

**NOTICE AND CALL OF SPECIAL MEETING
HESPERIA CITY COUNCIL AND HESPERIA WATER DISTRICT**

NOTICE IS HEREBY GIVEN that a special meeting of the Hesperia City Council and Hesperia Water District is hereby called to be held on Wednesday, August 30, 2017 at 3:00 p.m. in the Joshua Conference Room located at 9700 Seventh Avenue, Hesperia California.



Paul Russ, Mayor

**AUGUST 30, 2017
SPECIAL JOINT MEETING
HESPERIA WATER DISTRICT WATER AND SEWER RATES STUDY WORKSHOP
AGENDA**

As a courtesy, please silence your cell phones, pagers, and other electronic devices while the meeting is in session. Thank you

CALL TO ORDER

3:00 p.m.

Pledge of Allegiance

Roll Call:

Mayor Paul Russ
Mayor Pro Tem Russ Blewett
Council Member Larry Bird
Council Member Bill Holland
Council Member Rebekah Swanson

PUBLIC COMMENT REGARDING DISCUSSION ITEM BELOW

In compliance with the Brown Act, prior to action of the Council, any member of the audience will have the opportunity to address the legislative body on any item listed on the special meeting agenda.

Individuals wishing to speak on an item listed on the special meeting agenda must submit a speaker slip to the City Clerk. Speaker slips should be turned in before an agenda item is discussed. Comments will be limited to three minutes.

In further compliance with the Brown Act, the City Council may not discuss or take action on non-agenda items or engage in question and answer sessions with the public. The City Council may ask brief questions for clarification; provide a reference to staff or other resources for factual information and direct staff to add an item to a subsequent meeting.

NEW BUSINESS

1. Consideration of changes to Water and Sewer rates. (Staff person: Assistant City Manager/Management Services Brian Johnson)

ADJOURNMENT

I, Melinda Sayre, City Clerk of the City of Hesperia, California do hereby certify that I caused to be posted the foregoing agenda on Monday, August 28, 2017 at 5:30 p.m. pursuant to California Government Code §54954.2.



Melinda Sayre, City Clerk

Hesperia Water District Workshop

August 30, 2017

Introduction to the Water and Sewer Rate Study

Presented by:

Kim Boehler – Associate *Director*, NBS

Greg Henry – *Consultant*, NBS

Overview of the Presentation:

- **“Utility Rates 101” – Overview of a Rate Study**
- **Financial Plan Results**
- **Rate Design Results**
- **Summary of Council Direction Needed**

1. Rates 101

Overview of a “Rate Study”



1. Overview of a Rate Study

30,000-Foot Overview of Utility Rates

- **Water/Wastewater Utilities are:**
 - ✓ Intended to be Self-Sufficient Enterprises – Utility Revenues Cover Utility Costs
 - ✓ Do Not Support Other City Departments or General Fund Activities
- **Rate Study Objectives:**
 - ✓ Comprehensive Evaluation of Revenues, Expenses, Capital Plans, Reserves and Rate Structure
 - ✓ Develop a 5-year Rate Plan to Meet Funding Objectives

1. Overview of a Rate Study (Cont.)

Water Rates – Background and Recent Trends:

Major Factors Influencing Rates:

- Drought: Supply Shortages and Conservation Mandates
- Legal Constraints Resulting from Various Court Cases
- Results: Many California Water Agencies are Experiencing Higher Costs and Raising Rates

1. Overview of a Rate Study (Cont.)

FINANCIAL PLAN

Compares current sources and uses of funds and determines the revenue needed from rates and projected rate adjustments.



COST-OF-SERVICE ANALYSIS

Allocates revenue requirements to the customer classes in a "fair and equitable" manner that complies with Prop 218.

