

City of Mesa

FY 2016/17

Utility Departments Presentations and Rate Recommendations

City Council

April 21, 2016

Presented by the Office of Management and Budget, Engineering,
Environmental Management and Sustainability,
Energy Resources and Water Resources Departments



Enterprise Operations

- Each utility is operated as a separate business center
- The utilities assist in transforming neighborhoods and the city's economic sustainability
 - Environmental Management and Sustainability Department's solid waste roll off program
 - Treatment plants and infrastructure expansions for new residential and commercial growth

Enterprise Operations (Continued)

- Combined Ending Reserve Balance adheres to the adopted financial policy of at least 8-10% over the forecast period
- Reserve balance can be used to smooth rate adjustments year-to-year
- Reserve balance can be used to phase in new programs or changes in operations

CIP Projects Update

Utility Systems – 2014 Election



November 2014 Election Projects

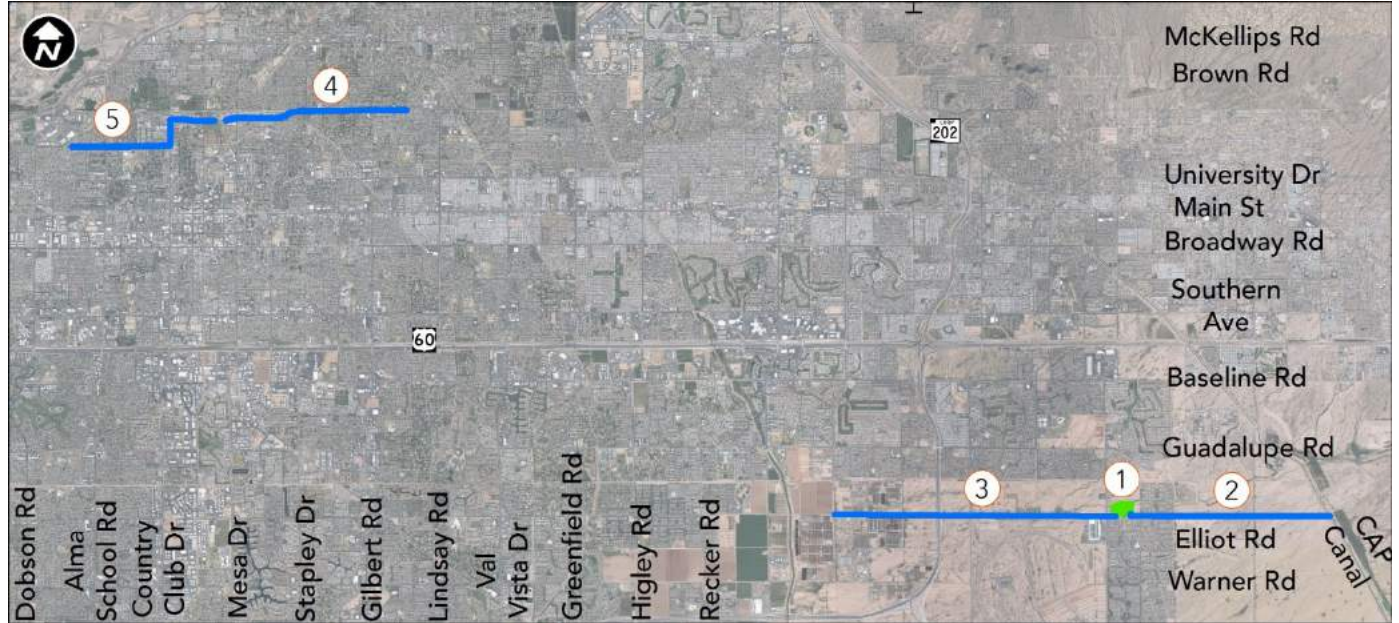
	Water	Wastewater	Gas	Electric
• Lifecycle Replacement/Reliability	\$63.3M	\$32.6M	\$22.6M	\$8.7M
• Contractual Obligations	\$46.5M	\$20.4M	\$0	\$0
• Customer Demand in SE Mesa	\$197.3M	\$122.8M	\$0	\$0
• Customer Demand Citywide	\$8.6M	\$2.4M	\$24.2M	\$5.8M
• System Reinforcement	\$0	\$0	\$12.3M	\$12.5M
Total	\$315.7M	\$178.2M	\$59.1M	\$27M

