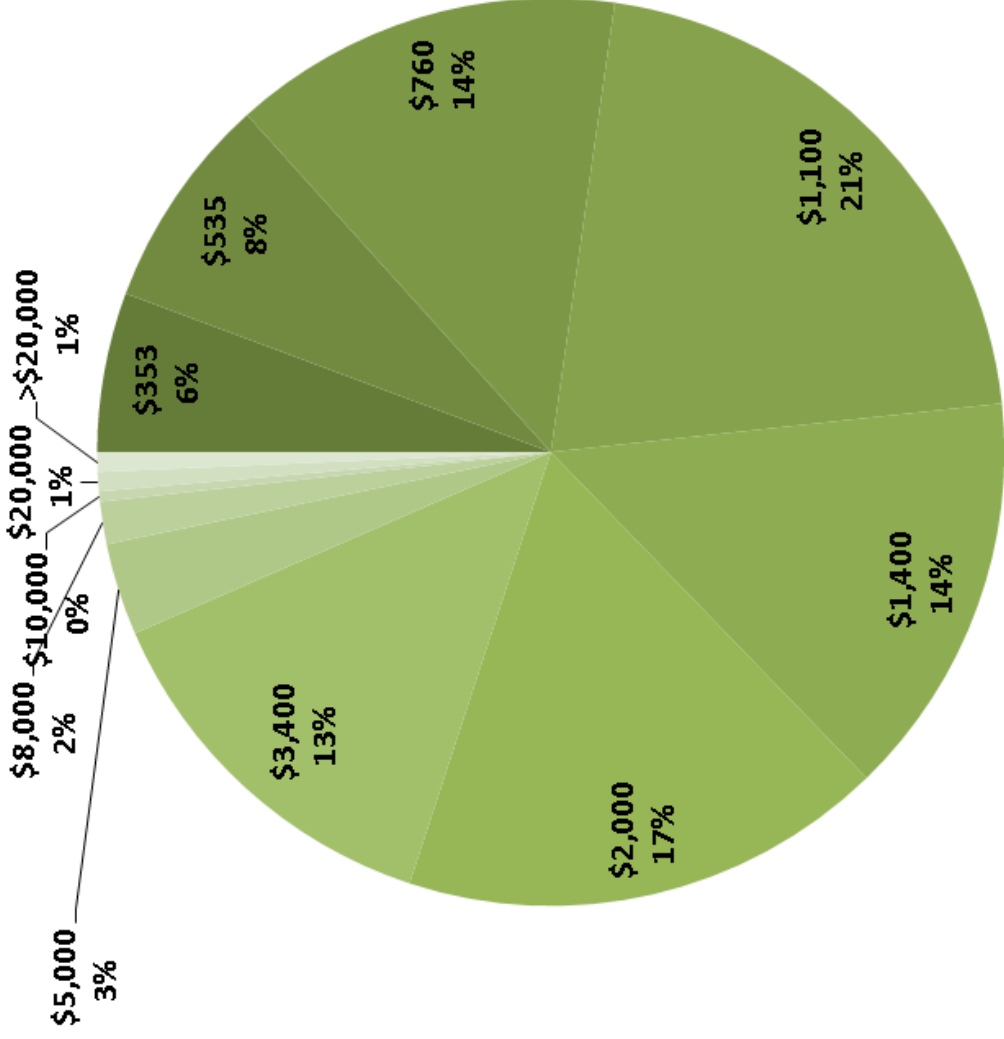
SEWER

\$17 MILLION

>\$531 PER

RESIDENCE

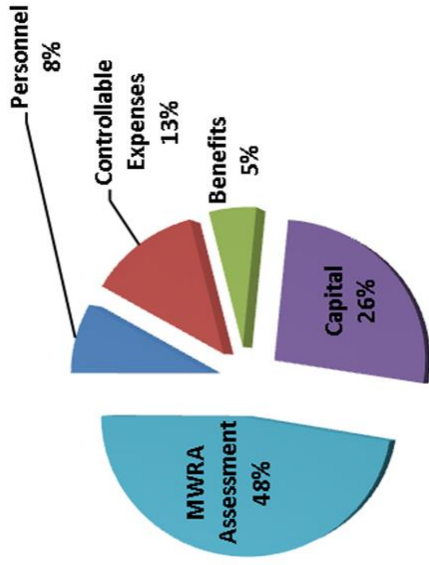
How Much Do Most People Pay



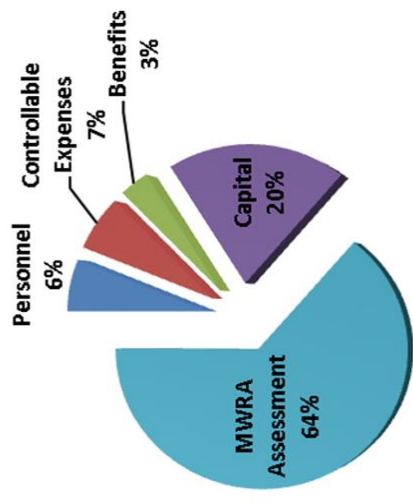
≈9,000 Accts
Pay < \$843

SINGLE RATES BASED ON 3,090,000 HCF'S