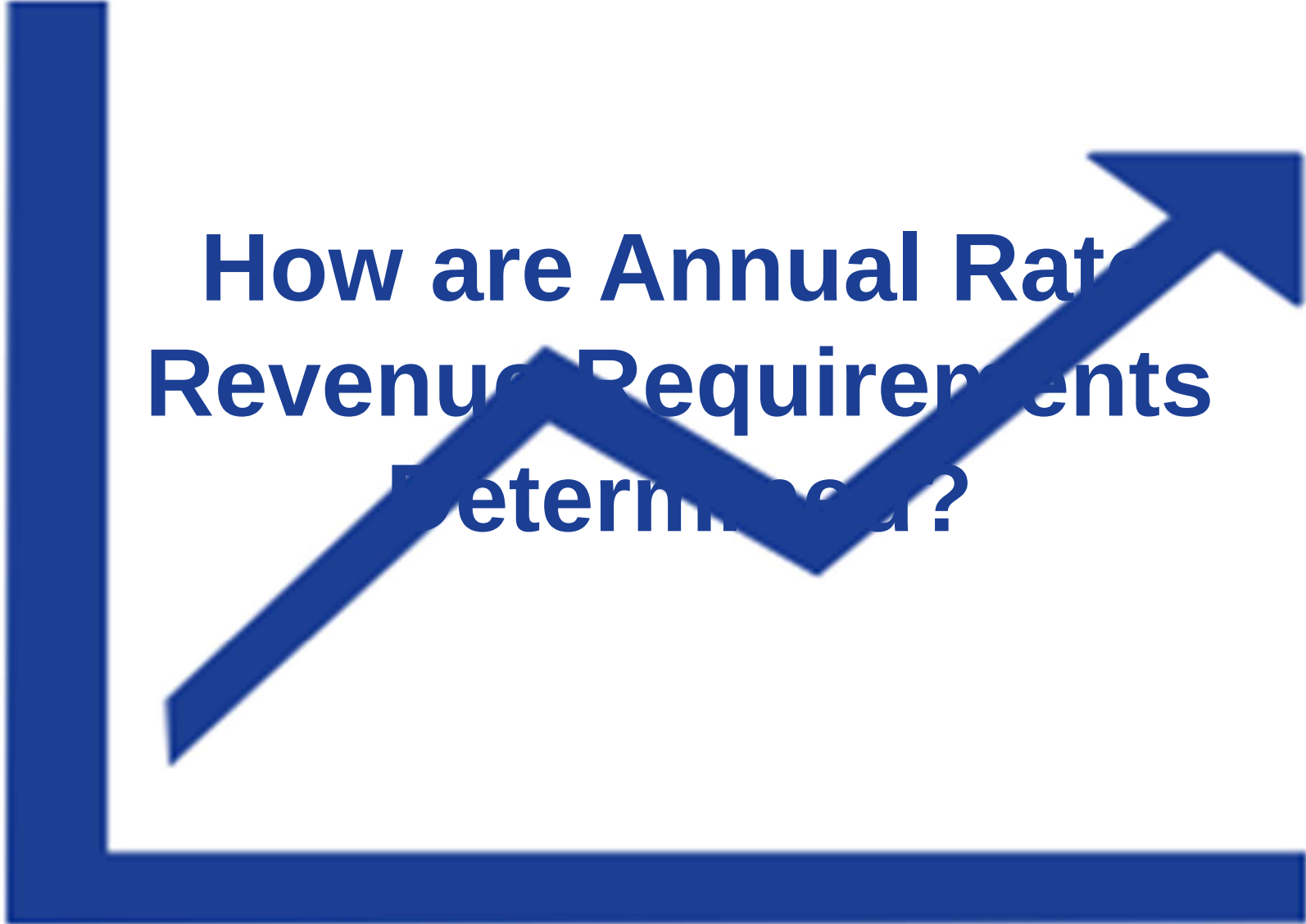


RATE DESIGN

Considers what rate structure alternative best meets the District's need to collect rate revenue from each customer class.



2. Financial Plan Results



**How are Annual Rate
Revenue Requirements
Determined?**

2. Financial Plan Results

Funding Priorities:

**1.
O & M
Expenses**

**2.
Debt
Service**

**3. Capital
Projects**

**4. Reserve
Funding**

Rates



2. Financial Plan Results

Funding Priorities:

1. Operations & Maintenance Costs

- ✓ Budgeted Expenses
- ✓ Identified by type (labor cost, electricity) and projected forward with a unique inflation factor
- ✓ Non-Rate Revenue is deducted

2. Debt Service

- ✓ Existing Debt Payments
- ✓ Estimated Payments for Future Debt



2. Financial Plan Results

Funding Priorities (cont.):

3. Reserve Requirements:

- ✓ Utilities are self-sufficient, so reserves are intended to avoid needing funding from elsewhere in the future
- ✓ GFOA* standards *“Start with 90 days of working capital, move up or down based upon specifics, never less than 45 day”*
- ✓ Capital R&R fund *minimum* standard is 3% net assets
- ✓ Can be held for specific purpose
- ✓ Connection/Capacity Fee Reserves are restricted for expansion projects, no target level



* GFOA = Government Finance Officers Association

2. Financial Plan Results

Funding Priorities (*cont.*):

4. Capital Improvement Costs

- ✓ City's Capital Improvement Program
- ✓ Inflated Using Construction Cost Index



Water Utility

Financial Plan Alternatives

Financial Plan - Alternative #1

Funds the following:

- ✓ Base Operating and Maintenance Costs
- ✓ Purchase of Water Rights in FY 2018/19:
 - 1,815 Acre Feet at \$5,000 per AF
 - 4.5 percent interest rate loan, 10-year payoff
- ✓ Full Cost Allocation beginning in FY 2018/19 (*\$2.4 mil.*)
- ✓ Operating Reserve Target of 90 days O&M Expenses
- ✓ Capital Reserve Target of 3% net assets
- ✓ Contamination Mitigation Reserve Fund Target (*\$500,000 annually to a target of \$2.5 million*)