Water

Lifecycle Replacement	\$ 63.3M	26 Projects	<ul style="list-style-type: none"> • 10 Quarter Section Waterline Replacement Projects • 4 Well Projects • Brown Rd Water Plant Misc. Improvements
Contractual Obligations	\$ 46.5M	2 Projects/ 2 Contracts	<ul style="list-style-type: none"> • Val Vista Pipeline Phases II & III • Val Vista Water Plant Contract w/Phoenix • Water Settlement Contract
Customer Demand in SE Mesa	\$197.3M	28 Projects	<ul style="list-style-type: none"> • Signal Butte Water Plant • CAP Raw Water Main • 3 Transmission Main Projects • 8 Well Projects • 8 Pipeline Projects • Gateway Infrastructure
Customer Demand-Citywide	\$ 8.6M	3 Projects	<ul style="list-style-type: none"> • Transfer Station 3 Upgrade • Misc. Waterlines
Totals	\$315.7	59 Projects/ 2 Contracts	

Water Projects

**Major
Water
Projects:
61% of
Total**



Project Name	Budget	Status	Construction Start	Construction End
1. Signal Butte Water Treatment Plant	\$128.2M	Design	July 2016	June 2018
2. CAP Raw Water Line	\$10.8M	Design	February 2017	January 2018
3. Elliot Road Water Line	\$17.9M	Design	October 2016	August 2017
4. Val Vista Transmission – Phase II	\$17.4M	Complete	February 2015	April 2016
5. Val Vista Transmission – Phase III	\$19.2M	Construction	January 2016	January 2017

Wastewater

Lifecycle Replacement	\$32.6M	21 Projects	<ul style="list-style-type: none"> Misc. Greenfield Water Rec Plant Improvements Lift Station, Pipeline & Manhole Projects SE Plant Rehabilitation projects
Contractual Obligations	\$20.4M	1 Contract	<ul style="list-style-type: none"> 91st Ave. WW Plant Mesa Share
Customer Demand in SE Mesa	\$122.8M	14 Projects	<ul style="list-style-type: none"> 8 sewer projects Greenfield WRP Expansion
Customer Demands-Citywide	\$2.4M	1 Project	<ul style="list-style-type: none"> Septic to Sewer Program
TOTAL	\$178.2M	36 Projects/ 1 Contract	

Major Wastewater Project: Greenfield Water Rec Plant 70% of Total



STATUS

Partners: Town of Gilbert
Town of Queen Creek

In Design Concept Phase

Est. Construction Start:
1st Quarter 2018

Est. Construction End:
3rd Quarter 2020

Electric

Lifecycle Replacement	\$8.7M	<ul style="list-style-type: none"> Distribution - Overhead Transmission Substation Improvements Metering 	\$3.3M \$0.7M \$2.9M \$1.8M
System Reinforcement	\$12.5M	<ul style="list-style-type: none"> Mesa Drive & Broadway Underground Electric Distribution Master Plan Generation 	\$2M \$8.9M \$0.6M \$1.0M
Customer Demand	\$5.8M	<ul style="list-style-type: none"> New Services 	\$5.8M
Totals	\$27M		\$27M

