

# **“Tackling Utility Rates the Right Way The City of Manistee Leading the Way”**

**Michigan Municipal League 2014 Convention - Marquette**



**Presented by:**

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# Introduction to City of Manistee

- ▶ City serves individual customers in Manistee and Filer Townships directly, mostly commercial customers
- ▶ Variety of rate structures are used outside of the City, including:
  - ▶ 100% + PILT
  - ▶ 100% + CUFCOF
  - ▶ 150% + Cap Chg.
  - ▶ 200%



Customers	Water	Sewer	# of Rate Structures
City	3,967	3,227	1
Manistee Twp.	18	16	3
Filer Twp.	9	13	3
Large User	1	1	1

# Key Utility Sustainability Challenges

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- ▶ Social: Customer concerns about the existing rate structures, notably in the townships
- ▶ Economic: Funding for needed renewal and replacement of existing infrastructure
- ▶ Environmental: Incurred substantial costs to address regulatory requirement (combined sewer overflows)
  
- ▶ Time was right to conduct a formal rate study
  - ▶ Never conducted a formal rate study in the past
  - ▶ Indicated to stakeholders that the analysis would be done by professional firm using accepted industry practices
  - ▶ Result would be a fair & equitable rate structure to all users

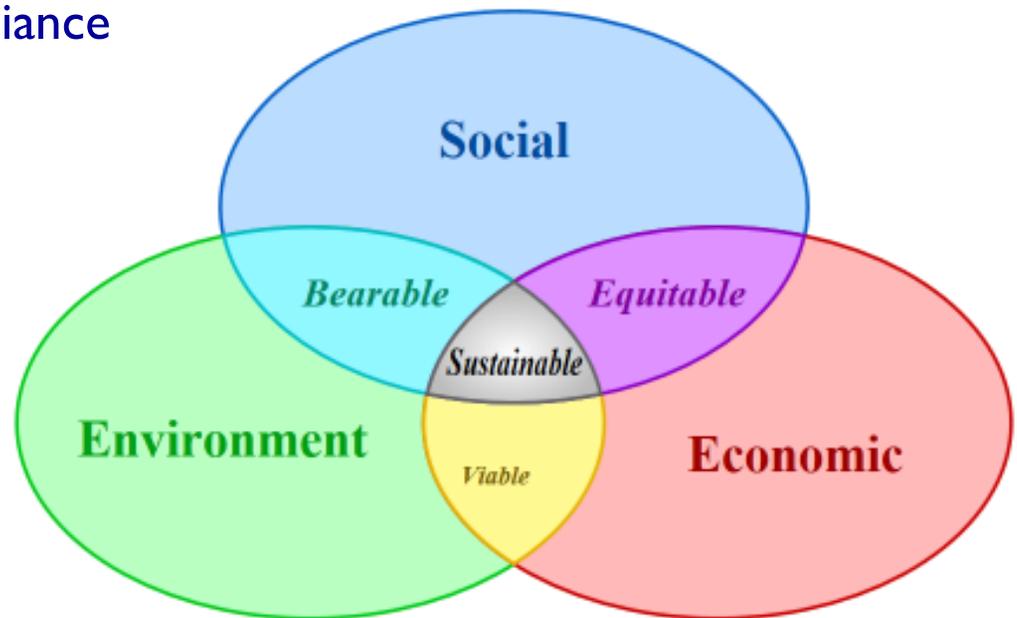
# About Burton & Associates

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- ▶ Specialize in multi-year financial planning and rate services to local governments (Nearly 1,000 studies)
  - ▶ Alabama, Arizona, Florida, Georgia, Maryland, Michigan, Mississippi, Missouri, North Carolina, Texas, Virginia
- ▶ National stature in water and sewer utility ratemaking
  - ▶ AWWA: Rates & Charges Committee & ratemaking manual development
  - ▶ Recognized as industry experts in various state and federal proceedings
- ▶ Innovators in interactive modeling
  - ▶ Identifying options and truly understanding their consequences
  - ▶ Easy to use, customized, robust models that provide real-time feedback and side-by-side comparisons of options/sensitivities
- ▶ Understand the importance of stakeholder communication
  - ▶ Goal is to achieve understanding and buy-in for sustainable solutions