Capital Improvement Projects – Alt #1

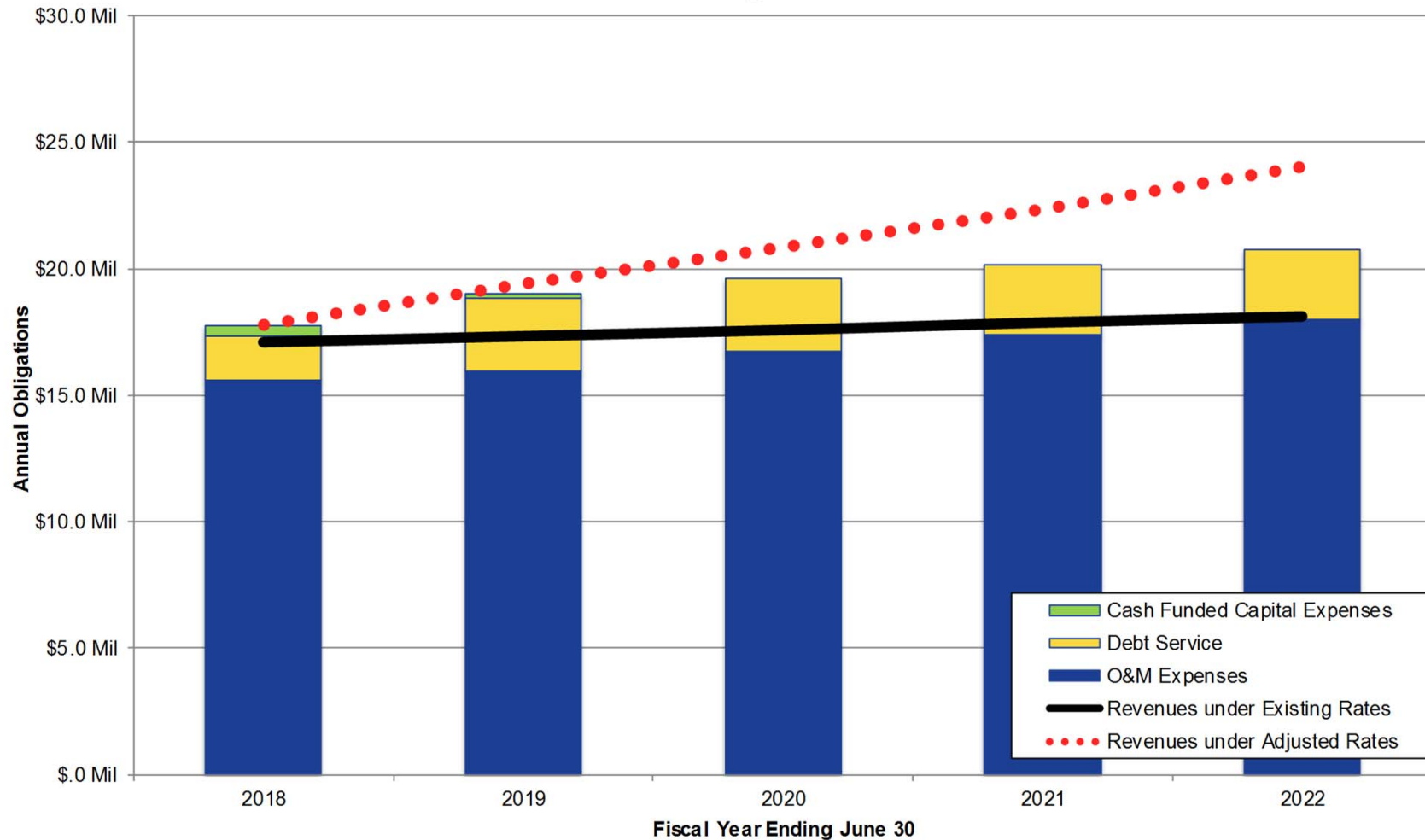
Proposed Capital Improvement Projects in Estimated Future Values (1)	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22	Total
Rate-Funded Capital Projects:						
G Av. Waterline Repair at Railroad Crossing - pipe is leaking	\$ -	\$ 61,800	\$ -	\$ -	\$ -	\$ 61,800
Recoat 5.0 MG Reservoir at Plant 22	-	679,800	-	-	-	679,800
Service Line Reconstruction City Wide	250,000	257,500	265,225	273,182	281,377	1,327,284
Pipeline Replacement Program - construct replacement pipelines within existing streets at various locations	450,000	463,500	477,405	491,727	506,479	2,389,111
I-15 at Ranchero Interchange - construct new pipelines and pump station to provide service to commercial area	2,500,000	-	-	-	-	2,500,000
Sub-Total: Rate Funded Capital Projects	3,200,000	1,462,600	742,630	764,909	787,856	6,957,995
Other Capital Projects (Developer, Grant, Loan and Cash Funded):						
I-15 at Ranchero Interchange Reservoir, Pump Station Upgrade and Pipeline (<i>developer funded</i>)	\$ -	\$ -	\$ -	\$ 4,644,090	\$ 4,783,412	\$ 9,427,502
Reclaimed Water Distribution System (<i>grant, loan and cash funded</i>)	13,113,331	4,160,170	-	-	-	17,509,501
Sub-Total: Other Capital Projects	\$13,113,331	\$ 4,160,170	\$ -	\$ 4,644,090	\$ 4,783,412	\$26,937,003
Total: Capital Projects	\$16,313,331	\$ 5,622,770	\$ 742,630	\$ 5,408,999	\$ 5,571,269	\$33,894,998

1. Assumes construction cost inflation of 3% per year (per ENR, see Exhibit 2), added to City's cost estimate (provided 8/24/2017).

Projects in red font cannot be funded with the proposed increases.