Water Budget - \$22 Million



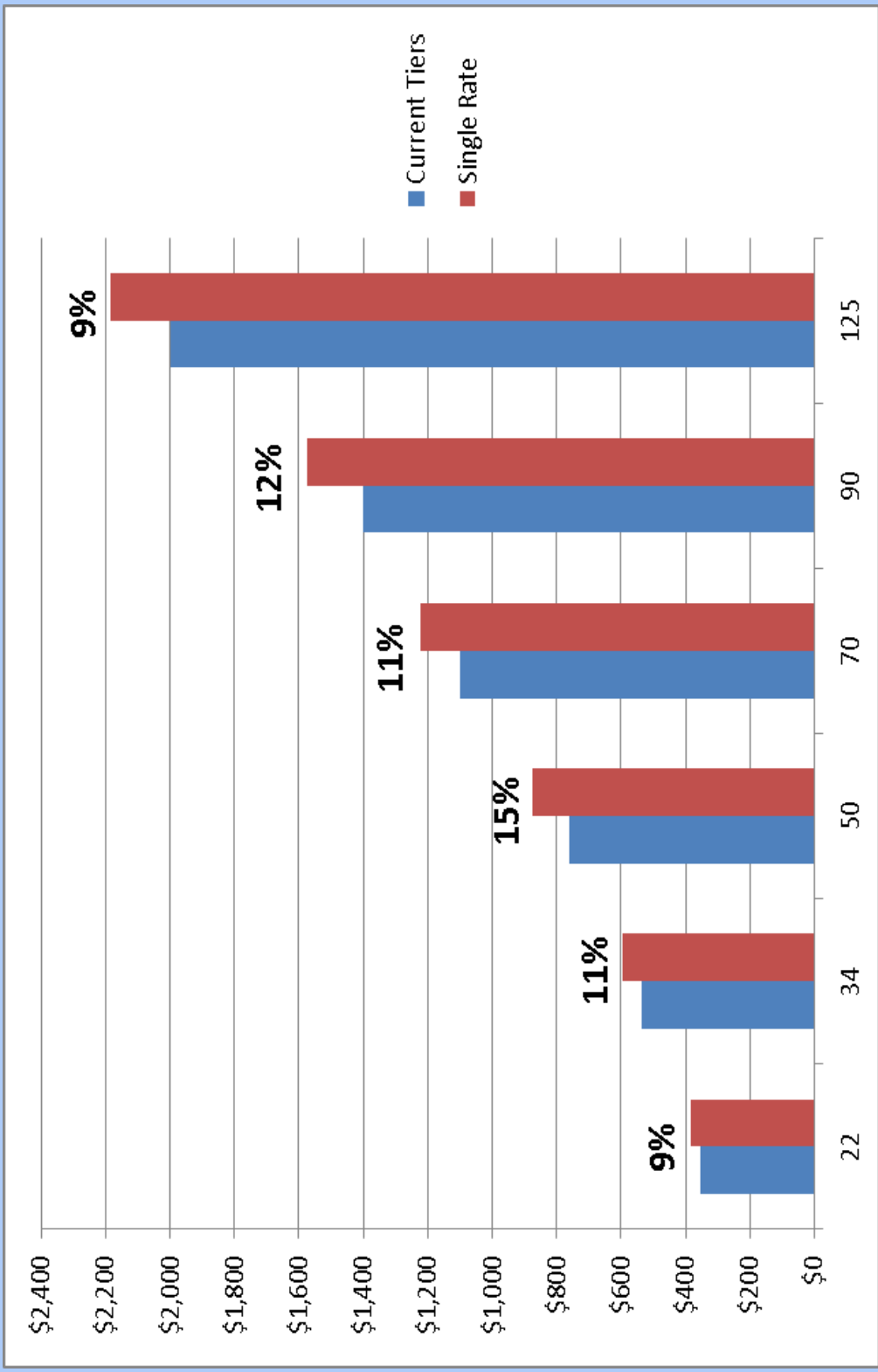
Sewer Budget - \$32 Million



WATER RATE
\$7.12 PER HCF

SEWER RATE
\$10.36 PER HCF

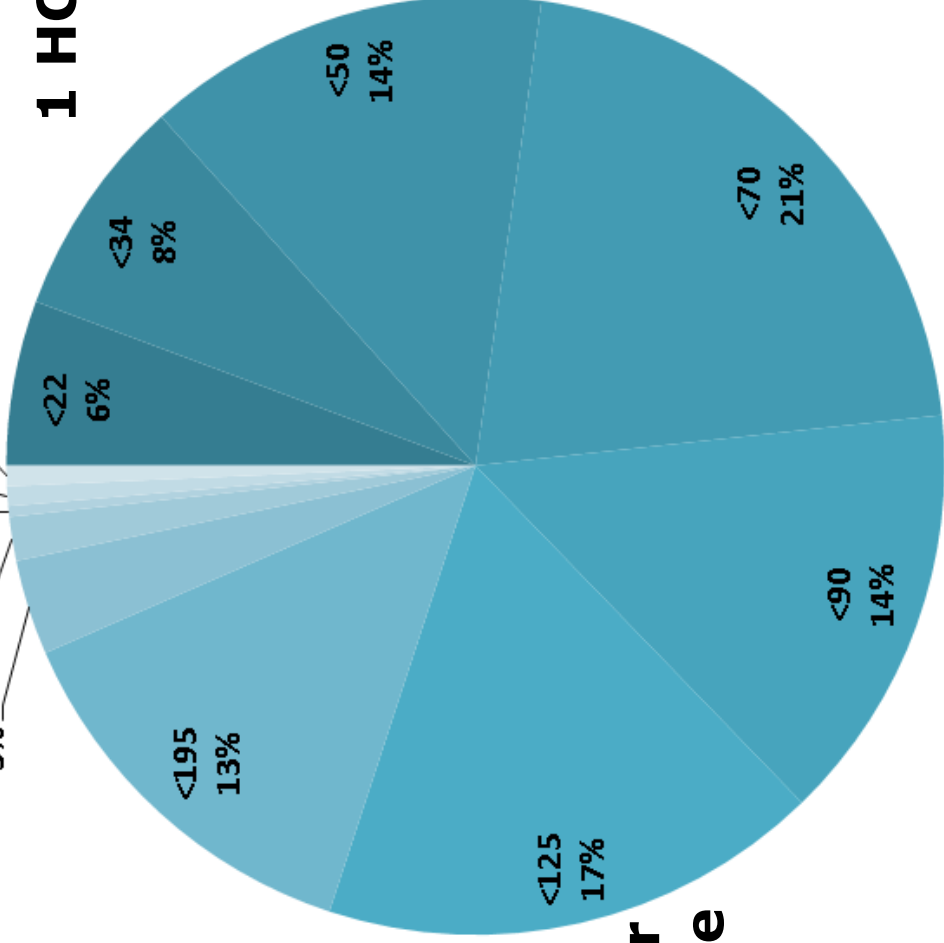
SINGLE RATE - LOSERS



How Much Water Do People Use??