# Objective: Sustainability

- ▶ Develop a rate structure to address the City's unique balance of the various components of sustainability:
- ▶ Social
  - ▶ Fair & equitable distribution of costs to customers
- ▶ Environmental
  - ▶ Fund cost of regulatory compliance
- ▶ Economical
  - ▶ Satisfy operating costs
  - ▶ Fund asset management
  - ▶ Service existing and new debt
  - ▶ Meet financial policies
  - ▶ Provide fiscal stability



# Rate Study Process: Overview

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## Typical Process

1. Revenue Requirement
2. Cost of Service
3. Rate Design

## Manistee Process

1. Cost of Service
2. Rate Design
3. Revenue Requirement

**Revenue Requirement Analysis:** Compares revenues to operating and capital costs to determine the adequacy of existing rates

**Cost of Service Analysis:** Allocates the revenue requirements of the system to customers in a fair and equitable manner

**Rate Design Analysis:** Considers both the level and structure of rates that will collect the revenue requirements from each customer class

**Manistee Approach:** Acquire understanding of system configuration and user characteristics first due to system complexity & user concerns

# Detailed Process for the City

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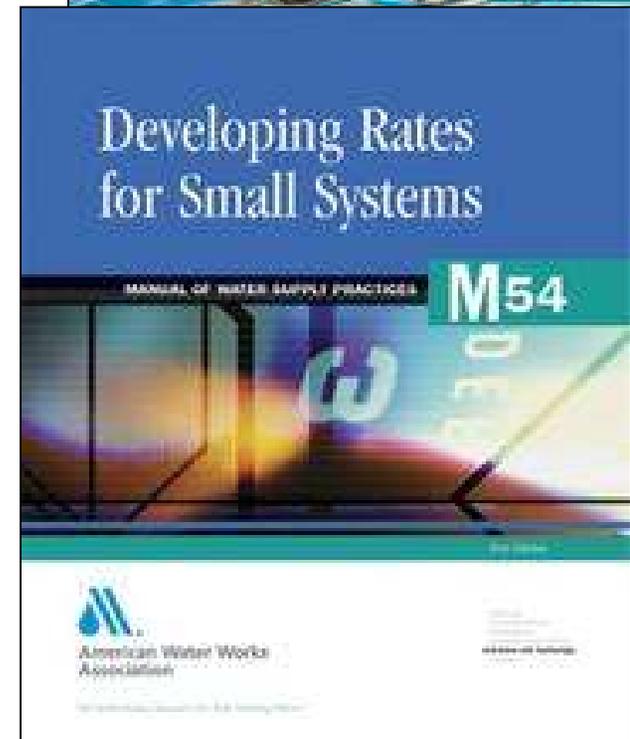
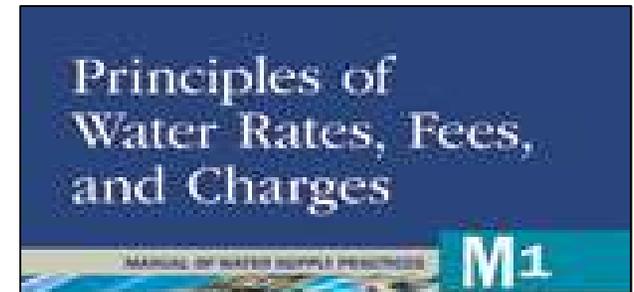
1. **Perform a Cost of Service Allocation (Based Upon FY14 Budget)**
  - ▶ Identify most appropriate industry accepted practice/methodology
  - ▶ Define logical classes of customers
  - ▶ Distribute cost of service and revenue requirements to customer classes
2. **Develop a Recommended Rate Structure**
  - ▶ Recovery of fixed costs, conformance to industry practice & legal precedent, administrative burden, agreements, and customer impacts
  - ▶ Goal: single structure, with rates for each class based on cost of service
3. **Develop a Multi-Year Financial Management Plan**
  - ▶ Determine annual revenue requirements of the utility in order to:
    - ▶ Satisfy annual operating and capital cost requirements
    - ▶ Ensure compliance with the terms of existing and any new debt
    - ▶ Maintain adequate operating reserves
  - ▶ Needed revenue increase for FY 15 applied to recommended rate structure

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# STEP I: COST OF SERVICE ALLOCATION