Natural Gas

Lifecycle Replacement	\$22.6M	<ul style="list-style-type: none"> Mesa Dr. & Broadway Other Street/Water projects Magma System Line Replacements Mesa System Line Replacements Meters 	\$1.1M \$7.0M \$1.8M \$10.1M \$2.6M
System Reinforcement	\$12.3M	<ul style="list-style-type: none"> Mains HP Mains Regulator Stations SCADA Cross Ties 	\$1.7M \$2.7M \$6.6M \$0.7M \$0.6M
Customer Demand	\$24.2M	<ul style="list-style-type: none"> Magma Utility Svc Area & Tower Upgrades Mains Meters New Service 	\$0.5M \$13.8M \$0.9M \$9M
Totals	\$59.1M		\$59.1M

Nature of Electric & Gas Projects

PROJECT SCHEDULE DRIVERS:

- **Gas & Electric are Under Streets + Gas Joint Trenched with Water:**
\$20M or 23% of Program
- **Customer Demand + New Customers:**
\$30M or 35% of Program



Fiscal Year 2016-17 Utility Rates and Revenues



Revenue Targets

Forecasted expenses are compared with forecasted revenues based on current rates and projected customer growth

In FY 2016/17, the following increases in revenues are needed to accommodate the estimated costs

Utility	Revenue
Electric	\$211,000
Natural Gas	\$605,000
Water	\$5,548,000
Wastewater	\$3,107,000
Solid Waste*	\$2,447,000

* Household Hazardous Waste Revenue not included

Rate Adjustment Implementation

- Methods of implementation of rate adjustments can vary from year to year based on needs and goals of the individual utilities
- Impact on individual customers can vary based on the method of implementation and the customer consumption of services

Environmental Management and Sustainability Department



EM&S Dept. FY 15/16 Accomplishments

- CNG Fleet Conversion – 24 of 70 vehicles have been converted
- Clean Sweep/Green Sweep Program success
- FleetMind routing and operational data tracking software system progressing
- Regional Partnerships established
 - Landfill Contracts
- Solar Program public/private partnerships
 - With Energy and Water Resources departments
- Urban Garden as part of the Place Making effort

EM&S Dept. FY 16/17 Areas of Emphasis

- Boundary change due to growth in the eastern parts of Mesa
- Permanent CNG Station to be installed
- Explore option of regional recycle contracts for vendors that are coming up for renewal

EM&S Dept. FY 16/17 Budget Highlights

- CNG vs. Diesel Savings
 - FY14-15 \$305,000 savings
 - FY 15-16 \$290,000 savings YTD
- Clean Sweep/Green Sweep program expansion \$60k
- FleetMind routing system implementation \$50k
- Boundary change \$75k
- Regional Contracts
 - Savings from such contracts \$30k annually
- Recycling - less revenues \$200k

Solid Waste Utility Rate Recommendations

- 4% increase on all residential rates
 - Residential 90 gallon barrel rate: \$1.07 per month, from \$26.72 to \$27.79
 - Residential 60 gallon barrel rate: \$0.95 per month, from \$23.86 to \$24.81
 - Additional black barrel rate: \$0.50 per month, from \$12.62 to \$13.12
 - Residential green barrel service: \$0.25 per month, from \$6.31 to \$6.56

Solid Waste Utility Rate Recommendations

- Mesa Green and Clean Fee: \$0.10 per month, from \$0.74 to \$0.84
- Average residential customer increase: \$1.17 from \$27.46 to \$28.63
- 4.0% increase on bulk item and appliance collection for City of Mesa refuse customers
- Establishing a new bulk item and appliance collection for Non-City of Mesa refuse customers
- Commercial Front Load rates: no recommendations for adjustment at this time
- 4.9% increase on Commercial Roll Off rates