<275 3%
<425 2%
<525 <1000 0%
>1000 1%

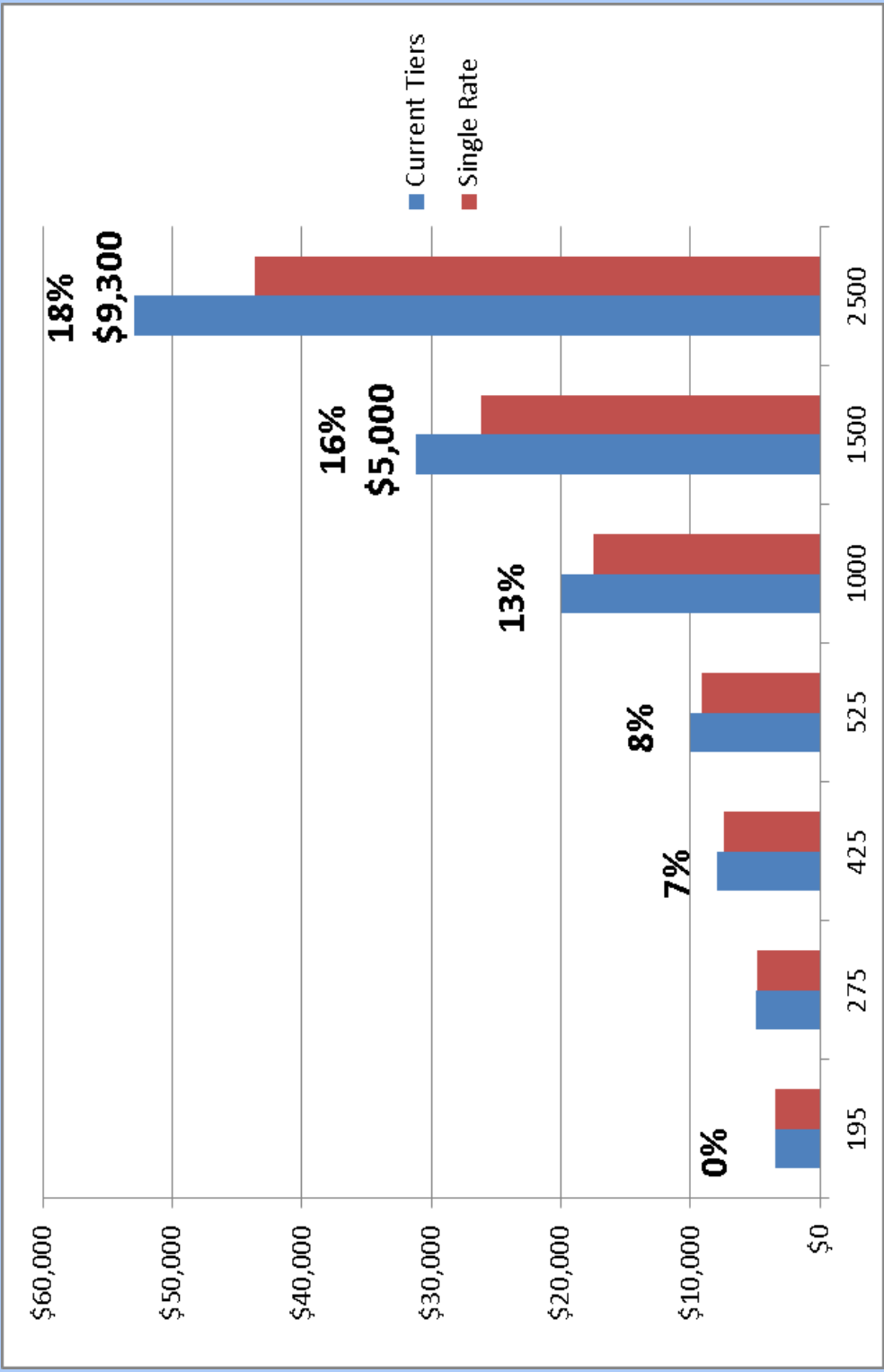
1 HCF = 748 Gals



63% of Water Customers Use <90 HCF's

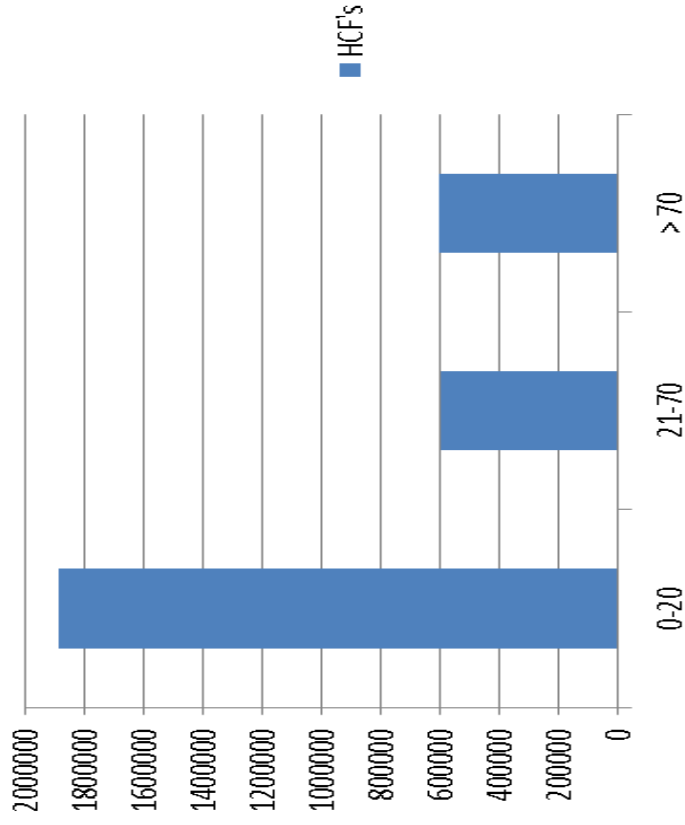
80% of Water Customers Use <125 HCF's Per Year

SINGLE RATE - WINNERS

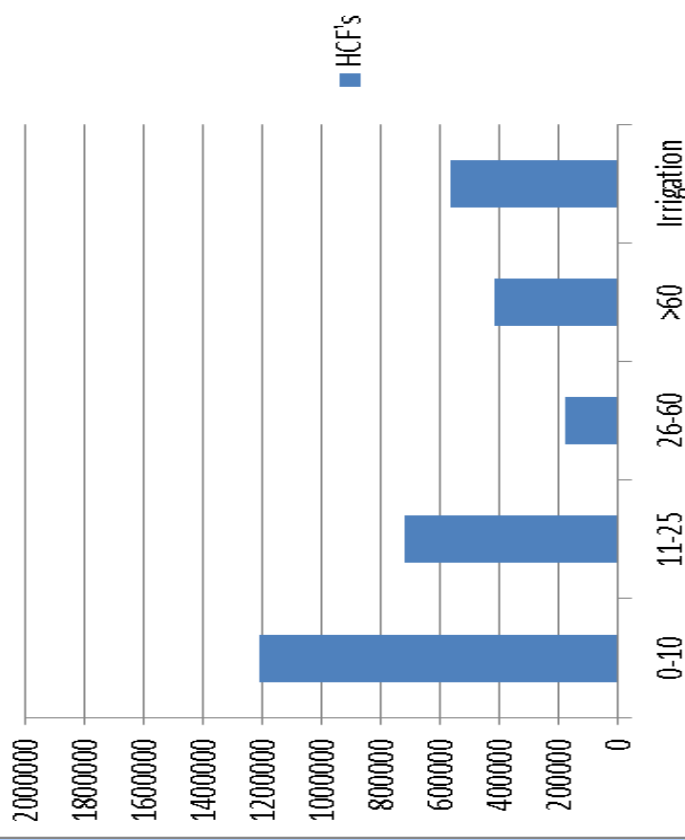


WHAT SHOULD THE TIERS LOOK LIKE??

Current HCF's by Tier



Proposed HCF's by Tier



CONSIDERATIONS IN SETTING RATES

- **Primary Considerations:**
 - Provide sufficient resources for Utilities Operations
 - Fairness to rate payers – pay for services rendered
- **Secondary Considerations:**
 - Sensitive to small users
 - Promote water conservation

CURRENT STORMWATER REVENUE

\$750,000

Current Impervious Area Breakout and Rates:

Customer Class	Approximate Impervious Area	Cost	%
Residential	73,000,000	\$25	65%
Commercial	20,000,000	\$150	18%
<u>Tax Exempt</u>	<u>19,000,000</u>	<u>\$150</u>	<u>17%</u>
Total	112,000,000		100%

REQUIRED STORMWATER REVENUE

\$2,300,000

Current Impervious Area Breakout and Rates:

Customer Class	Approximate Impervious Area	Cost	%
Residential	73,000,000	\$60/Residence	65%
Commercial	20,000,000	\$25/extra ERU	18%
<u>Tax Exempt</u>	<u>19,000,000</u>	<u>\$25/extra ERU</u>	<u>17%</u>
Total	112,000,000		100%

CURRENT RATE STRUCTURE

<u>HCF'S</u>	<u>WATER</u>	<u>% Incr</u>	<u>SEWER</u>	<u>% Incr</u>
0 - 20	\$ 5.84		\$ 8.60	
21 - 70	\$ 7.00	20%	\$10.33	20%
>70	\$ 8.41	20%	\$12.40	20%

WHAT SHOULD ADDITIONAL TIERS LOOK LIKE???