# Methodology

- ▶ Base-Extra Capacity per AWWA Manual M-1
  - ▶ Allocates costs to customer classes in proportion to their contributions to the cost components of the system
  - ▶ Commonly utilized within the industry for larger systems
  - ▶ Normally would use approaches per Manual M-54 for smaller systems
  - ▶ Detailed M-1 approach selected due to availability of detailed data, lack of prior comprehensive study, and level of stakeholder input/concern



# Allocation of Costs: Systems & Functions

- ▶ First allocated costs between the water & sewer systems

	Test Year COS	Allocation Basis/Factor	Water % Allocation	Sewer % Allocation	N/A	Water \$ Allocation	Sewer \$ Allocation
<b>541 ADMINISTRATION</b>							
702.000 Salaries	111,961	Indirect	37.36%	62.64%	-	41,828	70,132
704.000 Overtime	1,200	Indirect	37.36%	62.64%	-	448	752

- ▶ Costs of each system are then assigned to defined functions

	Test Year COS	Allocation Basis/Factor	Supply % Allocation	Treatment % Allocation	Distribution % Allocation	Meters/Services % Allocation	Total % Allocation
<b>541 ADMINISTRATION</b>							
702.000 Salaries	41,828	Indirect	18.94%	19.61%	26.54%	34.91%	100.00%
704.000 Overtime	448	Indirect	18.94%	19.61%	26.54%	34.91%	100.00%

- ▶ Costs of each function are then distributed to the various demand and/or customer categories they support

# Distribution of System Function Costs

Service	Water	Sewer
<b>Function</b>		
<b>A</b>	Source of Supply	Meters/Services
<b>B</b>	Treatment	Collection System
<b>C</b>	Distribution	Treatment
<b>D</b>	Meters/Services	Disposal

<b>WATER</b>				
<b>Function</b>	<u>Base Capacity - Avg Day</u>	<u>Extra Capacity - Max Day</u>	<u>Extra Capacity - Peak Hour</u>	<u>Customer</u>
Source of Supply	X			
Treatment	X	X		
Distribution	X	X	X	
Meters/Services				X

<b>SEWER</b>				
<b>Function</b>	<u>Volume - Avg Day</u>	<u>Extra Capacity - Max Day</u>	<u>Extra Capacity - Peak Hour</u>	<u>Customer</u>
Meters/Services				X
Collection System	X	X	X	
Treatment	X	X		
Disposal	X			