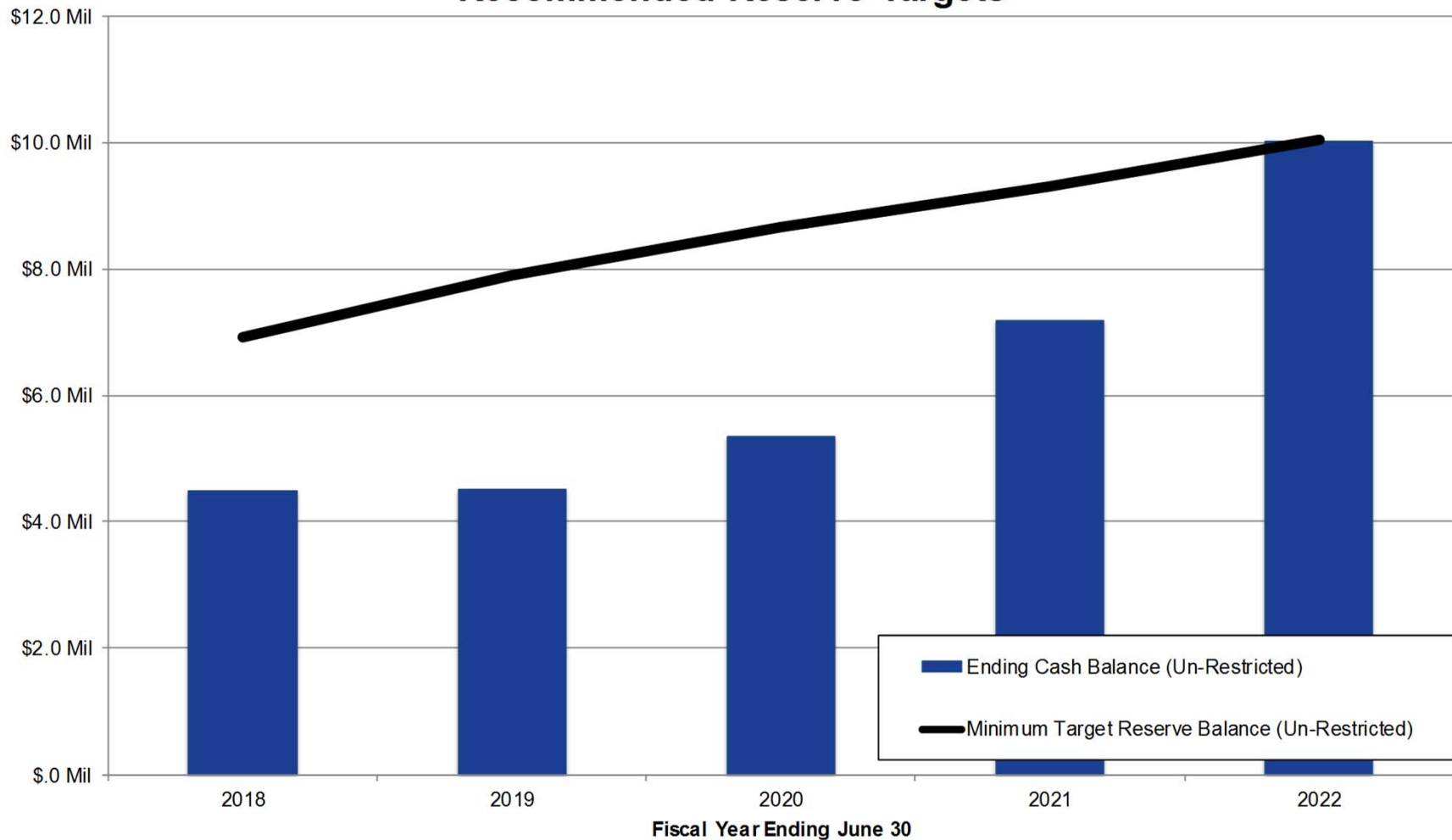
Financial Plan - Alternative #1

Water Revenue Requirements vs.
Revenue Under Existing and Increased Rates



Financial Plan - Alternative #1

**Cash Balances vs.
Recommended Reserve Targets**



CITY OF HESPERIA

Water Rate Study Capital Improvements



Water Systems Master Planning

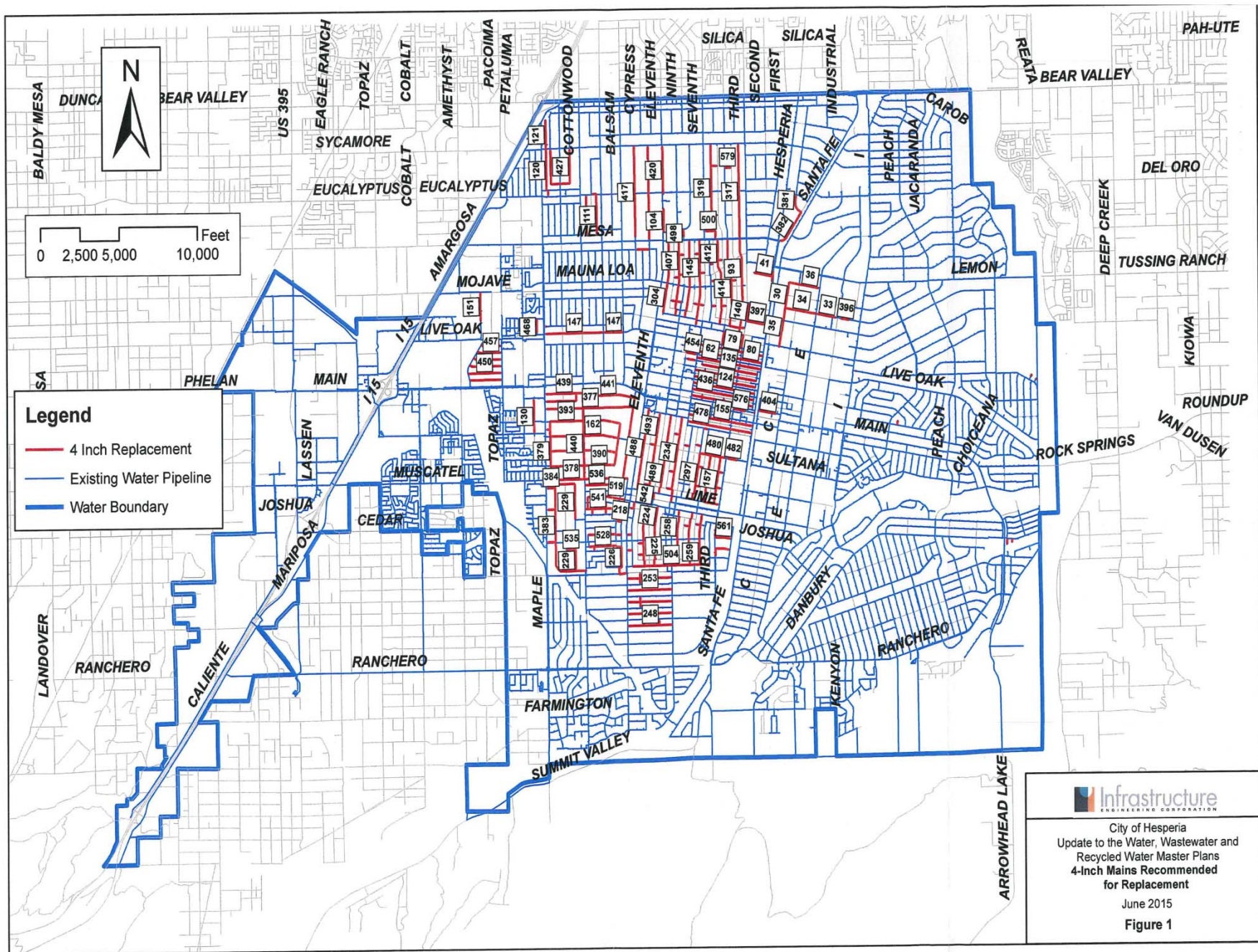
- Water System – Infrastructure Engineering Corporation, August 2015
- Wastewater System – Infrastructure Engineering Corporation, August 2015
- Recycled Water System – Infrastructure Engineering Corporation, August 2015