Energy Resources Department



Electric FY 15/16 Accomplishments

- Safety
 - 896 days as of 3/22/16 without a Lost Time Accident
- Reliability: Continuing to optimize 12kV distribution system
 - Reduced service interruptions
- Pilot for Low Income Electric Residential–Summer Energy Assistance (SEA Program)
- Commercial & Multi-Family Growth:
 - Light Rail (Central Mesa Extension); Encore II, Escobedo II, El Rancho, Helen’s Hope Chest, Ksport, Pioneer Park Food Truck Forest, Merry Main Street
- Electric Energy Supplies (EECAF)
 - “Summer Peak Power” RFP to replace 2 expired Contracts to reduce costs
 - Solar RFP
 - With Water Resources and Environmental Management & Sustainability
 - Evaluation of RFP responses
 - Hoover Post 2017: Colorado River Hydroelectric power
 - 1.5 MW allocation received via Az Power Authority
 - Customer Owned Solar program
 - 14 residential & 9 commercial customers as of January 31, 2016
 - 1 residential customer in 15/16, Pending (5 residential & 1 commercial)

Electric FY 16/17 Areas of Emphasis

- Safety, Reliability & Efficiency
 - Continue No Lost Time Accidents
 - Inspection, Testing & Replacement Programs - Steel, concrete, wood poles, vaults & vault lids, substation transformers, switchgear and breakers
 - Substation security improvements
 - Continue installation of devices that improve reliability (Trip Savers)
 - 1st Avenue underground conversion
 - Underground cable testing
- Electric Energy Supplies
 - Administer new Summer Peak Power contracts
 - Integrate Hoover Colorado Hydroelectric power
 - Continue expanding Renewable Portfolio, Customer Owned Solar program
- Low Income residential rate (SEA Program)
 - Enhance marketing
 - Expand participation
- CIP
 - Underground conversions (1st Ave, Mesa Dr./Broadway)
 - ArtSpace
 - Gilbert light rail extension
 - Economic Development & Expanding / New Customers

Electric FY 16/17 Budget Highlights

ELECTRIC

- Safety
 - Training - \$ 40,000
 - Replacement of Equipment/Vehicles - \$ 664,000
- Reliability
 - Tree trimming - \$ 150,000 to \$ 200,000
 - Electronic Reclosers / Animal Guards \$ 200,000
 - Pole Replacements \$ 300,000 +

Natural Gas FY 15/16 Accomplishments

- Safety
 - 184 days as of 3/24/16 without a Lost Time Accident
 - Underground damage prevention program (Blue Stake/811):
 - 58% increase in locate requests in most recent 5 years
 - 15% decrease in damages to the city's natural gas utility infrastructure
 - Less than 1 damage per 1000 locates vs national average of 5.8 per 1000 locates for Gas infrastructure
- Natural gas supplies – RFP & contract execution on 11/25/15
 - Domestic & abundant energy source
- CNG Station for Environmental Management & Sustainability(EM&S)
Solid Waste Trucks: RFQ, design, and prep/start construction
- Residential and commercial customer growth has remained steady

Natural Gas FY 16/17 Areas of Emphasis

- CNG Station for EM&S-Solid Waste Trucks
 - Complete construction, preoperational testing & start-up - September 2016
- RFP for CNG station O&M services:
 - Apply IRS rebate to fund costs for O&M services
 - Develop & administer training for gas service specialists
- CIP - System redundancy, reliability & growth
 - Building of (4) pressure regulating stations
 - Meet residential & commercial customer growth

Natural Gas FY 16/17 Budget Highlights

GAS

- Safety
 - Training - \$ 250,000
 - Replacement of Equipment/Vehicles - \$ 500,000
- Reliability
 - SCADA Enhancements - \$ 70,000
 - Pressure Regulator Stations - \$ 3,000,000

Electric Utility Rate Recommendations

- Residential System Service Charge component: \$1.50 per month, from \$8.00 to \$9.50
- Consumption component of rate: No adjustment recommended
- Average residential customer: \$1.50 per month, from \$92.92 to \$94.42, 1.5% (Including commodity pass-through cost)
- Third proposed increase since FY 2003/04
- Non-residential rates: No adjustment recommended