# Identification of Customer Classes

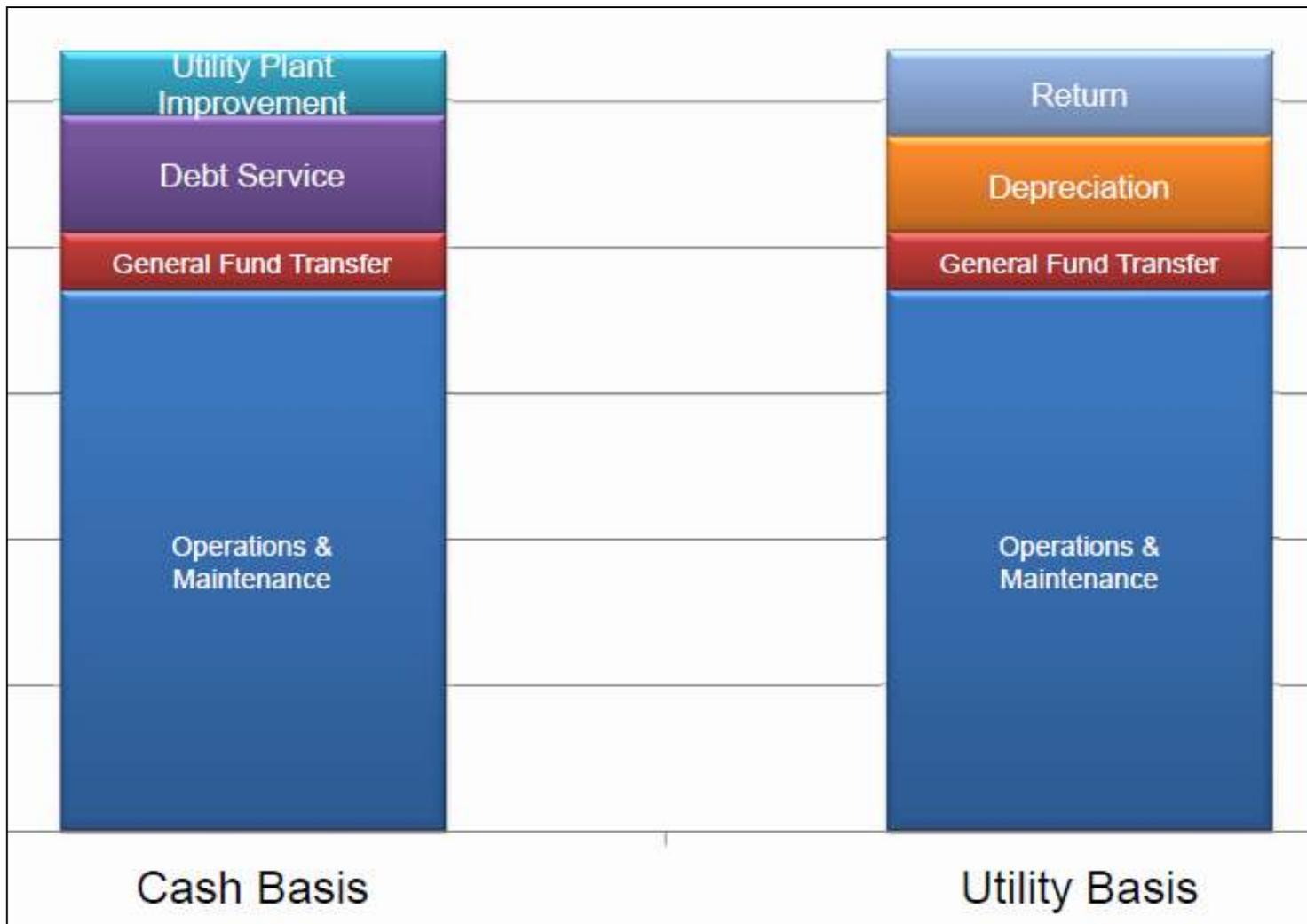
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- ▶ Establish customer classes based on usage and service characteristics, facility requirements, location, etc.
- ▶ Identified three (3) customer classes for the City:
  - ▶ **Inside City** (inclusive of residential & commercial customers)
  - ▶ **Outside City** (all customers in Manistee & Filer Townships)
  - ▶ **Large User**
- ▶ City could not easily produce the information needed that would allow for separate residential & commercial customer classes.
- ▶ City desired to maintain a single rate structure for all customers
- ▶ Makeup is predominantly residential customers inside the city
- ▶ Utilities do not typically establish individual rates for each customer outside its boundaries
- ▶ Large User: Due to nature of the service characteristics and terms of the contract (minimum flow & rates)

# Allocation of Water System Costs to Functions & Customer Classes

	<b>TOTAL</b>	<b>Inside City</b>	<b>Outside City</b>	<b>Large User</b>
<b><u>FY 2014 Op Ex</u></b>				
Base Capacity - Avg Day	\$281,430	\$216,507	\$16,996	\$47,927
Extra Capacity - Max Day	\$240,832	\$205,442	\$12,860	\$22,530
Extra Capacity - Peak Hour	\$37,133	\$32,370	\$2,315	\$2,448
Customer - Meters/Services	\$300,001	\$297,895	\$2,030	\$75
Total Cost Allocation	\$859,396	\$752,214	\$34,202	\$72,980
% Distribution		87.5%	4.0%	8.5%
<b><u>FY 2014 Debt Service</u></b>				
Base Capacity - Avg Day	\$95,233	\$82,696	\$6,492	\$6,046
Extra Capacity - Max Day	\$186,493	\$167,892	\$10,509	\$8,092
Extra Capacity - Peak Hour	\$54,128	\$47,185	\$3,375	\$3,569
Customer - Meters/Services	\$0	\$0	\$0	\$0
Total Cost Allocation	\$335,854	\$297,772	\$20,376	\$17,706
% Distribution		88.7%	6.1%	5.3%
<b><u>FY 2014 Depreciation &amp; Return On Inv.</u></b>				
Base Capacity - Avg Day	\$109,801	\$86,778	\$6,812	\$16,211
Extra Capacity - Max Day	\$90,006	\$80,519	\$5,040	\$4,447
Extra Capacity - Peak Hour	\$24,655	\$21,492	\$1,537	\$1,626
Customer - Meters/Services	\$16,896	\$16,778	\$114	\$4
Total Cost Allocation	\$241,358	\$205,567	\$13,504	\$22,287
% Distribution		85.2%	5.6%	9.2%
Subtotal Cost of Service (Op, ROI & Dep)	\$1,100,754	\$957,781	\$47,706	\$95,268