<u>HCF'S</u>	<u>WATER</u>	<u>% Incr</u>	<u>SEWER</u>	<u>% Incr</u>
0 - 10	\$ 5.50		\$ 9.25	
10.1 - 25	\$ 6.40	16%	\$10.75	16%
25.1 - 60	\$ 7.70	20%	\$12.90	20%
> 60.1	\$ 9.25	20%	\$15.50	20%
Outdoor	\$ 9.00			

**Additional info will be provided
during the actual presentation on
October 1, 2014**

Utilities



Water / Sewer / Stormwater
Rate Restructures

Utilities – Water/Sewer/Stormwater



Water / Sewer Rate Restructure

Water/Sewer Rate Restructure

- Water/Sewer Budget- \$56,670,265

- **MWRA Assessment**

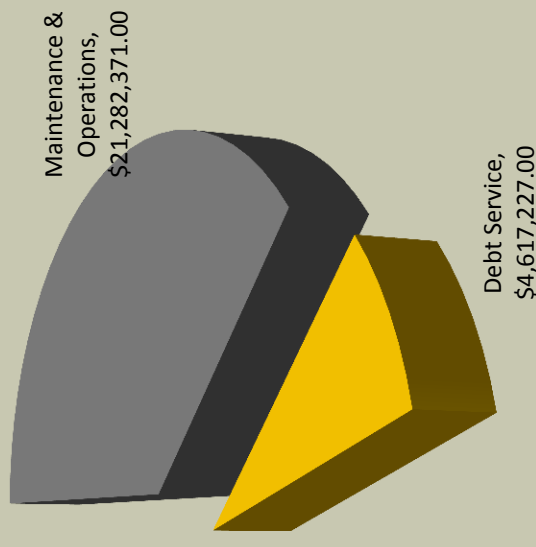
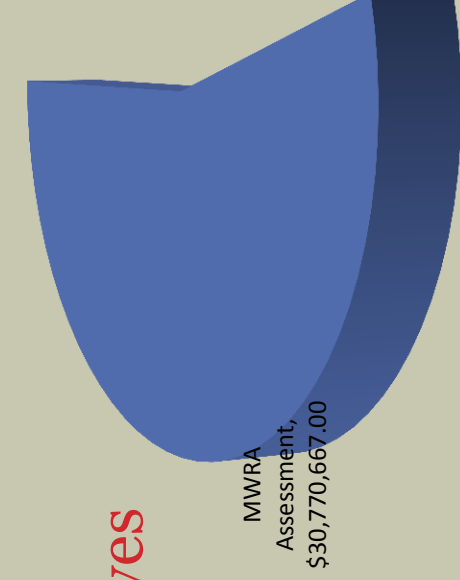
- ✦ \$30,770,667

- **Ops/Maint & Reserves**

- ✦ \$21,232,371

- **Debt Service**

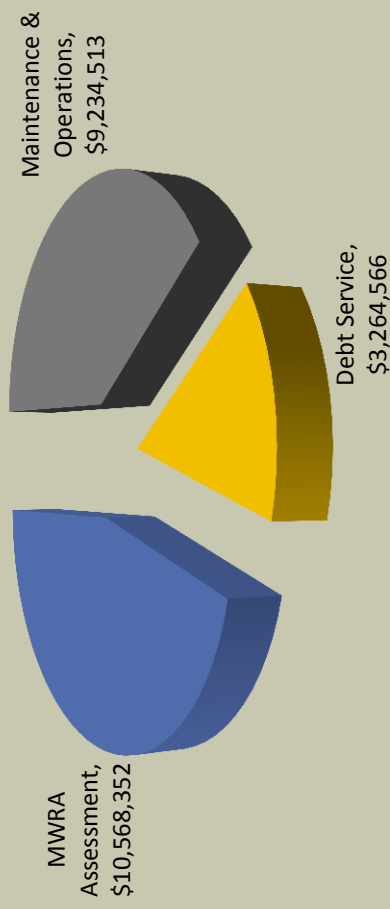
- ✦ \$4,617,227



Water/Sewer Rate Restructure

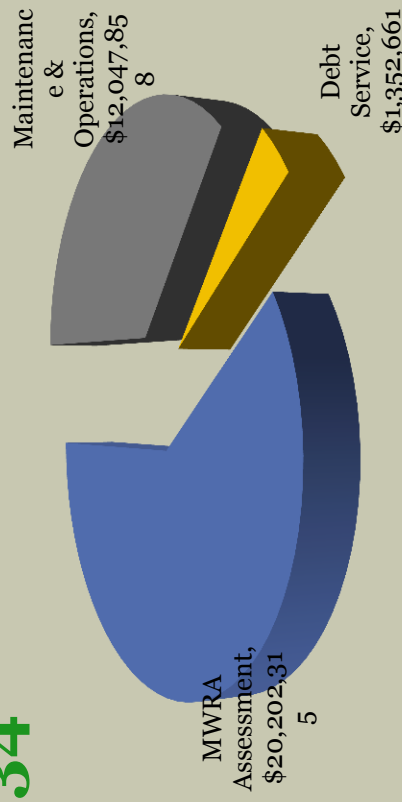
Water Budget - \$23,067,431

- MWRA Assessment –
 - ✦ \$10,568,352
- Ops/Maint & Reserves
 - ✦ \$9,234,513
- Debt Service
 - ✦ \$3,264,566



