



**CITY OF NORCO
CITY COUNCIL / STREETS, TRAILS AND UTILITIES COMMISSION
JOINT STUDY SESSION AGENDA**

**Wednesday, September 28, 2016
City Council Chambers, 2820 Clark Avenue, Norco, CA 92860**

CALL TO ORDER: 4:00 p.m.

ROLL CALL:

City Council:
Kevin Bash, Mayor
Greg Newton, Mayor Pro Tem
Robin Grundmeyer, Council Member
Berwin Hanna, Council Member
Ted Hoffman, Council Member

Streets, Trails and Utilities Commission:
William Naylor, Chair
Mike Thompson, Vice Chair
Cathey Burt, Commissioner
James Turpin, Commissioner
Sherry Walker, Commissioner

PLEDGE OF ALLEGIANCE: Council Member Ted Hoffman

DISCUSSION ITEM AS FOLLOWS:

1. **DISCUSSION ITEM:**

- A. Presentation of Water and Sewer Rates Study. (Director of Public Works)

Staff will present information on the current financial status of the Water Fund and Sewer Fund, and analysis of the current rate structure to determine potential rate adjustments.

ADJOURNMENT

In compliance with the Americans with Disabilities Act, any person with a disability who requires a modification or accommodation in order to participate in this meeting, please contact the City Clerk's office, (951) 270-5623, at least 48 hours prior to the meeting to make reasonable arrangements to ensure accessibility. Staff reports are on file in the City Clerk's Office. Any writings or documents provided to a majority of the City Council regarding any item on this agenda will be available for public inspection at the City Clerk's Counter in City Hall located at 2870 Clark Avenue during normal business hours. The meeting is recorded.



Rate Analysis of Water and Sewer Enterprises

City of Norco



Study Objectives, Key Issues and Assumptions

Water and Sewer Fund Financial Planning Scenarios

Rate Design and Customer Impacts

Drought Rates

Summary

Study Objectives

Comprehensive rate studies

- ▶ Water and sewer enterprise funds

Projection of full cost of service for each fund

- ▶ 5-Year projection including system capital reinvestment

Develop financial plans to ensure sustainable and resilient operations

- ▶ Account for reductions in water use and future variability

Evaluate and recommend rate structures

- ▶ Review of current and alternative structures to meet system goals

Develop financial models that support analysis

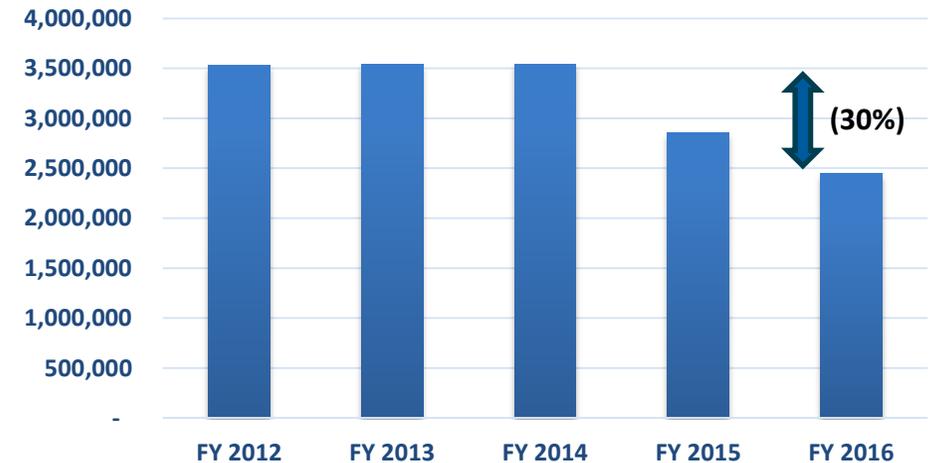
- ▶ Serve as key tools for the City's ongoing support of the enterprise funds

Summary of Key Issues

The City has experienced a significant reduction in annual water sales over last two years in response to conservation efforts

- ▶ Water operating fund balance has been exhausted
- ▶ Transfer of \$0.7 million from capital fund to balance water fund budget in FY17
- ▶ Sale of 2,000 acre-feet of excess carryover storage in Chino Basin
- ▶ Insufficient revenues to fund annual operating of water system going forward
- ▶ 70% of current water revenues are based on water usage

Annual Water Sales (HCF)



Current Water and Sewer Rates

Current Water Rates

Meter Size	Fixed Monthly Charge
3/4"	\$20.87
1"	\$33.12
1 1/2"	\$83.23
2"	\$108.31
3"	\$290.80
6"	\$1,247.06
Usage Rate	
Meter Use (per HCF)	\$2.22

Current Sewer Rates

	Fixed Monthly Charge
All Customers	\$51.00
Usage Rate	
Non-Residential Customers Use over 10 HCF (per HCF)	\$8.00
Fixed Revenue	71%
Variable Revenue	29%

Fixed Revenue	30%
Variable Revenue	70%

Proposed Alternative Water Rate Structure

To stabilize water revenues we recommend that the City adopt an alternative water rate structure:

- ▶ Increase fixed monthly charge based on cost of service analysis
- ▶ Fixed charge would recover the cost of customer service, metering and system peaking costs
- ▶ Increase in fixed revenues would reduce the City's dependency on metered water usage providing greater revenue stability within the fund

Cost of Service Water Rate Structure Revenue

Fixed Revenue	46%
Variable Revenue	54%

Summary of Key Study Assumptions

Operating and maintenance annual cost escalation at inflationary levels

Capital Improvements

- ▶ Various funding levels and sources evaluated

Customer and Usage Growth

- ▶ Water usage continues at current reduced levels
- ▶ Modest customer growth at 0.5% per year

Maintain / establish system reserves

- ▶ Operating and maintenance reserve (Working capital reserve) – Target 3 months operating
- ▶ Water fund - Establish rate stabilization reserve (target \$2 million over next 10 years)

Modified water rate structure (46% fixed / 54% variable)

First rate adjustments effective January 1, 2017 (subsequent adjustments on July 1 of each year through 2021)

Financial Planning Scenarios

Status Quo - Full 5-Year CIP Without Rate Increases

Scenario 1 - Full 5-Year CIP Without Debt

Scenario 2 - Full 5-Year CIP With Debt

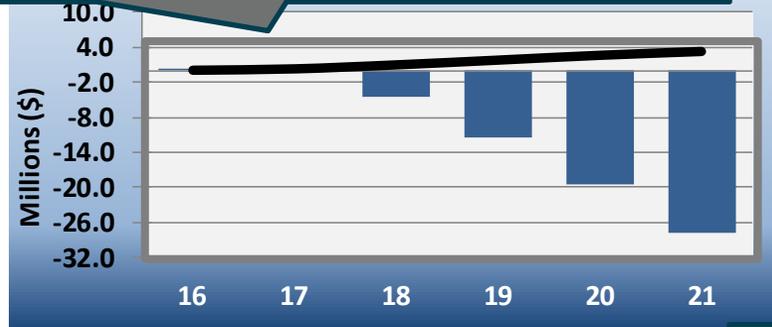
Scenario 3 - Extend 5-Year CIP to 10-Year Plan - No Debt