# Basis of Ratemaking



# Use of Utility Basis of Rate Making

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- ▶ Often used to set rates for outside-city customers:
  1. Identify the total revenue requirements for the utility using the cash-needs approach
  2. Establish revenue requirements for outside-city customers using the utility-basis of ratemaking
  3. Deduct revenue requirement for outside-city users from the total system revenue requirement on a cash-needs basis in order to determine the remaining revenue requirement to be recovered from inside-city users
  
- ▶ Approach recognizes an appropriate and fair rate of return allocable to non-owner customers, while ensuring recovery of the full revenue requirement of the Utility

# Adjustments to Customer Class Cost Allocations

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- ▶ Adjustments must be made to reflect unique circumstances of each utility system
  - ▶ Specific facility investments for certain customer classes
  - ▶ Prior contributions made by specific customer classes
- ▶ Process for making adjustments:
  - ▶ Determine initial cost of service for each customer class.
  - ▶ Adjust cost of service to recognize assets built specifically for certain outside-city users
    - ▶ Provide credits for cost of similar facilities included in initial allocations
  - ▶ Adjust cost of service to recognize prior contributions made by only inside-city users for cost requirements of the utility

# Water Cost Allocation Adjustments

	<u>TOTAL</u>	<u>Inside City</u>	<u>Outside City</u>	<u>Large User</u>
<b><u>Prior Contribution Adjustments</u></b>				
Prior O&G Contributions: '84 - '14	\$ 6,163,551			
Total Asset Base as of 6/30/13	\$ 36,021,893			
% Paid by City Via Non-User Fees	17%			
Water System Portion of Assets	11%			
Redistribution of Depreciation & ROI	\$4,339			
Subtotal	\$0	-\$4,339	\$1,637	\$2,702
<b><u>Specific Facility Dep. &amp; ROI Adjustments</u></b>				
Well 10		-\$23,349	\$7,609	\$15,740
US 31 Extension		-\$42,139	\$13,732	\$28,406
Renaissance Park Sewer		\$0	\$0	\$0
Renaissance Park Water		-\$15,529	\$15,529	\$0
Oaks Water & Sewer		-\$50,016	\$0	\$50,016
Oaks Northside Sewer Separation		\$0	\$0	\$0
Armstrong & Stewart (East Lake Estates) Estimate		-\$11,156	\$11,156	\$0
Replace section of Parkdale Force Main		\$0	\$0	\$0
Credit for Trans/Dist Facilities in Base DEP & ROI		\$6,753	-\$6,753	\$0
Credit for Supply/Treatment Facilities in Base DEP/ROI		\$18,641	-\$4,116	-\$14,525
Subtotal	\$0	-\$116,794	\$37,157	\$79,637

# Use of Cost of Service Analysis

- ▶ Resulting allocations by class of customer used to set rates
- ▶ New rate structure developed for all customers, with difference in cost of service used to determine level of multipliers for Outside City and Large User classes

Customer Class	Water	Sewer
Outside City Users	118%	254%
Large User*	70%	107%

\*The terms of a specific service agreement determined specific rate multipliers for this user

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# STEP 2: RATE DESIGN ANALYSIS

# Rate Design Analysis

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- ▶ Goal is to ensure appropriate & sustainable rate structure:
  - ▶ Reflects a fair and equitable cost distribution,
  - ▶ Conforms to industry practice and legal precedent
  - ▶ Technically sound and easy to administer
  - ▶ Consistent with the City's objectives (affordability & fiscal stability)
- ▶ Established a uniform rate structure for all customers
  - ▶ Levels of rates different by class of customer
    - ▶ Outside City – Reflect differential per cost allocation analysis
    - ▶ Large User – Reflect differential per unique service agreement
  - ▶ Does not include separate PILT, Capital Charges & CUFCOF Fees
    - ▶ GF Transfer included as part of utility cost of service