Sewer Budget - \$33,602,834

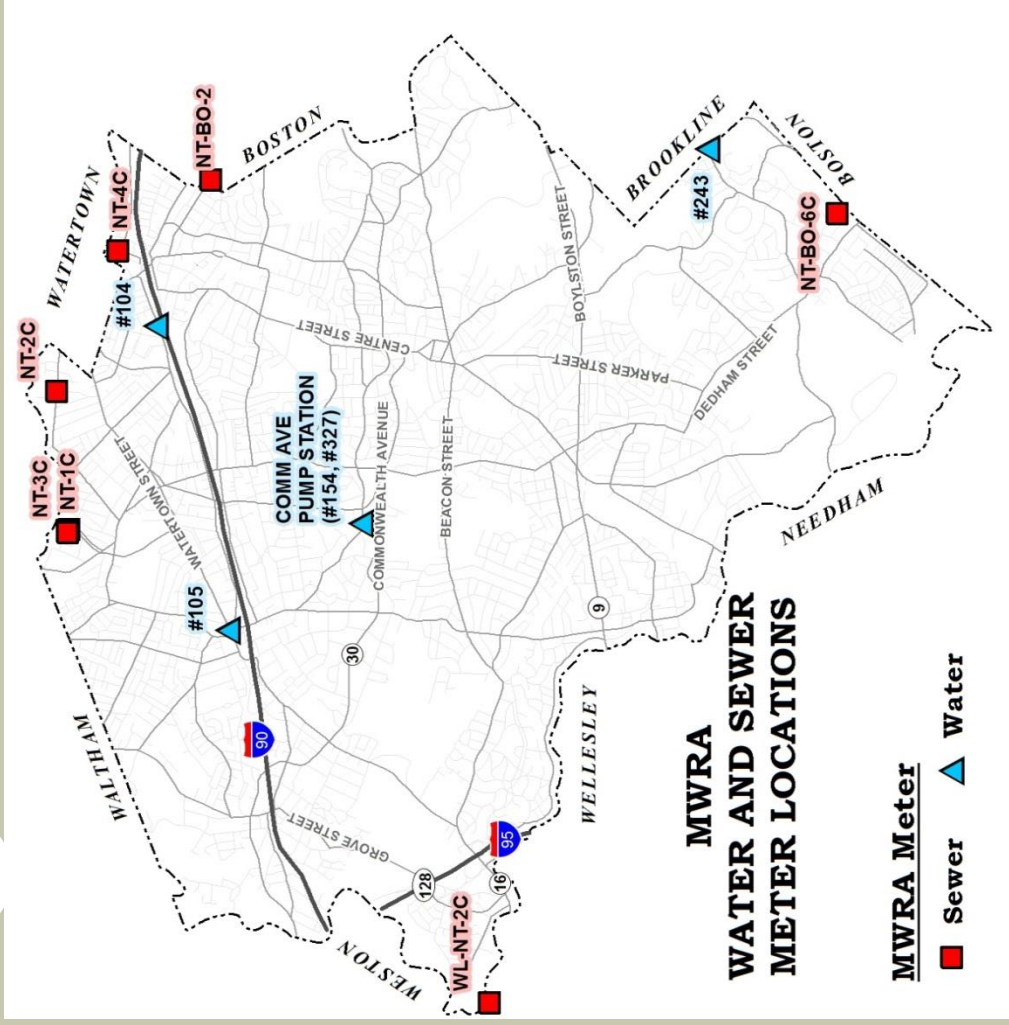
- MWRA Assessment –
 - ✦ \$20,202,315
- Ops/Maint & Reserves
 - ✦ \$12,047,858
- Debt Service
 - ✦ \$1,352,661



Water/Sewer Rate Restructure



- **MWRA**
 - Meters Water at 5 locations
 - Based on Previous Year
- **MWRA**
 - Meters Sewer at 7 locations
 - Based on 3-year ave. Flow/Pop./Strength
- **City**
 - Meters Water only at Residence/Business
 - Sewer metering is not feasible