Water System Forecast - No Adjustments to Rates

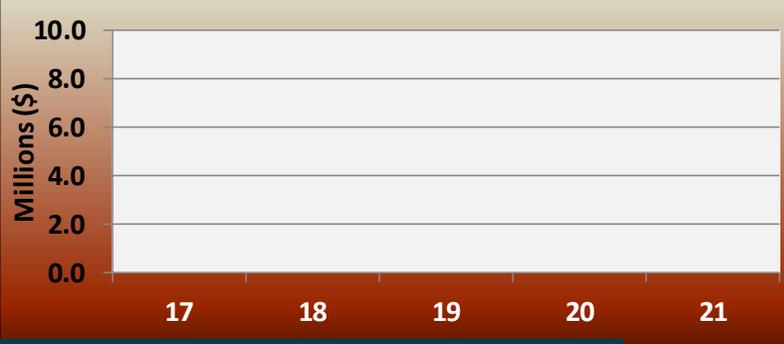
No Increases in Water Rates

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Water Rate Increase	0.00%	0.00%	0.00%	0.00%	0.00%
Average Water Bill (20 HCF)	\$65	\$65	\$65	\$65	\$65
Change \$	\$0	\$0	\$0	\$0	\$0

Negative Cash Balance in FY18



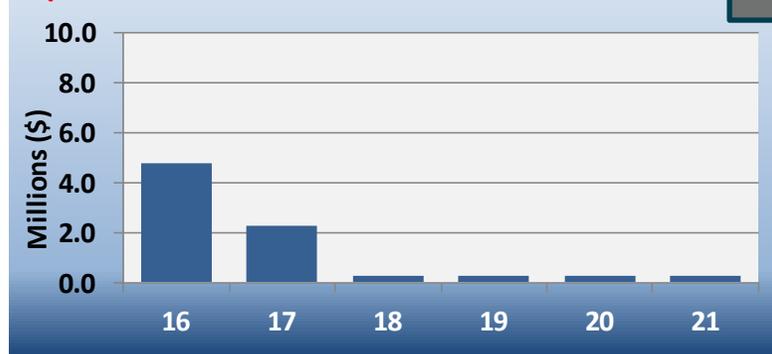
Rate Stabilization Reserve



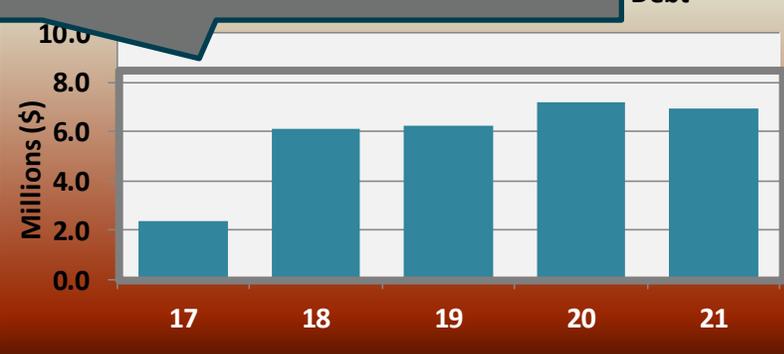
Rev vs. Exp



Capital Fund Balance

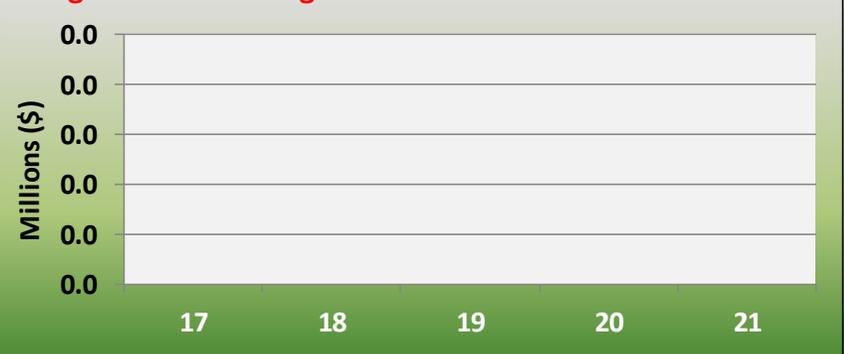


Execution of Full Annual CIP



Debt

Long-Term Borrowing



Scenario 1: Full Capital Plan - Cash Funding

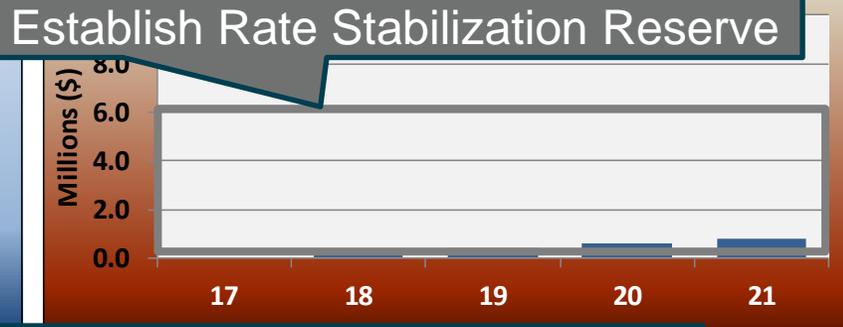
Required Increases in Water Rates

	FY 2017*	FY 2018	FY 2019	FY 2020	FY 2021
Water Rate Increase	30.00%	30.00%	18.00%	8.50%	0.00%
Average Water Bill (20 HCF)	\$88	\$114	\$134	\$146	\$146
Change \$	\$22	\$26	\$20	\$11	\$0