# Results of Rate Design Analysis

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- ▶ **Readiness-to-Serve Charge:**
  - ▶ Monthly charge for the system's extra-capacity related costs
  - ▶ Incurred to be able/ready to meet peak demands when they occur
  - ▶ Recovers 50% of system extra-capacity costs
    - ▶ To maintain affordability, adopted at partial cost recovery
  - ▶ Provides slightly more than 20% of system revenue
  - ▶ Scaled by meter size using AWWA factors
  
- ▶ **Usage Rate (per 1,000 gallons):**
  - ▶ Recovers remaining system costs (slightly less than 80%) in proportion to use of system

# Allocation of Costs to Rate Structure Components

Water Service Charge Revenue Requirement	Amount	% Fixed	% Variable	\$ to Fixed Fee	\$ to Variable Charge
<b>O&amp;M</b>					
Base Capacity - Avg Day	\$ 281,430	0%	100%	\$ -	\$ 281,430
Extra Capacity - Max Day	\$ 240,832	50%	50%	\$ 120,416	\$ 120,416
Extra Capacity - Peak Hour	\$ 37,133	50%	50%	\$ 18,567	\$ 18,567
Customer - Meters/Services	\$ 300,001	0%	100%	\$ -	\$ 300,001
<b>Debt</b>					
Base Capacity - Avg Day	\$ 95,233	0%	100%	\$ -	\$ 95,233
Extra Capacity - Max Day	\$ 186,493	50%	50%	\$ 93,246	\$ 93,246
Extra Capacity - Peak Hour	\$ 54,128	50%	50%	\$ 27,064	\$ 27,064
Customer - Meters/Services	\$ -	0%	100%	\$ -	\$ -
Subtotal	\$ 1,195,250			\$ 259,293	\$ 935,957
Less: Offsetting Revenue	\$ (254,236)			\$ (55,153)	\$ (199,083)
Total Service Charge Revenue Requirement	\$ 941,014			\$ 204,140	\$ 736,874
% Distribution (Fixed vs. Variable)				22%	78%

# Water System Rate Schedule

Monthly Readiness-to-Serve Schedule	<u>Inside</u>	<u>Outside</u>	<u>Large User</u>
5/8"	\$ 3.57	\$ 4.22	\$ 7.14
1"	\$ 8.93	\$ 10.55	\$ 17.85
1 1/4"	\$ 12.50	\$ 14.77	\$ 24.99
1 1/2"	\$ 17.85	\$ 21.10	\$ 35.70
2"	\$ 28.56	\$ 33.76	\$ 57.12
3"	\$ 57.12	\$ 67.52	\$ 114.24
4"	\$ 89.25	\$ 105.50	\$ 178.50
6"	\$178.50	\$ 211.00	\$ 357.00

Monthly Volume Rate Schedule / TGAL	\$ 2.52	\$ 2.98	\$ 5.04
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# **STEP 3: REVENUE REQUIREMENT ANALYSIS**

# Process & Basis of Analysis

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- ▶ **Populated multi-year financial planning model:**
  - ▶ Demand and customer data
    - ▶ FY 2011 – FY 2014 YTD
  - ▶ Historical and current operating cost data
    - ▶ Historical actuals vs. budget, FY 2014 Budget, FY 2015 Proposed Budget
  - ▶ Capital improvement and vehicle replacement programs
  - ▶ Financing plans/options for additional borrowing requirements
  - ▶ Key financial planning targets (reserves, debt coverage ratios, etc.)
- ▶ **Customized models to reflect the utility's financial structure and level of detail**
- ▶ **Reviewed multiple scenarios interactively with staff**
  - ▶ Perform sensitivity analyses with instant feedback
  - ▶ Unique graphical, side-by-side comparison of alternative scenarios