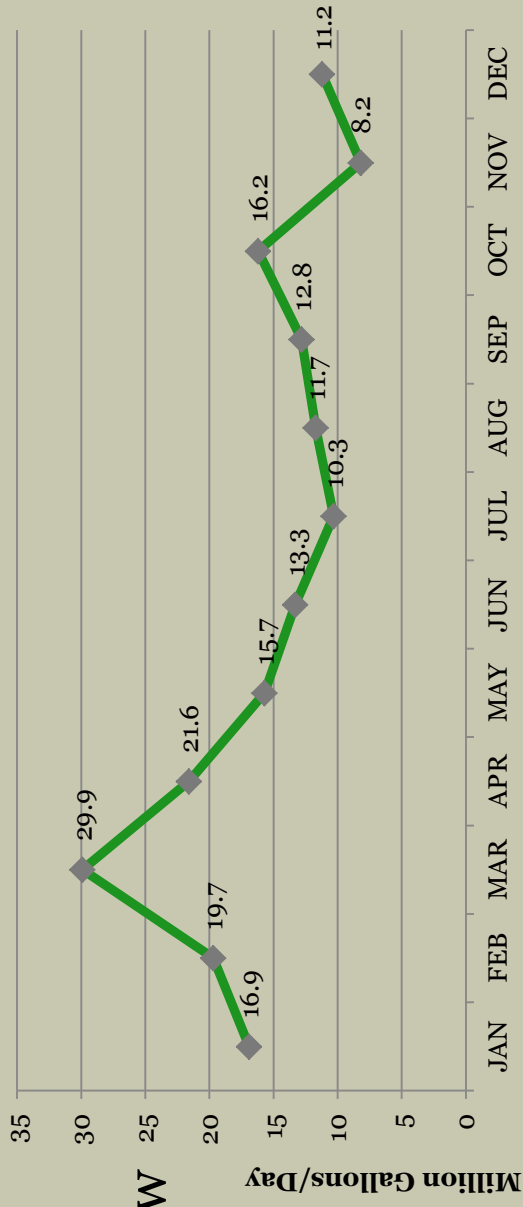


Water/Sewer Rate Restructure



Sewer Flow M Gallons/Day

- Peak in March and October
- Infiltration & Inflow



Water/Sewer Rate Restructure

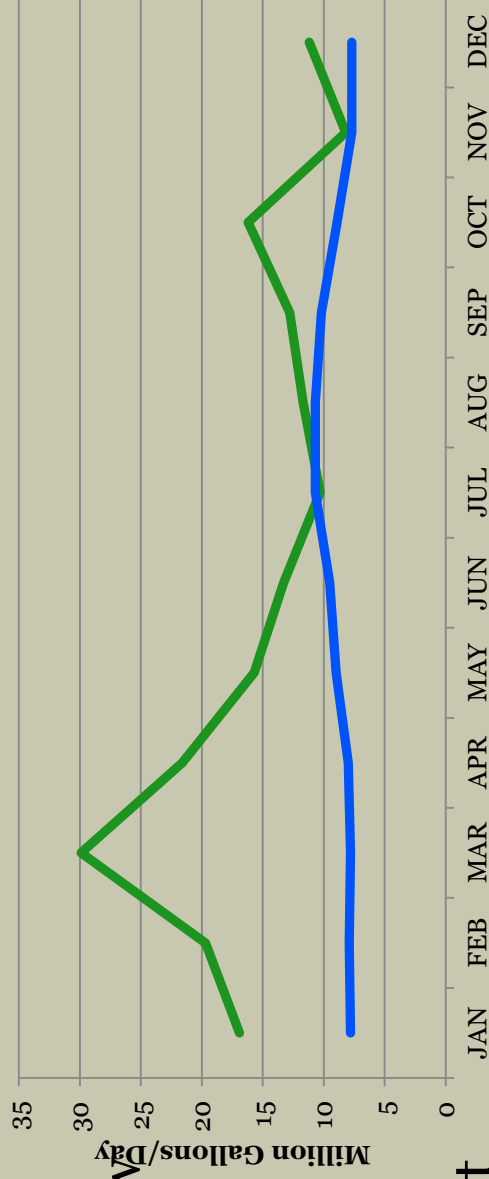


Sewer Flow M Gallons/Day

- Peak in March and October
- Infiltration & Inflow

Water Flow M Gallons/Day

- Peak in July/August
- Irrigation use



Water/Sewer Rate Restructure

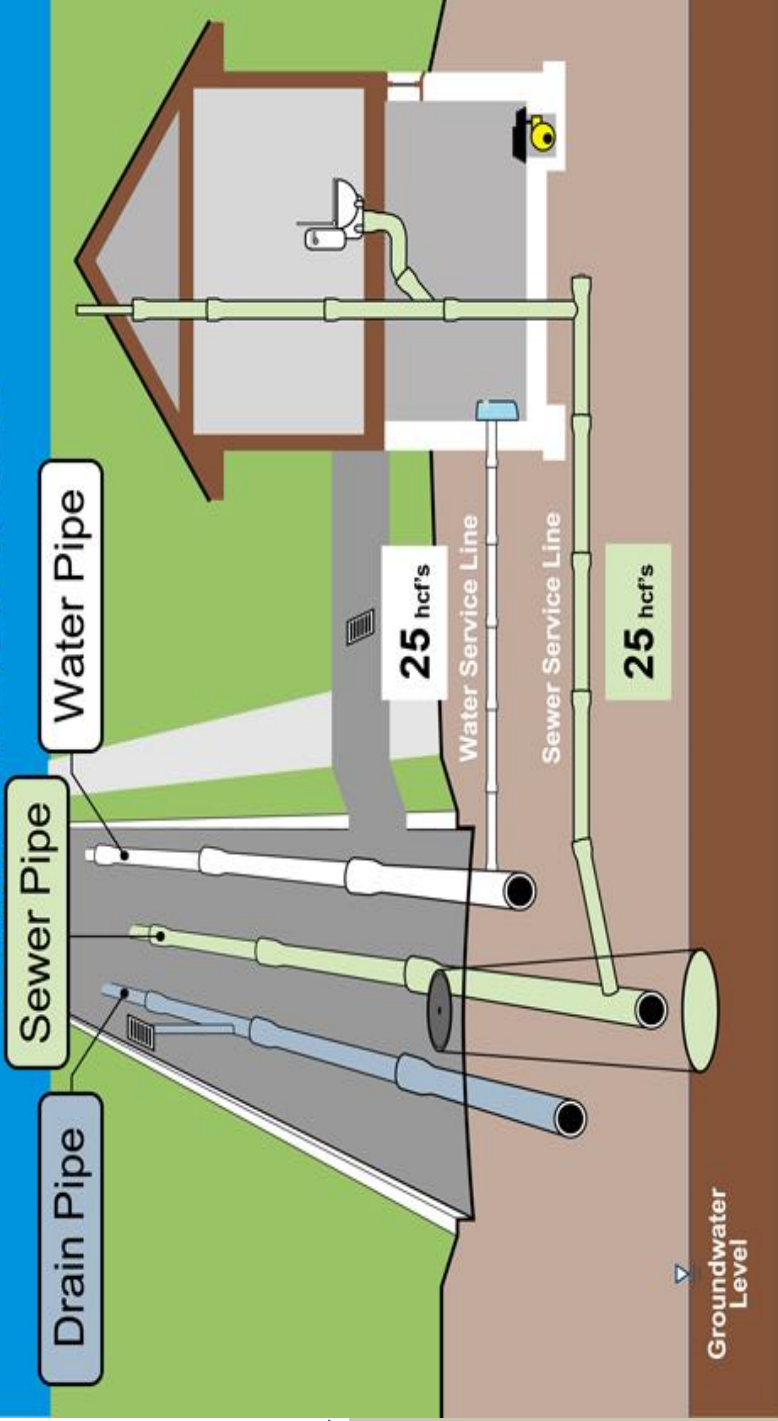


FY 2015 Water/Sewer Rates

<u>HCF</u>	<u>Projected Consumption</u>	<u>Water Rate</u>	<u>Sewer Rate</u>	<u>Water Revenue</u>	<u>Sewer Revenue</u>
0 - 20	1,100,000	6.07	8.81	6,674,536	9,687,040
21 - 70	1,300,000	7.27	10.58	9,454,900	13,751,296
> 70	775,000	8.74	12.70	6,771,942	9,840,640
TOTALS:	3,175,000			22,901,378	33,278,976

2nd Meter (Irrigation)

CURRENT AVERAGE USER

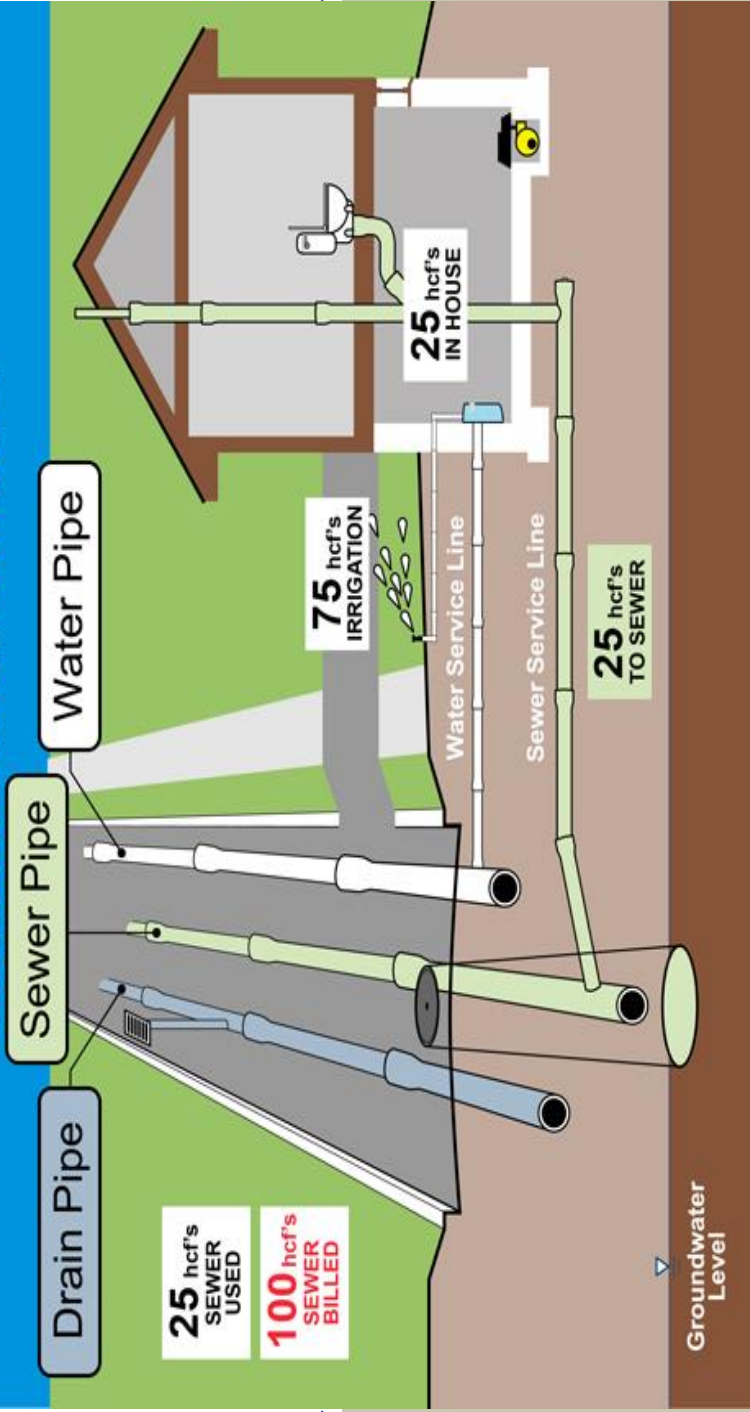


Scenario #1	Quarter	Annual
Current resident		
No irrigation use		
25 hcf's/qtr; 100hcf's/yr		