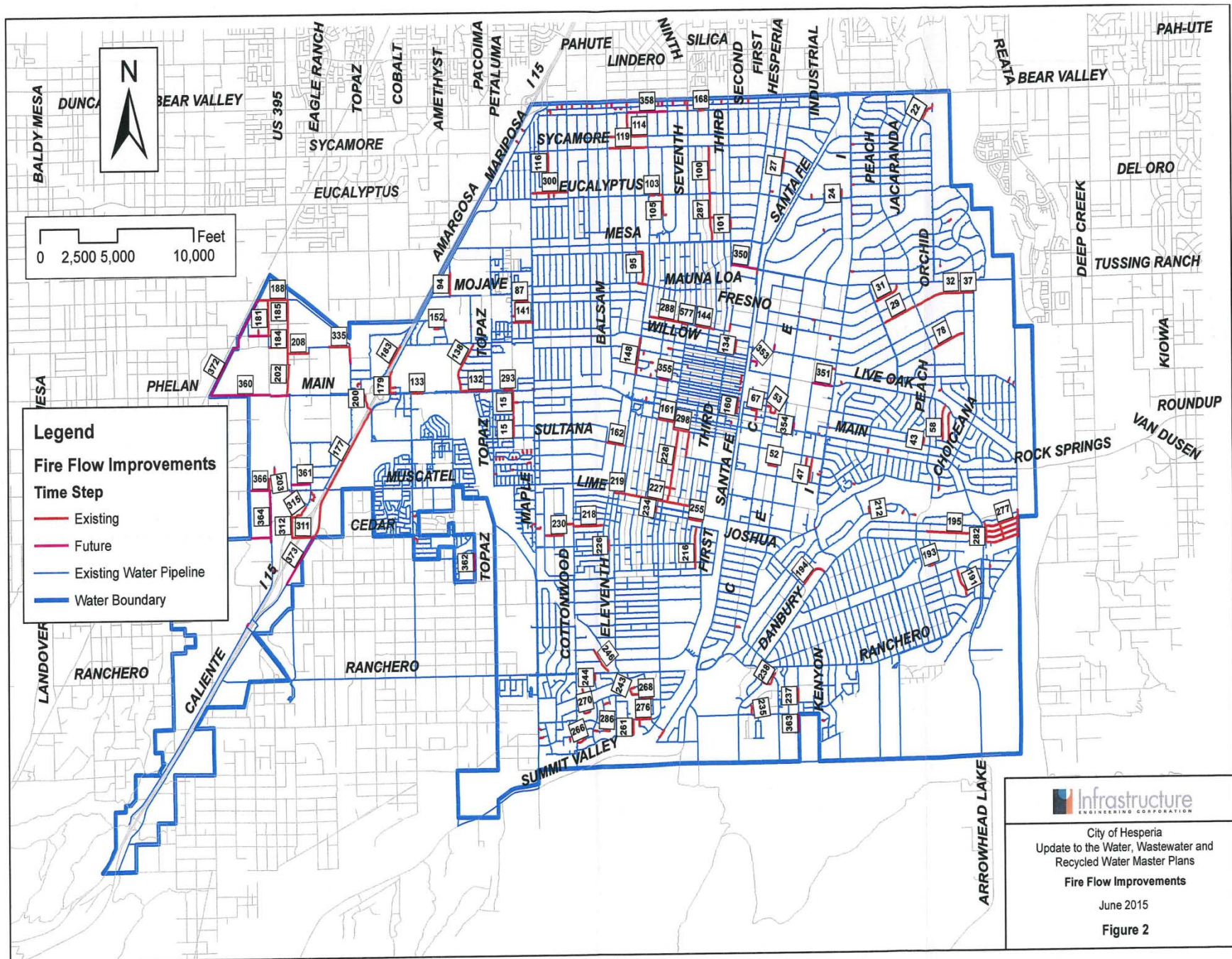


Table 9-Water Distribution System CIP Summary

Description	Year						Total
	Existing	2020	2025	2030	2035	2040	
Pipelines	\$162,368,700	\$4,598,600	\$16,670,200	\$0	\$0	\$0	\$183,637,500
Pump Stations		\$5,939,000	\$175,000	\$265,900	\$220,500	\$0	\$6,600,400
Wells	\$0	\$752,300	\$593,200	\$525,000	\$532,000	\$553,300	\$2,955,800
Pressure Reducing Stations	\$78,000	\$78,000	\$125,500	\$0	\$0	\$0	\$281,500
Reservoirs	\$0	\$9,350,000	\$0	\$9,350,000	\$0	\$28,050,000	\$46,750,000
TOTALS	\$162,446,700	\$20,717,900	\$17,563,900	\$10,140,900	\$752,500	\$28,603,300	\$240,225,200