Electric Utility Rate Recommendations

- Proposed System Service Charge of \$9.50 is:
 - \$10.50 per month less than SRP's monthly service charge of \$20.00
- Monthly bills during calendar year 2015 (at FY 2016/17 Mesa rates) would be approximately \$8.47 less per month than if served by SRP (\$101.64 less per year)
- Commodity costs for power are passed through to the customers and are not included in the annual rate review

Natural Gas Utility Rate Recommendations

- All customers System Service Charge: increase \$1.00 per month
 - Residential customers summer: from \$12.11 to \$13.11 per month
 - Residential customers winter: from \$15.04 to \$16.04 per month
- Average residential customer monthly bill: from \$33.83 to \$34.83, 3% (Including commodity pass-through)
- Monthly bills during calendar year 2015 (at FY 2016/17 Mesa rates) would be approximately \$0.72 less per month than if served by SW Gas (\$8.64 less per year)
- Commodity costs for natural gas are passed through to the customers and are not included in the annual rate review

Water Resources Department



Water Resources FY 15/16 Accomplishments

- Field Force Automation (Mobile Dispatch) upgrade completed using internal staff.
- Val Vista Transmission Main
 - Completion of Warranty Inspections Phase 1
 - Completion of Phase 2
- Reliability Improvements
 - Brown Rd. Water Treatment Plant Filters
 - Pump Station Back Up Generators
 - New Wells Drilled
- Projecting \$3M in savings
 - Sub-Regional Operating Group (SROG)
 - Val Vista Water Treatment Plant
 - Energy & Chemical Costs

Water Resources FY 16/17 Areas of Emphasis

- Southeast Mesa Infrastructure Planning
 - Signal Butte Water Treatment Plant Construction
 - Greenfield Water Reclamation Plant Expansion
- Waterline Replacements
- Succession Planning
- Recruitment
 - Signal Butte Water Treatment Plant Staffing

Water Resources FY 16/17 Budget Highlights

- Water Purchase costs decreased \$454K
 - Projected \$3M increase over next 4 years
- Increase in chemical budget \$124K
- Energy costs increased \$323K
- Joint Venture costs increased \$628K
- New positions for Signal Butte Water Treatment Plant
- Rates
 - Continue with year 2 of 5 year residential water tier realignment plan