# Key Financial Sustainability Issues

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- ▶ Funding of Capital Improvement Program
  - ▶ \$4.2 million from FY 15 – FY 19; \$4.7 million in FY 20 – FY 24
  - ▶ Rates ultimately need to provide for funding of R&R without additional debt
  - ▶ Increase (wrap) R&R funding around drop-off of existing debt service
- ▶ Maintaining Sufficient Operating Reserves
  - ▶ Target: 35% of Operating & Maintenance Expenses (\$0.6M in FY 15)
  - ▶ Indicative of “Good” Utility Systems per Standard & Poor’s (S&P)
- ▶ Maintaining Sufficient Debt Service Coverage
  - ▶ Target: Net Revenues at least 1.5 times greater than annual debt service
  - ▶ Indicative of “Strong” Utility Systems per Municipal Rating Agency, S&P
- ▶ Increases in Key Operating Costs (Overall increase of 3.5% per year)
  - ▶ Health Insurance: 10% per year; Electricity & Fuel: 5% per year
  - ▶ Repair/Maintenance: 4% per year; Salaries: 2.0% per year
- ▶ Historical and expected demand reductions
  - ▶ Historical: Large User (190,000 GPD to less than 90,000 GPD currently)
  - ▶ Projected: Loss of volume from certain outside city customers (\$65-100k)

# Screen Capture of Financial Model Control Panel



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# STAKEHOLDER ENGAGEMENT ACTIVITIES

# Stakeholder Presentations

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- ▶ Presentations were made to Stakeholders, City Council, and Stakeholder Consultants
  - ▶ Presented approach, key issues, drivers, and results of the study
  - ▶ Allowed time for stakeholders to voice concern and ask questions
  - ▶ Incorporate feedback as appropriate prior to finalization
- ▶ Integral to the success of rate studies
  - ▶ Fosters understanding of the issues affecting the sustainability of the utility and acceptance of the solutions needed to ensure it
- ▶ Employed the use of a variety of visuals to demonstrate the process, drivers and results of the study
  - ▶ Many presented herein, with additional aids on the following slides