Transition to 3 Month O&M Reserve



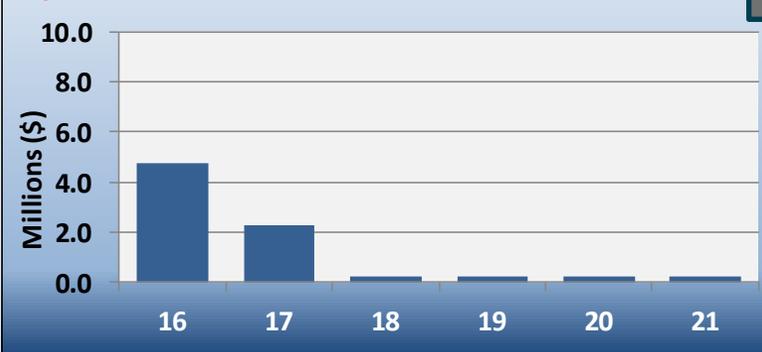
Rate Stabilization Reserve



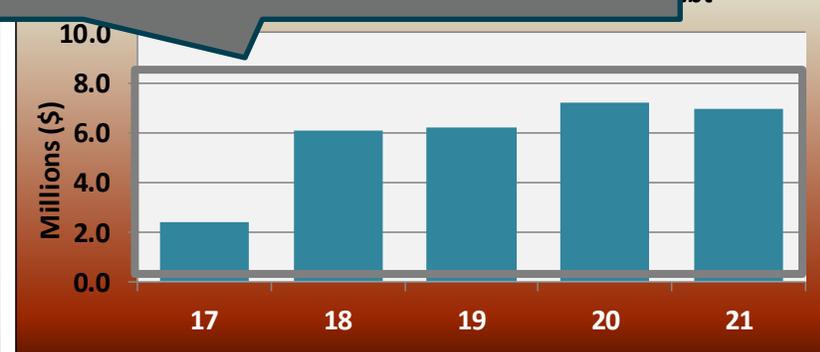
Establish Rate Stabilization Reserve



Capital Fund Balance



Execution of Full Annual CIP



Long-Term Borrowing



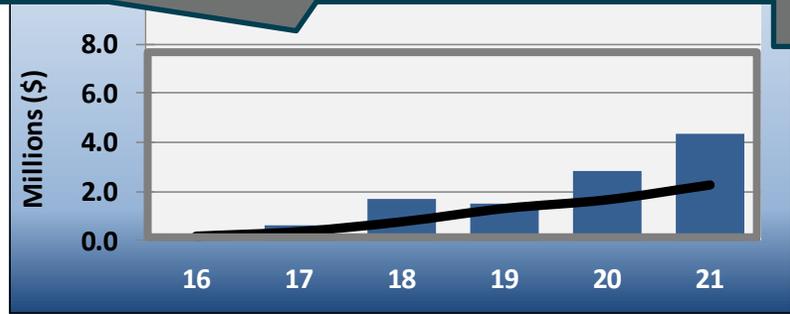
*Jan 1, 2017, all future increases on July 1 of each year

Scenario 2: Full Capital Plan - Partial Debt Funding

Required Increases in Water Rates

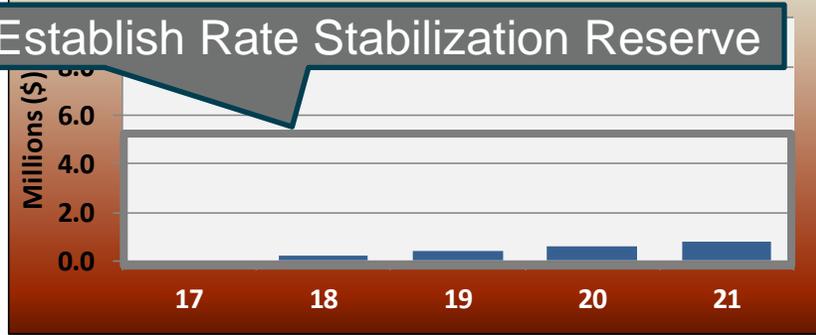
	FY 2017*	FY 2018	FY 2019	FY 2020	FY 2021
Water Rate Increase	14.00%	14.00%	14.00%	9.00%	9.00%
Average Water Bill (20 HCF)	\$77	\$88	\$101	\$110	\$120
Change \$	\$12	\$11	\$12	\$9	\$10

Transition to 3 Month O&M Reserve



Rate Stabilization Reserve

Establish Rate Stabilization Reserve



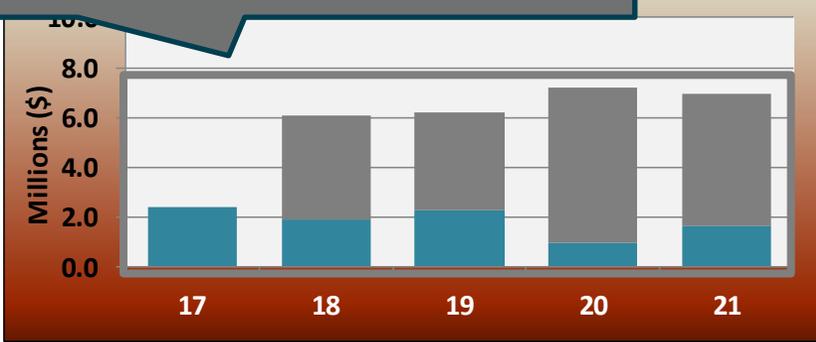
Rev vs. Exp



Capital Fund Balance



Execution of Full Annual CIP



Long-Term Borrowing

Borrow \$21.4M



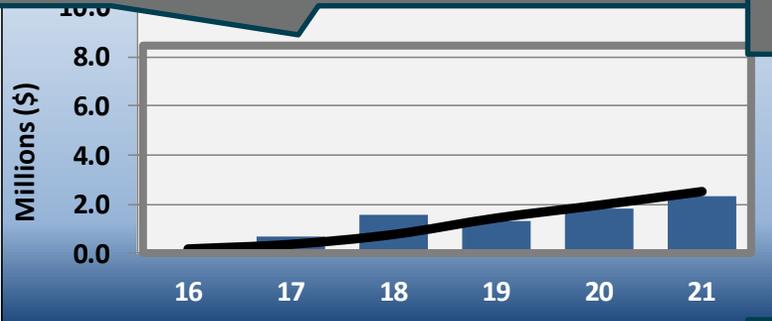
*Jan 1, 2017, all future increases on July 1 of each year

Scenario 3: Reduced Capital Plan - Full Cash Funding

Required Increases in Water Rates

	FY 2017*	FY 2018	FY 2019	FY 2020	FY 2021
Water Rate Increase	15.00%	12.00%	11.00%	10.00%	2.00%
Average Water Bill (20 HCF)	\$78	\$87	\$97	\$107	\$109
Change \$	\$13	\$9	\$10	\$10	\$2