Water Utility Rate Structure

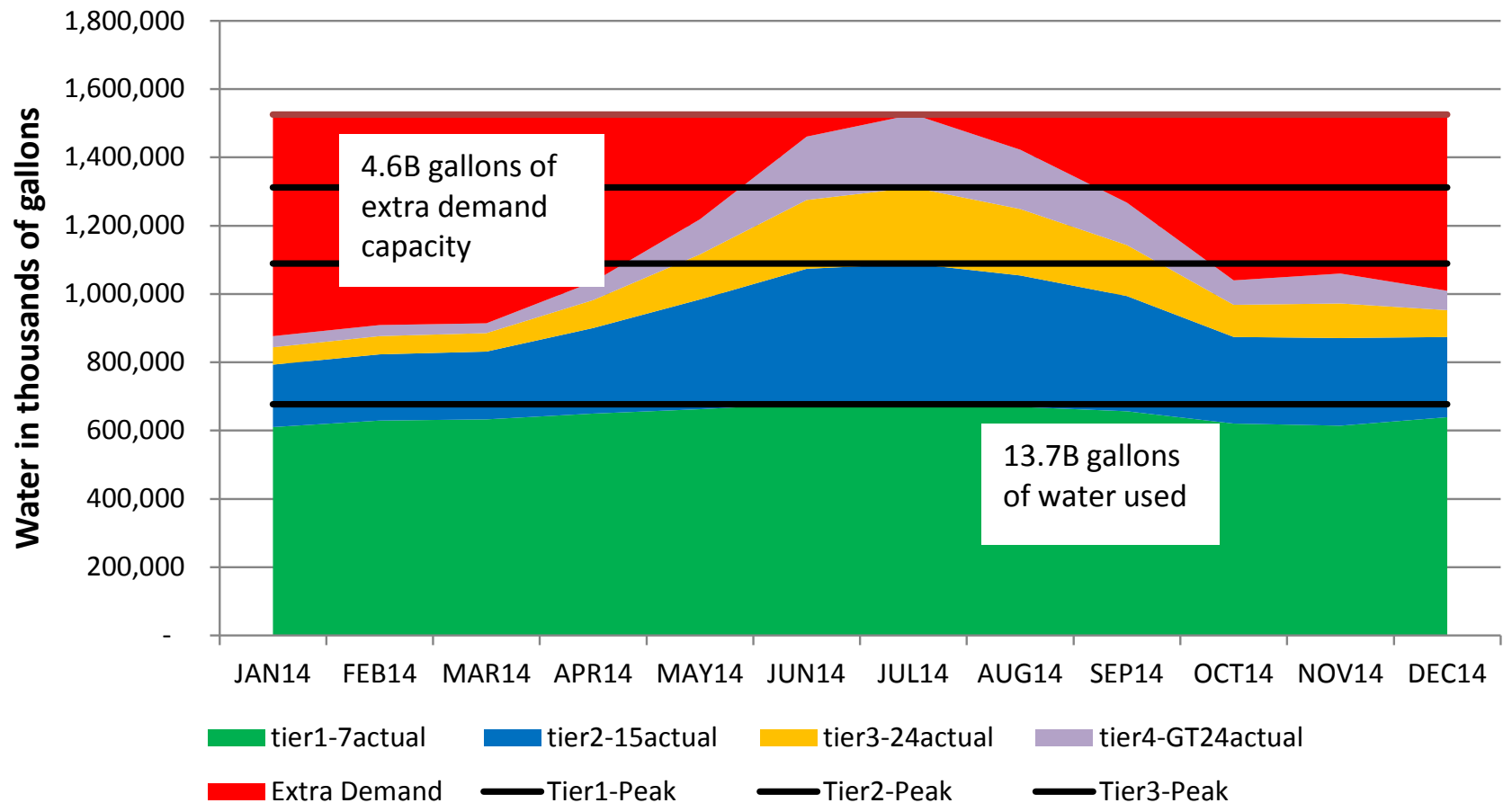
- Over the last few years the City has focused on better aligning fixed revenues with fixed costs. Target is fixed revenues at 35-40% of total costs. FY 2016/17 estimated at 36.1%
- Water consumption per account has declined in recent years: more widespread use of water saving appliances, smaller number of people per household, less landscaping and more water conservation awareness
- The City implemented a fourth residential water tier last year to align the tiers with usage patterns and associated costs
- This year will be the second year of the five year implementation
- Decreases annual impact to customers and allows time for customers to continue assessing their water usage and apply conservation techniques if possible

Water Utility Rate Structure Recommendation

- Current Residential Tier Structure:
 - First 3,000 gallons included in service charge
 - 4,000 – 11,000 gallons; \$2.88 per 1,000 gallons
 - 12,000 – 22,000 gallons; \$4.32 per 1,000 gallons
 - 23,000 – 24,000 gallons; \$4.90 per 1,000 gallons
 - 25,000 gallons and greater; \$5.05 per 1,000 gallons
- Recommended Residential Tier Structure for FY 16/17:
 - First 3,000 gallons included in service charge
 - 4,000 – 10,000 gallons; \$3.02 per 1,000 gallons
 - 11,000 – 20,000 gallons; \$4.54 per 1,000 gallons
 - 21,000 – 24,000 gallons; \$5.23 per 1,000 gallons
 - 25,000 gallons and greater; \$5.54 per 1,000 gallons