City of Hesperia
Update to the Water, Wastewater and
Recycled Water Master Plans

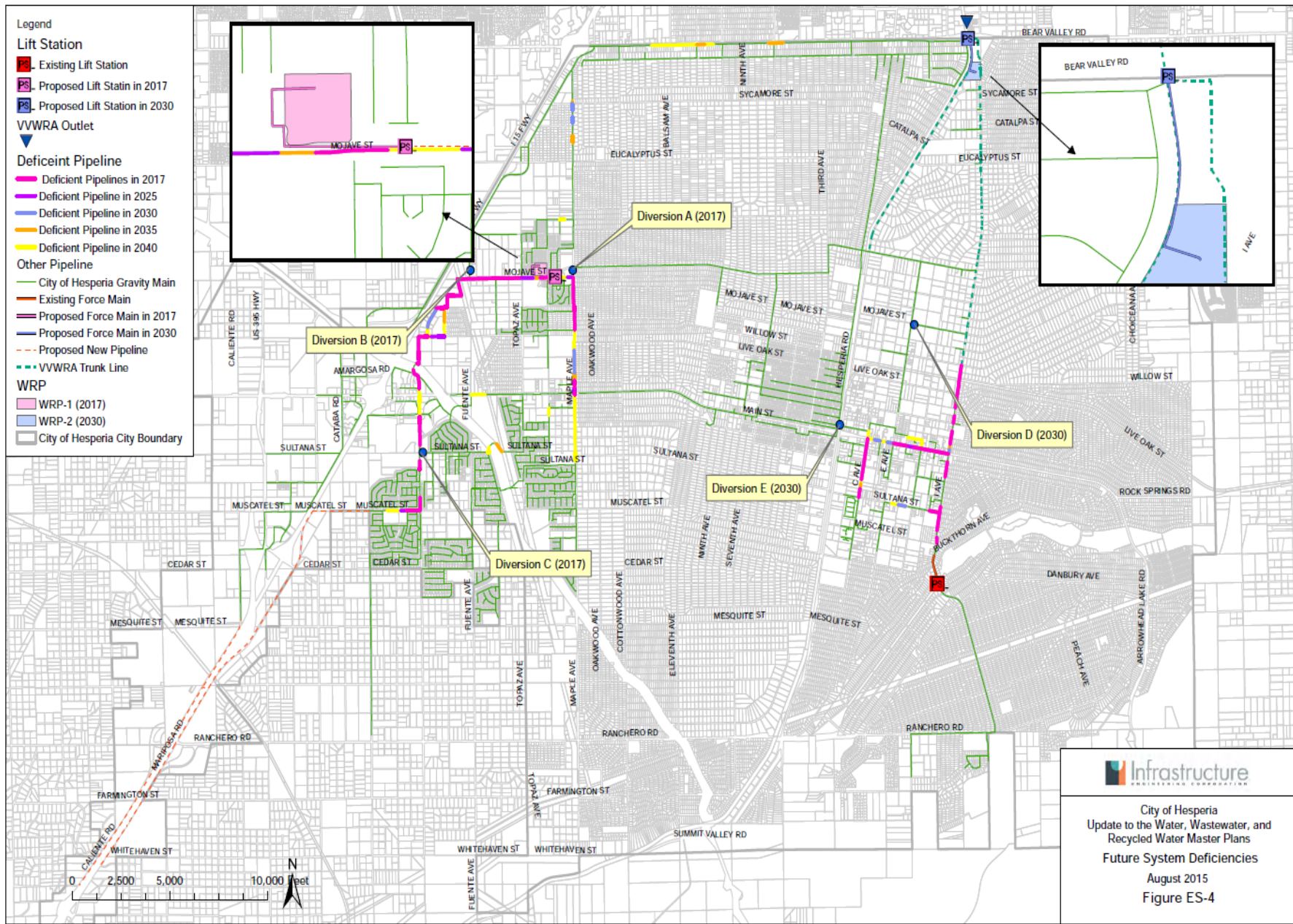
Fire Flow Improvements

June 2015

Figure 2

Water System 5-Year CIP

Project Description	Program Total	'17-'18 Amount Included In Annual Budget	'17-'18 Amount not Included Annual Budget	'18-'19 Amount	'19-'20 Amount	'20-'21 Amount	'21-'22 Amount
	(\$ million)	(\$ million)	(\$ million)	(\$ million)	(\$ million)	(\$ million)	(\$ million)
Pipeline Replacement Program - construct replacement pipelines within existing streets at various locations together rear to front service relocations ^{1.)}	\$ 3.55	\$ 1.30	\$ 0.45	\$ 0.45	\$ 0.45	\$ 0.45	\$ 0.45
Service Line Reconstruction City Wide	\$ 1.25	\$ -	\$ 0.25	\$ 0.25	\$ 0.25	\$ 0.25	\$ 0.25
Zone J seperation -- Area 1 (Topaz to Maple, Cedar to White Haven) ^{2.)}	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
G Av. Waterline Repair at Railroad Crossing - pipe is leaking	\$ 0.06	\$ -	\$ -	\$ 0.06	\$ -	\$ -	\$ -
Recoat 5.0 MG Reservoir at Plant 22	\$ 0.66	\$ -	\$ -	\$ 0.66	\$ -	\$ -	\$ -
I-15 at Rancho Improvements - construct new pipelines and pump station to serve commercial corridor - includes seperation from Zone J	\$ 2.50	\$ -	\$ 2.50	\$ -	\$ -	\$ -	\$ -
I-15 at Rancho Interchange Reservoir, Pump Station Upgrade and Pipeline, system will connect at multiple locations providing water system circulation ^{3.)}	\$ 8.50	\$ -	\$ -	\$ -	\$ -	\$ 4.25	\$ 4.25
Master Plan Pipelines (see enclosed exhibit), Fire Flow Program	\$ 20.00	\$ -	\$ -	\$ 5.00	\$ 5.00	\$ 5.00	\$ 5.00
Master Plan Pump Stations Upgrades (Plants 14, 18, 19, and 21)	\$ 0.35	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.35
Master Plan Wells - Various Locations	\$ 0.75	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.75
Master Plan Pressure Stations - Various Locations	\$ 0.16	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.16
Totals:	\$ 37.78	\$ 1.30	\$ 3.20	\$ 6.42	\$ 5.70	\$ 9.95	\$ 11.21



Wastewater System 5-Year CIP