Transition to 3 Month O&M Reserve

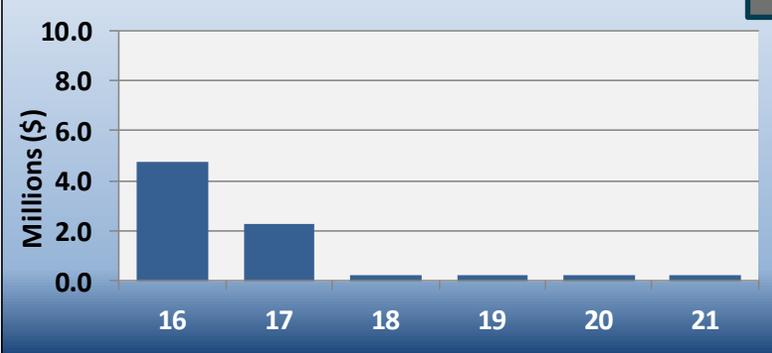


Rate Stabilization Reserve

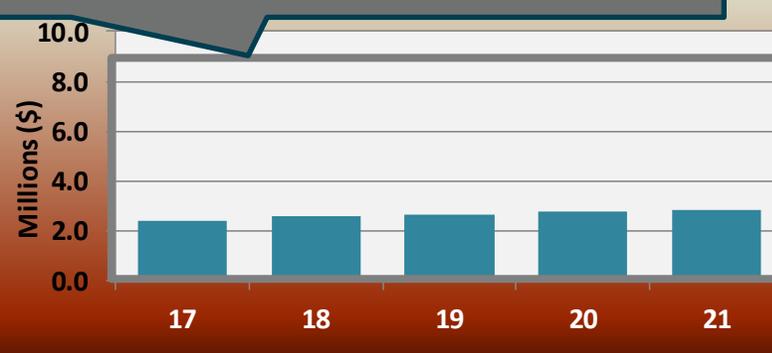
Establish Rate Stabilization Reserve



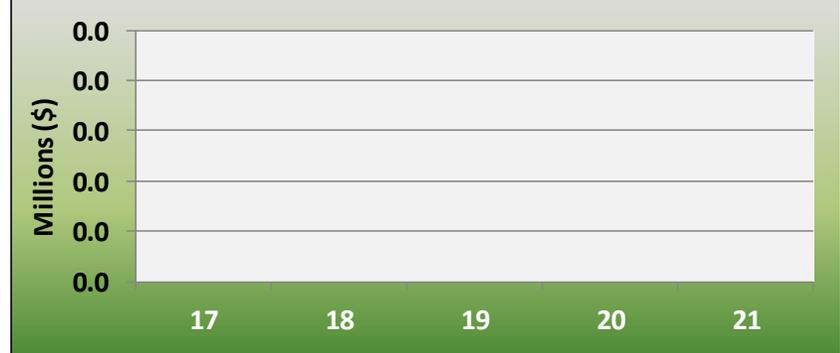
Capital Fund Balance



Execution of Half Annual CIP



Long-Term Borrowing



*Jan 1, 2017, all future increases on July 1 of each year

Water Financial Scenario Summary

	FY17	FY18	FY19	FY20	FY21	Total
Annual Capital Funded (millions)						
Scenario 1	\$2.35	\$6.10	\$6.21	\$7.20	\$6.91	\$26.85
Scenario 2 (*)	\$2.35	\$6.10	\$6.21	\$7.20	\$6.91	\$26.85
Scenario 3	\$2.35	\$2.58	\$2.65	\$2.73	\$2.81	\$12.35

Rate Increases

Scenario 1	30.0%	30.0%	18.0%	8.5%	0.0%	86.5%
Scenario 2	14.0%	14.0%	14.0%	9.0%	9.0%	60.0%
Scenario 3	15.0%	12.0%	11.0%	10.0%	2.0%	50.0%

Customer Bill (Average Residential Customer)

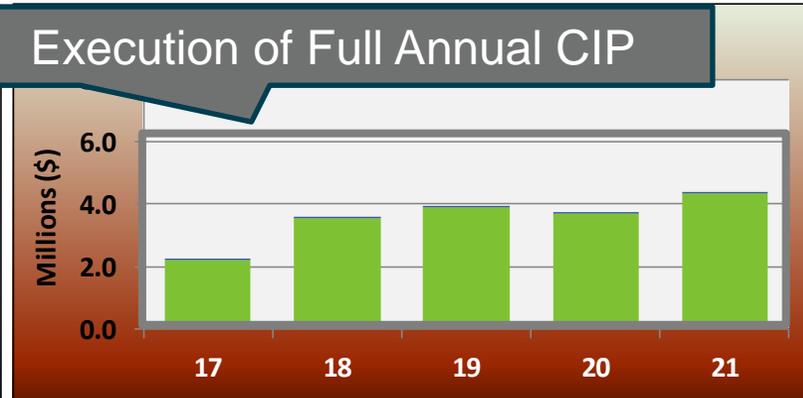
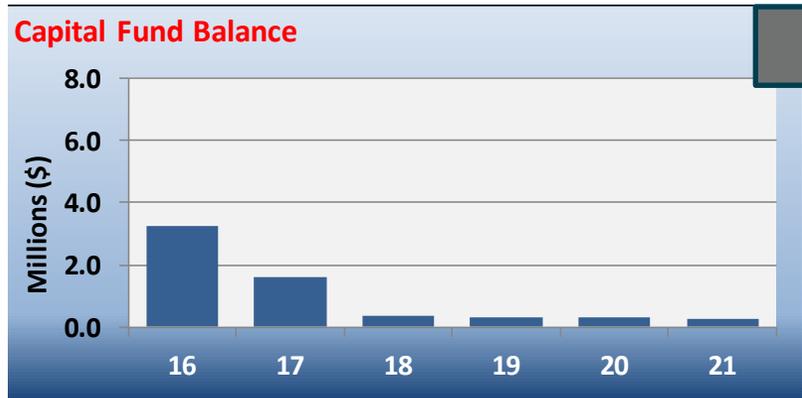
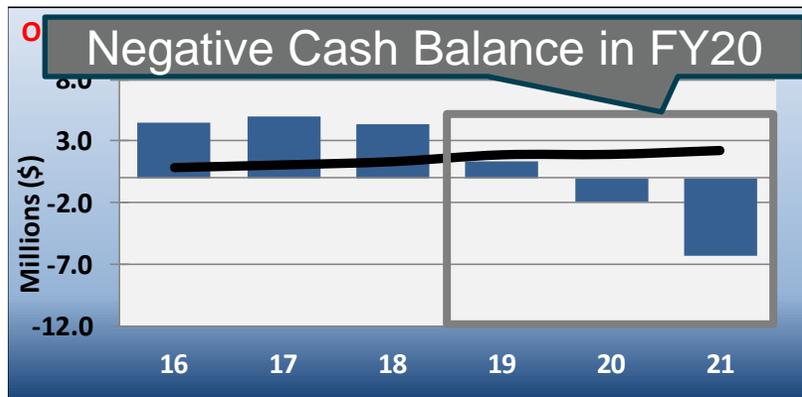
Scenario 1	\$88	\$114	\$134	\$146	\$146
Scenario 2	\$77	\$88	\$101	\$110	\$120
Scenario 3	\$78	\$87	\$97	\$107	\$109