Residential Demand vs. Actual Usage

City of Mesa CY2014 Residential Water Full Demand Capacity vs. Actual Usage



Water Utility Rate Recommendations

- All customers: 5% increase on all rate components
 - With phased adjustments in residential tiers 3 and 4
- Residential Service Charge: \$1.27 per month, from \$25.35 to \$26.62
- Residential average monthly seasonal consumption total bill: \$2.23, from \$45.03 to \$47.26
- The City average monthly consumption is about 9,000 gallons however seasonality takes into account high demand summer months that experience some water consumption in tier 2. The resulting impact is greater than a straight 9,000 gallons per month.
- Lowering the eligibility for the Commercial and Industrial Large Water Service rate (W31.1) from 8,500 kgal per month to 6,000 kgal per month

Wastewater Utility Rate Recommendations

- All customers: 5% increase on all rate components
- Residential Service Charge: \$0.86 per month, from \$17.22 to \$18.08
- Residential average monthly consumption total bill: \$1.24, from \$24.77 to \$26.01
- Wastewater rates are not subject to seasonality. The monthly rate is adjusted annually based on the winter water average usage of the individual customer

Summary



Average Residential Customer Impact

Utility	Monthly	Annual
Solid Waste	\$1.07	\$12.84
Water	\$2.23	\$26.76
Wastewater	\$1.24	\$14.88
Total	\$4.54	\$54.48
Electric	\$1.50	\$18.00
Natural Gas	\$1.00	\$12.00

Enterprise Fund Fiscal Impact

The FY 2016/17 recommended utility rate/structure adjustments are anticipated to meet the revenue needs of the enterprise fund.

Utility	Revenue
Electric	\$211,000
Natural Gas	\$605,000
Water	\$5,548,000
Wastewater	\$3,107,000
Solid Waste*	\$2,447,000

* Household Hazardous Waste Revenue not included

Rate Adjustment Forecast for the Next Five Years

	FY 15/16 Estimate	FY 16/17 Forecast	FY 17/18 Forecast	FY 18/19 Forecast	FY 19/20 Forecast	FY 20/21 Forecast
Ending Reserve Balance Percent*	16.5%	14.3%	11.1%	9.5%	9.8%	10.6%
*As a % of Next Fiscal Year's Expenditures						
ELC Residential (Customer Charge/Fixed Rate only)		\$1.50	\$1.50	\$2.00	\$2.50	\$2.75
ELC Non-Residential		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GAS Residential (Customer Charge/Fixed Rate only)		\$1.00	\$1.00	\$1.00	\$1.00	\$1.00
GAS Non-Residential (Customer Charge/Fixed Rate only)		\$1.00	\$1.00	\$1.00	\$1.00	\$1.00
WTR All Rate Revenue		5.0%	4.5%	4.5%	4.5%	4.0%
WW All Rate Revenue		5.0%	5.0%	5.0%	5.0%	4.5%
SW Residential		4.0%	4.0%	4.0%	4.0%	3.5%
SW Commercial		0.0%	2.0%	2.0%	2.0%	2.0%
SW Rolloff		4.9%	4.9%	2.0%	2.0%	2.0%

Enterprise Fund Reserves

	FY 15/16 Estimate	FY 16/17 Forecast	FY 17/18 Forecast	FY 18/19 Forecast	FY 19/20 Forecast	FY 20/21 Forecast
Beginning Reserve Balance	\$46.6	\$57.8	\$53.3	\$42.9	\$37.7	\$40.7
Total Sources	\$336.2	\$345.1	\$363.0	\$381.9	\$401.8	\$419.2
Total Uses	\$325.1	\$349.6	\$373.4	\$387.1	\$398.9	\$414.5
Ending Reserve Balance	\$57.8	\$53.3	\$42.9	\$37.7	\$40.7	\$45.4
Ending Reserve Balance Percentage*	16.5%	14.3%	11.1%	9.5%	9.8%	10.6%

*As a % of Next Fiscal Year's Expenditures

(in millions)

Schedule for FY 2016/17 Utility Rate Consideration

May 2 – Introduce Utility Rate Ordinances

May 16 – City Council Action on Utility Rates

July 1 – Effective date for Utility Rate changes