	Program Total	'17-'18 Amount Included In Annual Budget	'17-'18 Amount not Included Annual Budget	'18-'19 Amount	'19-'20 Amount	'20-'21 Amount
Project Description	(\$million)	(\$million)	(\$million)	(\$million)	(\$million)	(\$million)
I-15 at Ranchero Improvements - construct sewer conveyance system together with Amargosa sewer diversion to supply larger wastewater flows for recycled water uses. MP#7.	\$ 3.70	\$ 0.20	\$ 3.50	\$ -	\$ -	\$ -
Zone J separation - SP2 Sewer ^{4.)}	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Main St. Sewer Replacement (C Av. to I Av.), MP# 21	\$ 0.52	\$ 0.10	\$ -	\$ 0.21	\$ 0.21	\$ -
Main St. Sewer Replacement (Topaz Av. to Fuente Av.) MP # 1	\$ 0.33	\$ -	\$ -	\$ 0.33	\$ -	\$ -
Maple Av. Sewer Replacement (Sultana Av. to Mojave Av.) MP#'s 2	\$ 1.59	\$ 0.34	\$ -	\$ 0.25	\$ 0.50	\$ 0.50
Golf Course Sewer Line - New Sewer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
I Av. Lift Station and Force Main Upgrade	\$ 1.30	\$ -	\$ -	\$ -	\$ -	\$ 0.65
I Av. Sewer Replacement (Muscatal Av. to Hercules Av.) MP # 19, 22, and 23.	\$ 2.34	\$ -	\$ -	\$ -	\$ 1.17	\$ 1.17
Muscatel/Escondido Sewer MP's #12, 13, 14 and 15.	\$ 1.90	\$ -	\$ -	\$ -	\$ -	\$ -
C Avenue Sewer, MP# 20	\$ 0.90	\$ -	\$ -	\$ -	\$ -	\$ -
Mojave Street Sewer, MP# 24	\$ 0.70	\$ -	\$ -	\$ -	\$ -	\$ -
Totals:	\$ 13.28	\$ 0.64	\$ 3.50	\$ 0.79	\$ 1.88	\$ 2.32

Recycled Water System 5-Year CIP

		'17-'18 Amount Included In Annual Budget	'17-'18 Amount not Included Annual Budget				
	Program Total			'18-'19 Amount	'19-'20 Amount	'20-'21 Amount	'21-'22 Amount
Project Description	(\$million)	(\$million)	(\$million)	(\$million)	(\$million)	(\$million)	(\$million)
Recycled Water Distribution System (Reservoir, Pump Stations, and Pipeline), Phase 1	\$ 17.10	\$ 13.10	\$ -	\$ 4.00	\$ -	\$ -	\$ -
Totals:	\$ 17.10	\$ 13.10	\$ -	\$ 4.00	\$ -	\$ -	\$ -



Financial Plan - Alternative #2

Funds the following:

- ✓ All Expenses and Reserve Contributions Noted in Alternative #1
- ✓ Funds All of the Proposed Capital Improvement Projects