(*) Assumes \$21.4 million debt issue in FY19

Sewer System Forecast - No Adjustments to Rates

No Increases in Sewer Rates

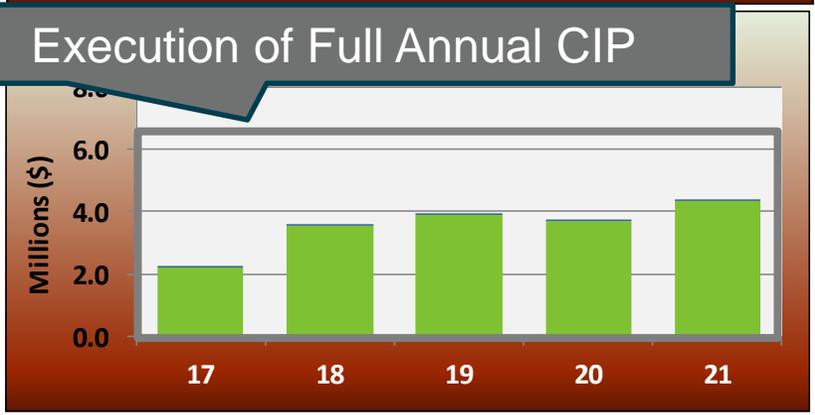
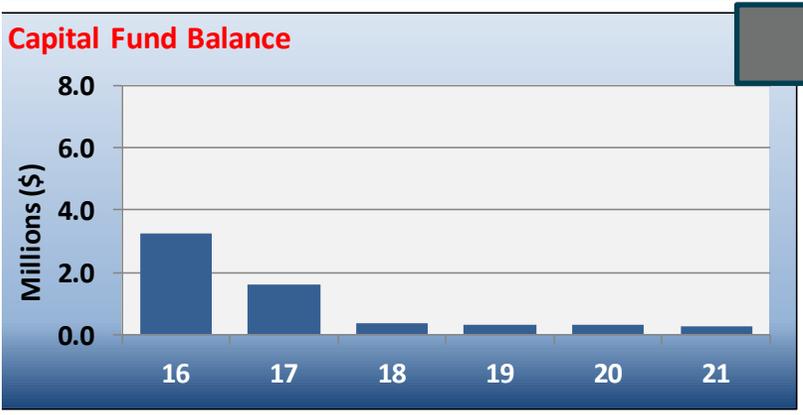
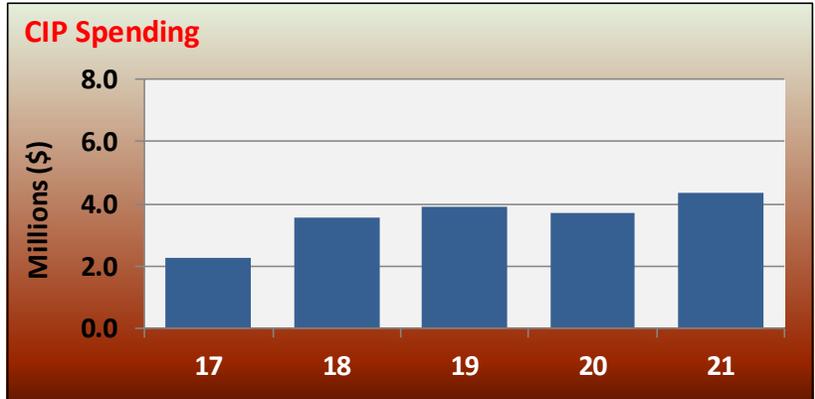
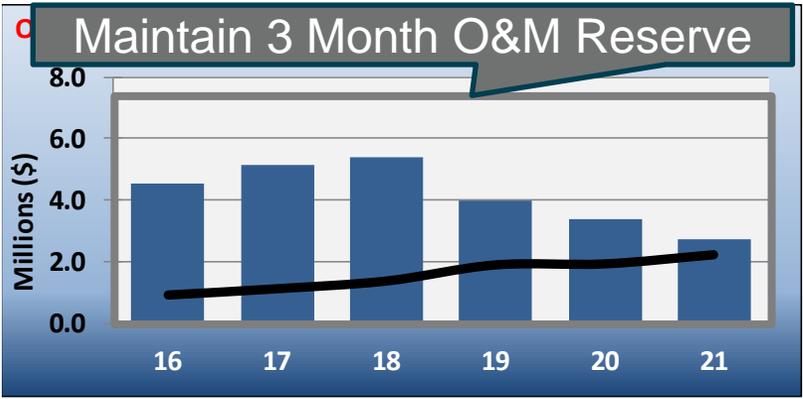
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Sewer Rate Increases	0.00%	0.00%	0.00%	0.00%	0.00%
Average Bill	\$51	\$51	\$51	\$51	\$51
Change \$	\$0	\$0	\$0	\$0	\$0



Scenario 1: Full Capital Plan - Cash Funding

Required Increases in Sewer Rates

	FY 2017*	FY 2018	FY 2019	FY 2020	FY 2021
Sewer Rate Increases	6.00%	6.00%	12.00%	12.00%	12.00%
Average Bill	\$54	\$57	\$64	\$72	\$81
Change \$	\$3	\$3	\$7	\$8	\$9