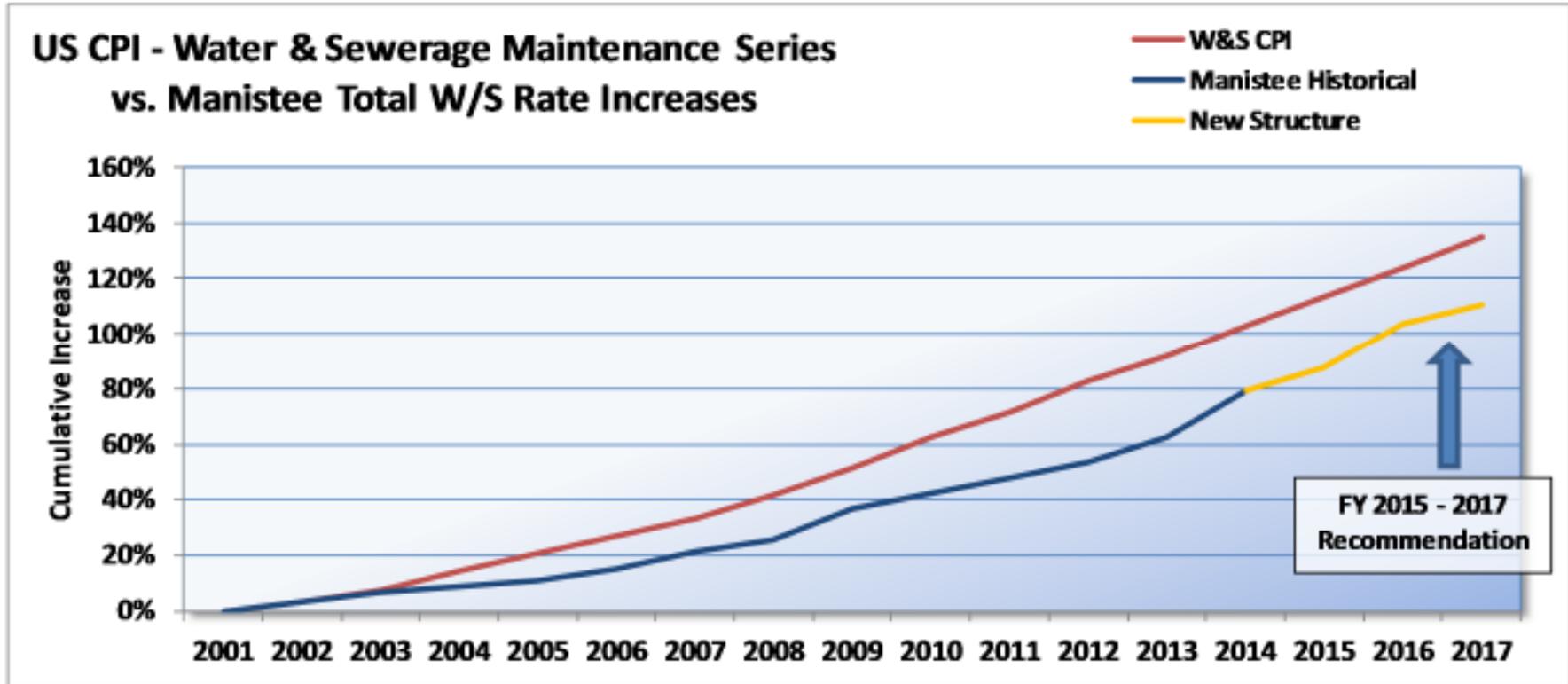
# Analysis of Customer Impacts

- ▶ It is important to examine the impact that rates will have upon customers monthly bills
  - ▶ Rates can impact customers with different usage patterns differently
  - ▶ Readiness-to-serve charges were moderated based upon understanding of impacts to low volume users
  - ▶ Comparing impacts of alternative options at staff level was helpful

## Inside City Customer Impact/Monthly Bill Analysis - FY 2015 Revenue Requirement

5/8" Meter Usage (TGAL)	FY 2014 - Existing Rate Structure			FY 2015 - New Rate Structure			\$ Change	% Change
	Water	Sewer	Total	Water	Sewer	Total		
0	\$ -	\$ 6.60	\$ 6.60	\$ 3.57	\$ 10.27	\$ 13.84	\$ 7.24	109.7%
2	\$ 6.74	\$ 20.08	\$ 26.82	\$ 8.61	\$ 24.09	\$ 32.70	\$ 5.88	21.9%
4	\$ 13.48	\$ 33.56	\$ 47.04	\$ 13.65	\$ 37.91	\$ 51.56	\$ 4.52	9.6%
<b>6</b>	<b>\$ 20.22</b>	<b>\$ 47.04</b>	<b>\$ 67.26</b>	<b>\$ 18.69</b>	<b>\$ 51.73</b>	<b>\$ 70.42</b>	<b>\$ 3.16</b>	<b>4.7%</b>
8	\$ 26.96	\$ 60.52	\$ 87.48	\$ 23.73	\$ 65.55	\$ 89.28	\$ 1.80	2.1%
10	\$ 33.70	\$ 74.00	\$ 107.70	\$ 28.77	\$ 79.37	\$ 108.14	\$ 0.44	0.4%
15	\$ 50.55	\$ 107.70	\$ 158.25	\$ 41.37	\$ 113.92	\$ 155.29	\$ (2.96)	-1.9%
20	\$ 67.40	\$ 141.40	\$ 208.80	\$ 53.97	\$ 148.47	\$ 202.44	\$ (6.36)	-3.0%
30	\$ 101.10	\$ 208.80	\$ 309.90	\$ 79.17	\$ 217.57	\$ 296.74	\$ (13.16)	-4.2%

# Comparison to Industry Trends



- ▶ City has been consistently lower than the industry in water/sewer rate adjustments through 2014
- ▶ Average annual increase of 7% per year for Water & Sewerage Series; City at 5% per year
- ▶ Recommendations would fund needed improvements with rate adjustments lower than the industry

# Implementation Challenges

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- ▶ Customer concerns raised over the implementation of the readiness-to-serve charge
  - ▶ Prepared and distributed FAQ document
  - ▶ Utilized expertise of consultant to develop talking points
- ▶ Gradual implementation of new outside-city rates due to existing service agreements
  - ▶ Stakeholder presentations allowed for customers to learn about the changes in advance
  - ▶ Set-up additional stakeholder meeting after adoption

# City's View of the Process

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- ▶ Long over-due and enlightening
- ▶ Results are a fair and equitable rate structure that is defensible, rational, and explainable
- ▶ Provided us with a financially sustainable utility
- ▶ Facilitation by an industry expert was crucial
  - ▶ Knowledge of the rate making process
  - ▶ Facilitate each step of the process, while minimizing staff time
  - ▶ Independent/un-biased perspective desired by stakeholders
  - ▶ Ability to explain analysis and results to stakeholders
  - ▶ Support implementation issues/concerns as they arise based upon experience with other communities

# Questions & Discussion

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