Water	\$ 152	\$ 608
Sewer	\$ 224	\$ 896
Total	\$ 376	\$ 1,504

2nd Meter (Irrigation)

CURRENT IRRIGATION USER



Scenario #2
 Current resident
 Uses irrigation - 1/2 year
 25 hcf's/2 qtr; 100hcf's/2 qtr
 250 hcf's/yr

	Quarter	Annual
Water	\$ 719	\$ 1,742
Sewer	\$ 1,061	\$ 2,570
Total	\$ 1,780	\$ 4,312

Current Sewer Structure



Scenario #1		Quarter	Annual
Current resident	Water	\$ 152	\$ 608
No irrigation use	Sewer	\$ 224	\$ 896
25 hcf's/each quarter	Total	\$ 376	\$ 1,504
Scenario #2		Quarter	Annual
Current resident	Water	\$ 719	\$ 1,742
Uses irrigation 1/2 year 25 hcf's/2 quarters; 100hcf's/2 quarters	Sewer	\$ 1,061	\$ 2,570
	Total	\$ 1,780	\$ 4,312

Water/Sewer Rate Restructure



- **Primary Considerations:**
 - **Provide sufficient resources for Utilities operations**
 - **Fairness to rate payers – pay for services rendered**
- **Secondary Considerations:**
 - **Sensitive to small users**
 - **Promote water conservation**

Water/Sewer Rate Restructure



- Revised rate information

Process for 2nd meters



- Homeowner purchase meter & transponder from City vendor
- Homeowner contracts plumber to install meter and plumb necessary lines
- Utilities Division inspects/approves installation
- Notify City of intent by April 1st
- Rates take affect 1 July following installation

Utilities – Water/Sewer/Stormwater



Stormwater Fee Restructure

Stormwater Fee Restructure



- City established a Stormwater Fee in 2006
- Fixed Fee
 - \$25/Year – residential
 - \$150/Year – commercial
 - Annual Income - \$750,000
- Program Support
 - 6-person crew
 - Stormwater operations
 - \$150,000 Capital Funds

Stormwater Fee Restructure



- Program Support
 - 6-person crew –
 - Routinely augmented by Sewer Division personnel
- Stormwater Operations –
 - ✦ Costs have increased to extent of using all capital funds
 - ✦ New EPA Permit will increase Operational costs
- Capital Funds - \$150,000 Originally - \$0 Available Now
 - ✦ Stormwater Assessment underway
 - ✦ Capital Equipment needs

Stormwater Fee Restructure



Stormwater Assessment

- Localized Flooding
- Stream Maintenance
- Culvert Maintenance



Stormwater Fee Restructure



- Based on Impervious Surface
 - Residential (single family)
 - ★ ERU – Equivalent Residential Unit
 - Commercial, multi-family
 - ★ Ratio to ERU's

Impervious Surface:

- Any material or structure on or above the ground that prevents water infiltrating into the underlying soil.
- Impervious surface includes without limitation roads, paved parking lots, sidewalks, and roof tops.
- One ERU equals 2,600 square feet

Stormwater Fee Restructure



Both
businesses
currently pay
\$150

Utilities – Water/Sewer/Stormwater



- Questions?

Water/Sewer Rate Restructure



Back up Slides

Water/Sewer Rate Restructure



Completed Stormwater Projects Funded by Stormwater / Drain Use Fees From FY 2007 through Feb. 2014

Project Name	Description	Dates	Expenditures ¹
Hammond Pond Stormwater Improvement Project	The improvements included the removal of paved swales; and the construction of five bioretention cells, two sand filters and vegetated buffer areas.	Jul 2006 to Aug. 2007	
Crystal Lake Bath House Project	Planning, permitting, design and construction of stormwater collection and treatment measures for the existing parking lot & roof leaders.	Oct. 2007 - April 2012 (2 phases)	\$ 30,000.00
Ashmont Ave Drainage Study	Assessment of existing drainage infrastructure and flooding in the area.	June - Dec. 2007	\$ 35,000.00
Cheesecake Brook at Albemarle Rd	Conceptual design for brook wall restoration	Jan - April 2008	\$ 15,500.00
City Hall Ponds Sediment	Sediment Testing Contract	May - Oct. 2008	\$ 8,000.00
Ashmont Ave Drain Replacement and Upgrades	Construction contract to replace 24" diameter drain pipes and with twin 30" SDR 35 pipes	Jun - Sept. 2009	\$ 21,000.00
Culvert Inspections	Contract with FST to inspect road culverts and present findings in a report	Sept 2009 - Feb. 2010	\$ 178,000.00
Stormwater Rate Evaluation Study	Contract with CDM to evaluate our current stormwater rates and develop a new rate structure based on impervious area	2010 -2011	\$ 23,000.00
City Hall Ponds Dredging and Restoration	Survey, Design and Permits for the three ponds sediment removal project	Dec. 2011 - Sept. 2012	\$ 30,000.00
Webster and Rowe Street Drainage Project	Construction and implementation of our design to replace and upgrade to 24" drainage pipe	Sept - Dec. 2012	\$ 61,500.00
City Hall Ponds Dredging and Restoration	Contract to implement design, remove and dispose of sediment and restore disturbed banks	Jan. - June 2013	\$ 180,000.00
Catch Basin Inserts	Furnish and install water quality inserts for storm drains located in the Crystal Lake Watershed	April - July 2013	\$ 320,000.00
		Total	\$ 927,000.00

Notes:

¹ Many of these projects were designed, managed and in some instances constructed by DPW staff. Labor costs are only partially covered by the current stormwater fund budget and are not included in the expenditures column.

² This list does not include Operations and Maintenance, such as CB cleaning, repairs and replacement of storm drains and brook walls.

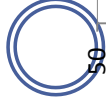
Water/Sewer Rate Restructure



Overall Budget	\$	30,973,993		
MWRA Assessment	\$	20,146,020	65%	
Ops/Debt/Reserves	\$	10,827,973	35%	Fixed
MWRA Assessment	\$	20,146,020		
Flow	\$	10,878,851	54%	
Population	\$	9,267,169	46%	Census
MWRA Flow	\$	10,878,851		
Account Usage	\$	4,351,540	40%	Flow
I&I Estimate	\$	6,527,311	60%	Fixed

Fixed Costs	\$	17,355,284		
Ops/Debt/Reserves	\$	10,827,973		
MWRA - I&I	\$	6,527,311		
Census	\$	9,267,169		
MWRA - Population	\$	9,267,169		
Flow	\$	4,351,540		
MWRA - Accounts	\$	4,351,540		
Overall Budget	\$	30,973,993		
Fixed	\$	17,355,284		56%
Census	\$	9,267,169		30%
Flow	\$	4,351,540		14%