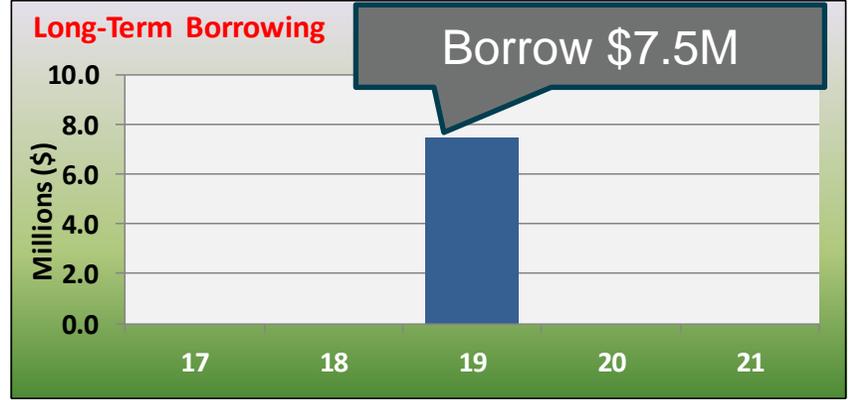
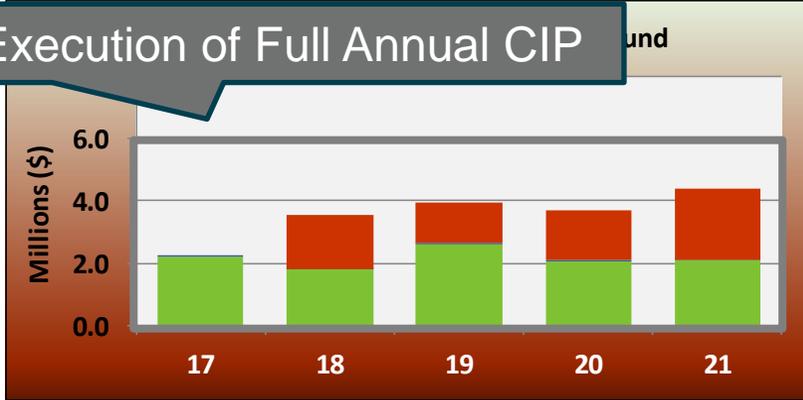
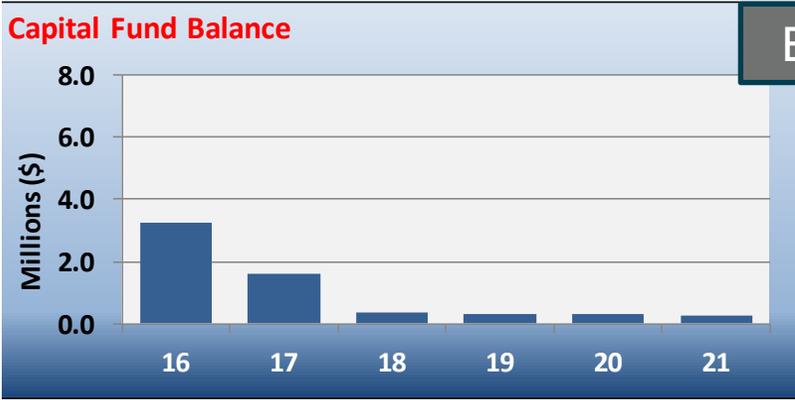
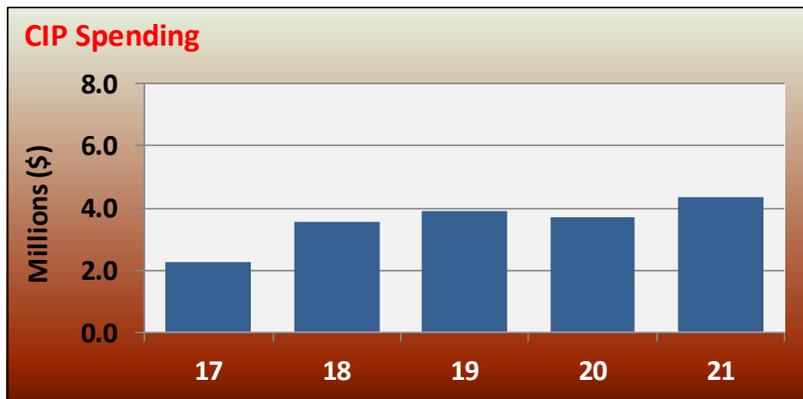
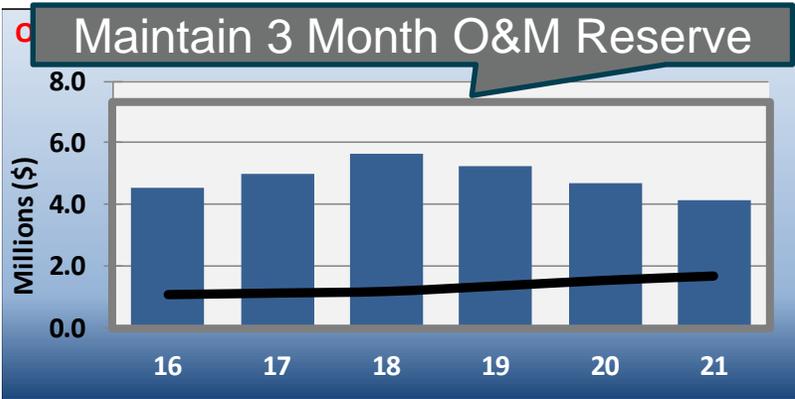


*Jan 1, 2017, all future increases on July 1 of each year

Scenario 2: Full Capital Plan - Partial Debt Funding

Required Increases in Sewer Rates

	FY 2017*	FY 2018	FY 2019	FY 2020	FY 2021
Sewer Rate Increases	0.00%	7.00%	7.00%	7.00%	7.00%
Average Bill	\$51	\$55	\$58	\$62	\$67
Change \$	\$0	\$4	\$4	\$4	\$4

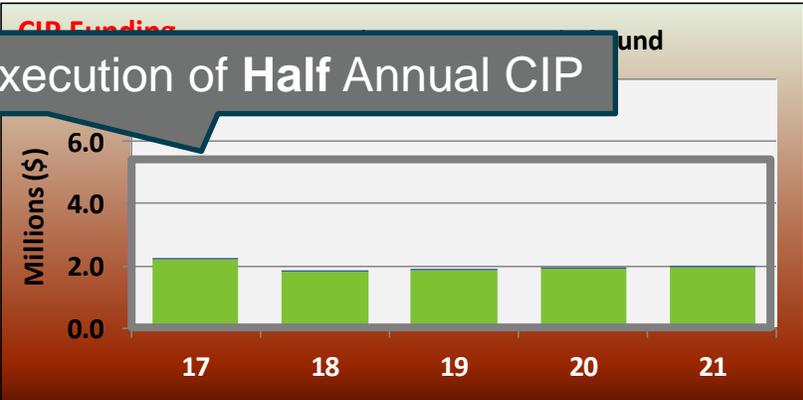
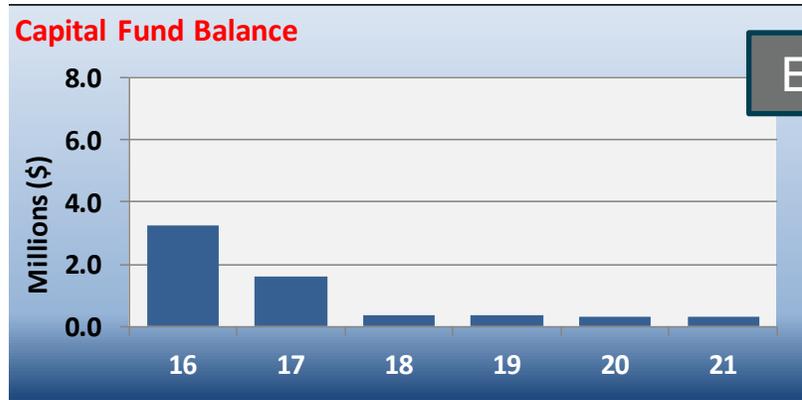
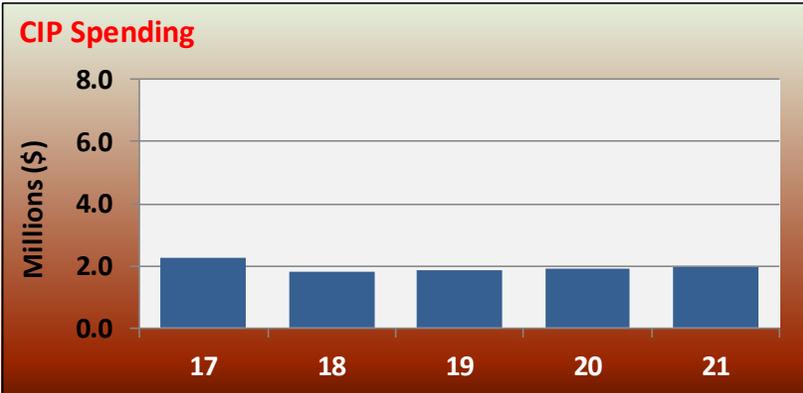
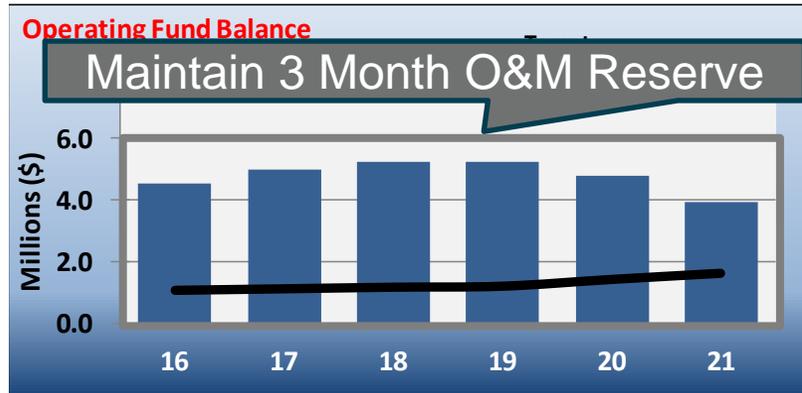


*Jan 1, 2017, all future increases on July 1 of each year

Scenario 3: Reduced Capital Plan - Full Cash Funding

Required Increases in Sewer Rates

	FY 2017*	FY 2018	FY 2019	FY 2020	FY 2021
Sewer Rate Increases	0.00%	0.00%	5.50%	5.50%	5.50%
Average Bill	\$51	\$51	\$54	\$57	\$60
Change \$	\$0	\$0	\$3	\$3	\$3



*Jan 1, 2017, all future increases on July 1 of each year

Sewer Financial Scenario Summary

	FY17	FY18	FY19	FY20	FY21	Total
Annual Capital Funded (millions)						
Scenario 1	\$2.26	\$3.56	\$3.93	\$3.71	\$4.38	\$16.70
Scenario 2 (*)	\$2.26	\$3.56	\$3.93	\$3.71	\$4.38	\$16.70
Scenario 3	\$2.26	\$1.82	\$1.87	\$1.93	\$1.98	\$9.30

Rate Increases

Scenario 1	6.0%	6.0%	12.0%	12.0%	12.0%	48.0%
Scenario 2	0.0%	7.0%	7.0%	7.0%	7.0%	28.0%
Scenario 3	0.0%	0.0%	5.5%	5.5%	5.5%	16.5%

Customer Bill (Average Residential Customer)

Scenario 1	\$54	\$57	\$64	\$72	\$81
Scenario 2	\$51	\$55	\$58	\$62	\$67
Scenario 3	\$51	\$51	\$54	\$57	\$60

(*) Assumes \$7.5 million debt issue in FY19

Financial Plan Recommendations

Move forward with funding of partial CIP

- ▶ Prudent approach given current financial health of water system
- ▶ Allows for more gradual adjustment in water and sewer rates
- ▶ City can fund capital more aggressively in the future if necessary

Capital improvements should be funded with cash

- ▶ Eliminates significant interest expense (lower cost to customer)
- ▶ Provides flexibility moving forward

	FY17*	FY18	FY19	FY20	FY21
Recommended Rate Increases					
Water System	15.0%	12.0%	11.0%	10.0%	2.0%
Sewer System	0.0%	0.0%	5.5%	5.5%	5.5%

*Assumes January 1, 2017 rate increase, subsequent rate increases every July 1 through 2021

Rate Design and Customer Impacts

Proposed Alternative Water Rates (FY17)

Cost of service based rate structure with increased fixed charge

Rates generate revenue defined in recommended financial plan

Water Rates		
Meter Size	Current Monthly Fixed Charge	Proposed Monthly Fixed Charge
3/4"	\$20.87	\$35.74
1"	\$33.12	\$53.09
1 1/2"	\$83.23	\$124.04
2"	\$108.31	\$159.55
3"	\$290.80	\$417.94
4"	\$521.75	\$744.95
6"	\$1,247.06	\$1,771.94
	Usage Rate	Usage Rate
Meter Use (per HCF)	\$2.22	\$2.12
Fixed Revenue	30%	46%
Variable Revenue	70%	54%

Customer Bill Impacts (FY17 Monthly Water and Sewer Bills)

Monthly Use (HCF)	Number of Bills	Cumulative % of Bills	Current Bill	Proposed Bill (FY17)	\$ Change
5	2,328	12.9%	\$83	\$97	\$14
10	2,689	34.5%	\$94	\$108	\$14
15	2,105	53.6%	\$105	\$119	\$13
20	1,538	67.9%	\$116	\$129	\$13
25	1,007	77.9%	\$127	\$140	\$12
30	726	84.7%	\$138	\$150	\$12
35	511	89.5%	\$150	\$161	\$11
40	324	92.6%	\$161	\$171	\$11

Five Year Water Rate Projection

	FY17*	FY18	FY19	FY20	FY21
Fixed Charge					
3/4"	\$35.74	\$39.42	\$43.27	\$47.10	\$47.80
1"	\$53.09	\$58.54	\$64.26	\$69.96	\$71.01
1 1/2"	\$124.04	\$136.75	\$150.14	\$163.48	\$165.95
2"	\$159.55	\$175.90	\$193.13	\$210.29	\$213.47
3"	\$417.94	\$460.73	\$505.88	\$550.86	\$559.23
4"	\$744.95	\$821.21	\$901.69	\$981.87	\$996.81
6"	\$1,771.94	\$1,953.30	\$2,144.75	\$2,335.48	\$2,371.04
8"	\$2,843.06	\$3,134.02	\$3,441.22	\$3,747.24	\$3,804.31
10"	\$4,497.90	\$4,958.21	\$5,444.23	\$5,928.38	\$6,018.68
12"	\$7,393.83	\$8,150.49	\$8,949.43	\$9,745.30	\$9,893.75
Usage Charge					
Rate (per HCF)	\$2.12	\$2.22	\$2.44	\$2.66	\$2.70

*Assumes January 1, 2017 rate increase, subsequent rate increases begin July 1, 2017 through 2021