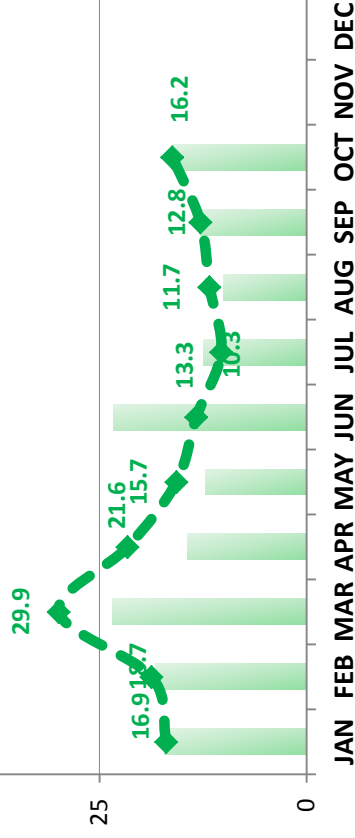
Primary “Fairness” Issue



- Sewer Flow peaks in Spring and Fall

NEWTON CY-13 SEWER FLOWS

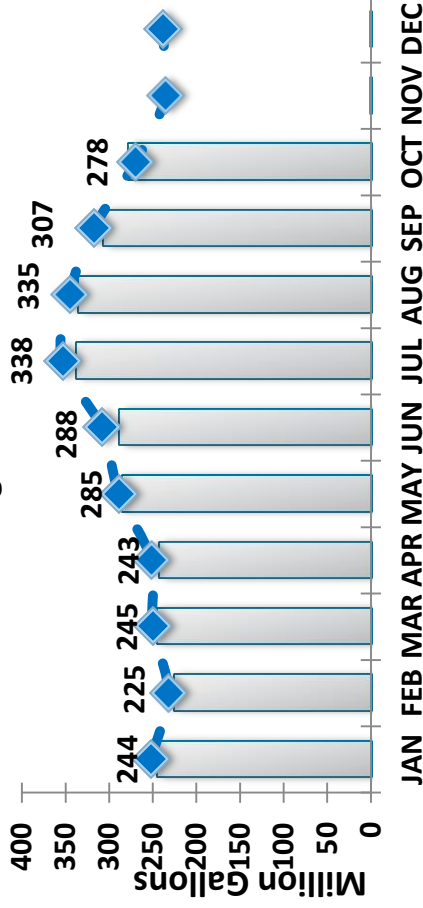
vs. 3YR Average – CY10-CY12



- Water Flow (and Sewer Billing) peaks in Summer

NEWTON CY-13 Water Demand

vs. 10Yr Average -- CY02-CY12

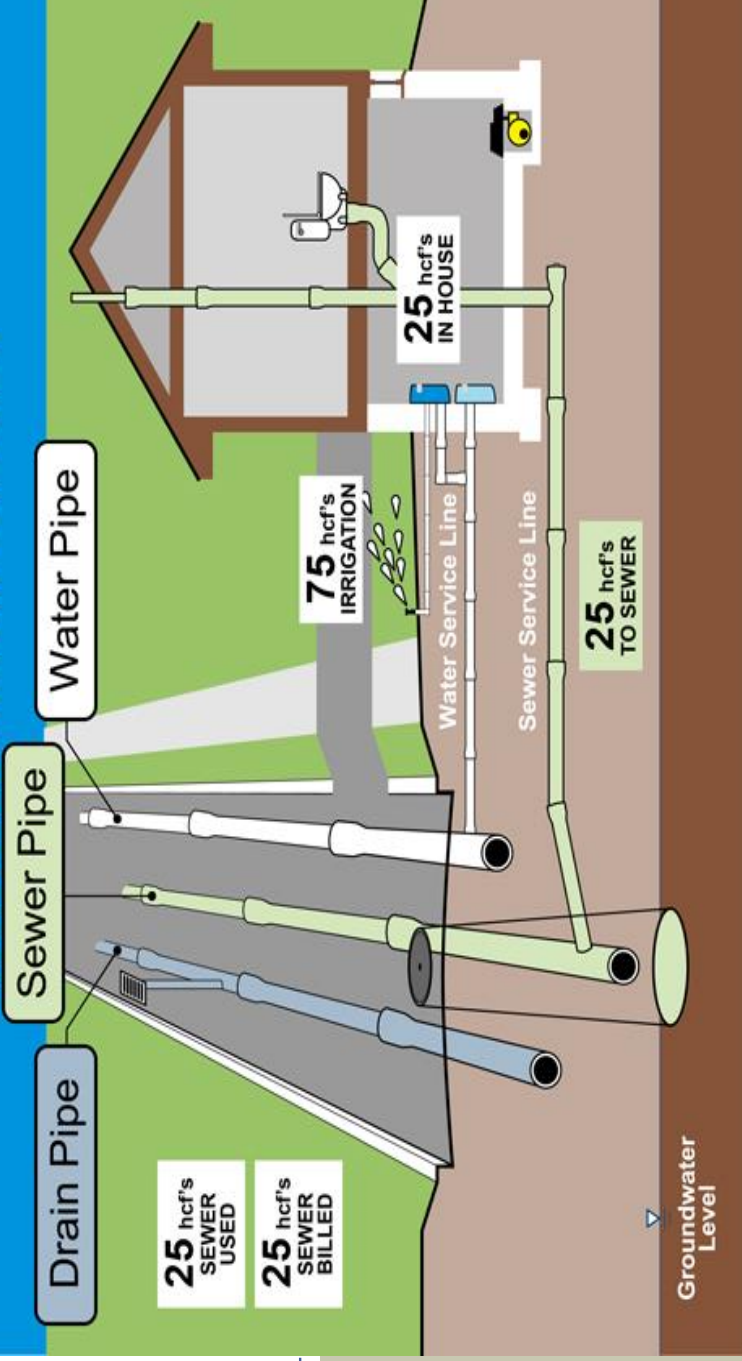


Water/Sewer Rate Restructure



- Problem - Sewer Billing Fairness
 - Sewer bill is based on water usage
 - All water currently assessed sewer charge, including irrigation water usage that does not go into sewer
- Solution - 2nd (Irrigation) Meters
 - Separate metering for water used outdoors
 - Water measured with 2nd meter is not charged for sewer
 - ~20% of sewer billing is “irrigation” water
 - Necessary revenue to be raised stays the same
 - Requires readjustment of rates

2nd Meter (Irrigation) PROPOSED IRRIGATION USER



Scenario #3

Future resident, 2nd meter

Uses irrigation 1/2 year

25 hcf's/2 qtr; 100hcf's/2 qtr

250 hcf's/yr water

100 hcf's/yr sewer

	Quarter	Annual
Water		
Sewer		
Total		

Revised Sewer Structure



Scenario #1		Quarter	Annual
Current resident	Water	\$ 152	\$ 608
No irrigation use	Sewer	\$ 224	\$ 896
25 hcf's/qtr; 100hcf's/yr	Total	\$ 376	\$ 1,504
Scenario #2		Quarter	Annual
Current resident	Water	\$ 719	\$ 1,742
Uses irrigation 1/2 year	Sewer	\$ 1,061	\$ 2,570
25 hcf's/2 qtr; 100hcf's/2 qtr	Total	\$ 1,780	\$ 4,312
250 hcf's/yr			
Scenario #3		Quarter	Annual
Future resident, 2nd meter	Water	\$ 719	\$ 1,742
Uses irrigation 1/2 year	Sewer	\$ 224	\$ 896
25 hcf's/2 qtr; 100hcf's/2 qtr	Total	\$ 943	\$ 2,638
250 hcf's/yr water			
100 hcf's/yr sewer			