Five Year Sewer Rate Projection

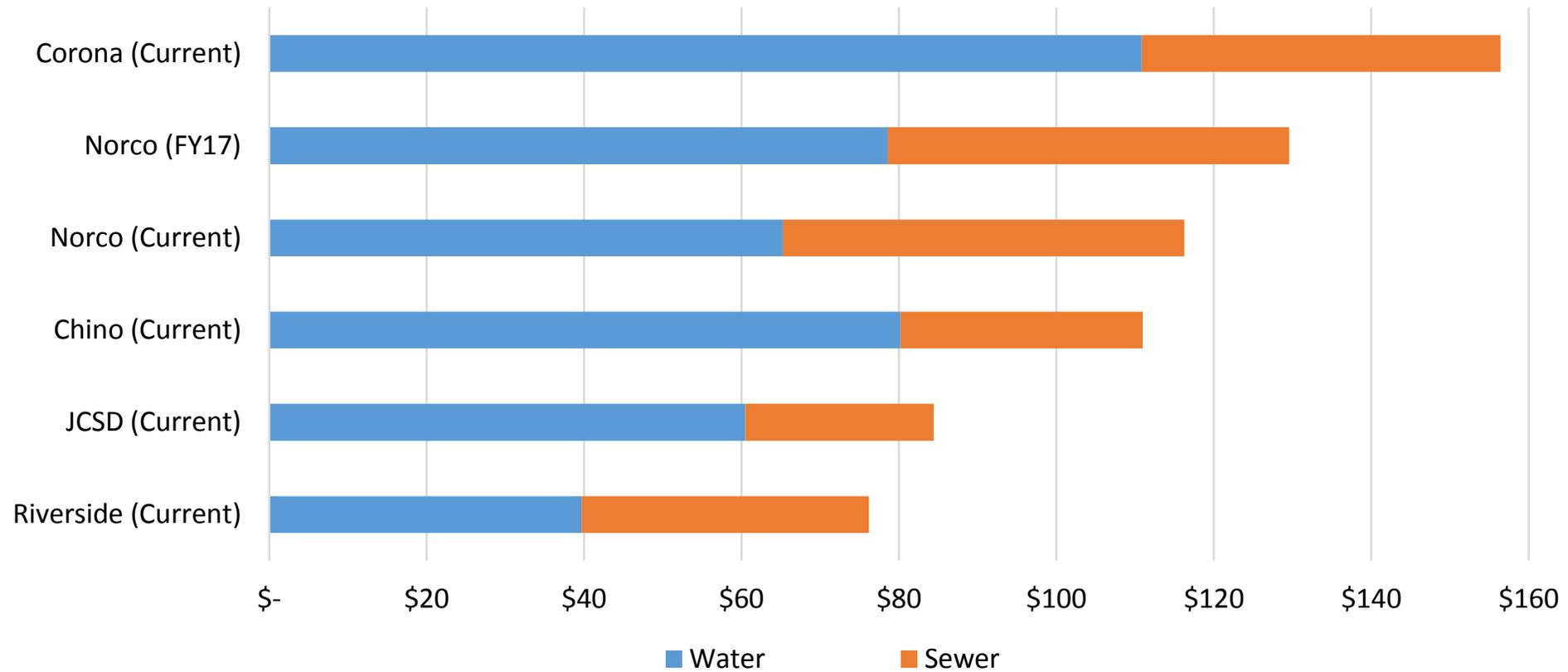
	FY17	FY18	FY19	FY20	FY21
Fixed Charge					
	\$51.00	\$51.00	\$53.81	\$56.77	\$59.89
Non-Residential Usage Charge (Usage over 10 HCF)					
Rate (per HCF)	\$8.00	\$8.00	\$8.44	\$8.90	\$9.39

Average Residential Customer (20 HCF) Monthly Bill Projections

	Current	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Water Bill	\$65	\$78	\$87	\$97	\$107	\$109
Sewer Bill	\$51	\$51	\$51	\$54	\$57	\$60
Total Bill	\$116	\$129	\$138	\$151	\$164	\$169
\$ Change		\$13	\$9	\$12	\$13	\$5

Water and Sewer Utility Bill Comparison

Monthly Water and Sewer Bill (20 HCF)



Private Fire Protection

City currently assesses a fixed charge per fire service connection – same fixed charge as ¾” meter customer

Industry standard to assess private fire protection charges based on potential demand associated with fire line size

Fire Line Size	Current Monthly Charge	Proposed Monthly Charge FY 2017
2”	\$20.87	\$36.48
3”	\$20.87	\$37.88
4”	\$20.87	\$40.29
6”	\$20.87	\$48.96
8”	\$20.87	\$63.92
10”	\$20.87	\$86.42

Private Fire Protection – Five Year Projection

Fire Line Size	FY 2017*	FY 2018	FY 2019	FY 2020	FY 2021
2"	\$36.48	\$40.85	\$45.35	\$49.88	\$50.88
3"	\$37.88	\$42.42	\$47.09	\$51.80	\$52.83
4"	\$40.29	\$45.13	\$50.09	\$55.10	\$56.20
6"	\$48.96	\$54.84	\$60.87	\$66.96	\$68.30
8"	\$63.92	\$71.59	\$79.46	\$87.41	\$89.16
10"	\$86.42	\$96.79	\$107.43	\$118.17	\$120.54

*Assumes January 1, 2017 rate increase, subsequent rate increases begin July 1, 2017 through 2021

Drought Rates

Establishment of Drought Rates

To address future conservation requirements the City should adopt drought rates

- ▶ Even with new water rate structure future drought restrictions will reduce water revenues

Drought rates should be tied to City's Water Conservation Program Water Shortage Response Levels

Water Shortage Response Level	Conservation Target	FY 2017 Proposed Usage Rate	Drought Surcharge
Level 1	0%	\$2.12	\$-
Level 2	20%	\$2.12	\$0.37
Level 3	30%	\$2.12	\$0.71
Level 4	40%	\$2.12	\$1.14
Level 5	>50%	\$2.12	\$1.73

Current financial health of water fund requires revenue adjustments

Based on financial forecast we recommend that the City limit capital spending to allow for gradual increases in revenues

Reserve funds should be established / maintained within each fund

- ▶ Operating reserve for water and sewer at 3 months operating
- ▶ Rate stabilization reserve for water fund

Adopt a water rate structure that provides increased revenue stability

- ▶ Cost of service based fixed charge that transitions from 30% to 46% of revenues
- ▶ Reduces dependency on variable revenues and susceptibility to revenue impacts due to reductions in usage

If the recommendation of Scenario 3 is approved the next steps would include:

- **October 19, 2016 - Council will vote to authorize staff to mail Prop 218 notice and schedule a public hearing for December 7, 2016**
- **Public hearing December 7, 2016**
- **New rates would become effective January 1, 2017**

Questions