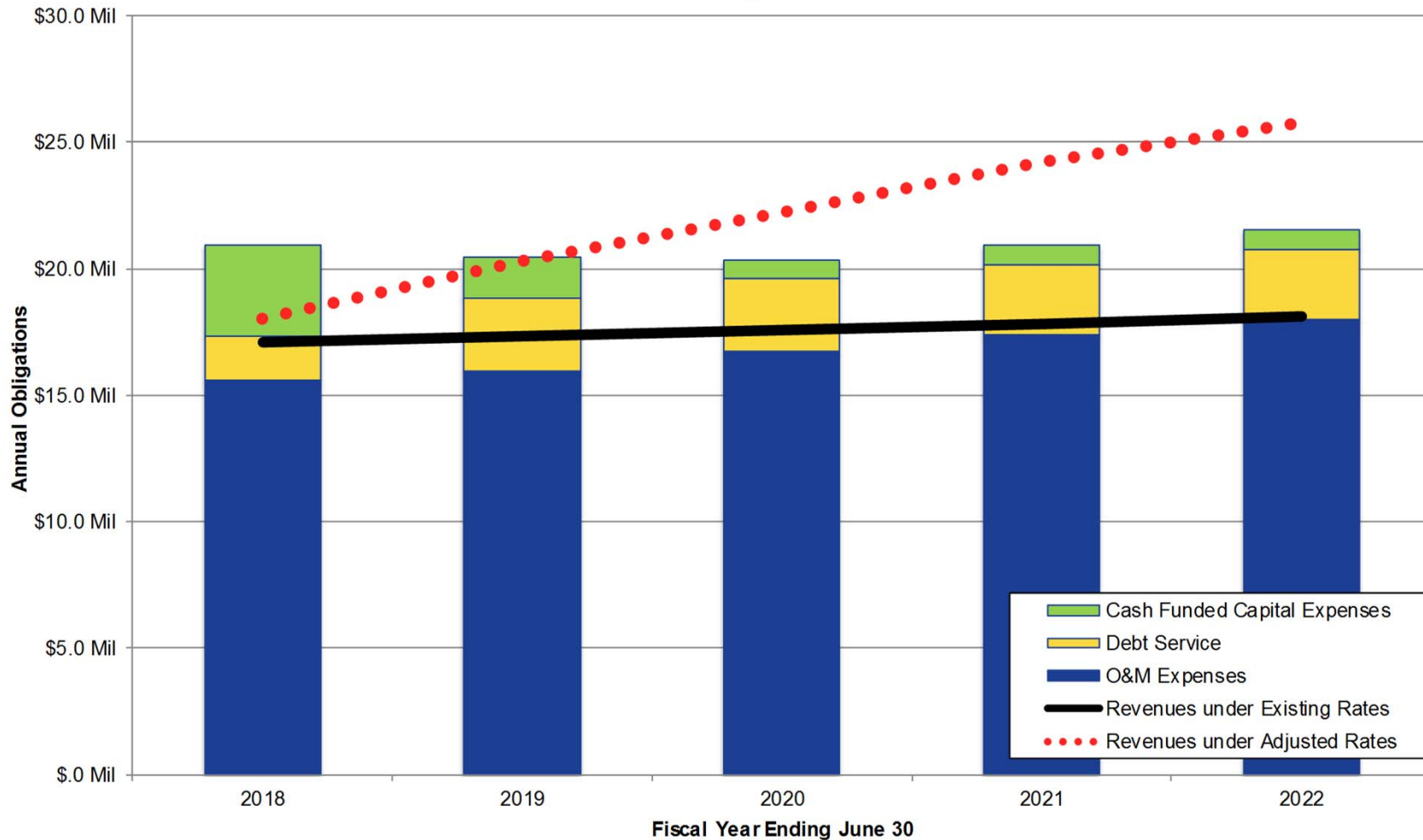
Capital Improvement Projects – Alt #2

Proposed Capital Improvement Projects in Estimated Future Values (1)	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22	Total
Rate-Funded Capital Projects:						
G Av. Waterline Repair at Railroad Crossing - pipe is leaking	\$ -	\$ 61,800	\$ -	\$ -	\$ -	\$ 61,800
Recoat 5.0 MG Reservoir at Plant 22	-	679,800	-	-	-	679,800
Service Line Reconstruction City Wide	250,000	257,500	265,225	273,182	281,377	1,327,284
Pipeline Replacement Program - construct replacement pipelines within existing streets at various locations	450,000	463,500	477,405	491,727	506,479	2,389,111
I-15 at Ranchero Interchange - construct new pipelines and pump station to provide service to commercial area	2,500,000	-	-	-	-	2,500,000
Sub-Total: Rate Funded Capital Projects	3,200,000	1,462,600	742,630	764,909	787,856	6,957,995
Other Capital Projects (Developer, Grant, Loan and Cash Funded):						
I-15 at Ranchero Interchange Reservoir, Pump Station Upgrade and Pipeline (<i>developer funded</i>)	\$ -	\$ -	\$ -	\$ 4,644,090	\$ 4,783,412	\$ 9,427,502
Reclaimed Water Distribution System (<i>grant, loan and cash funded</i>)	13,113,331	4,160,170	-	-	-	17,509,501
Sub-Total: Other Capital Projects	\$13,113,331	\$ 4,160,170	\$ -	\$ 4,644,090	\$ 4,783,412	\$26,937,003
Total: Capital Projects	\$16,313,331	\$ 5,622,770	\$ 742,630	\$ 5,408,999	\$ 5,571,269	\$33,894,998

1. Assumes construction cost inflation of 3% per year (per ENR, see Exhibit 2), added to City's cost estimate (provided 8/24/2017).

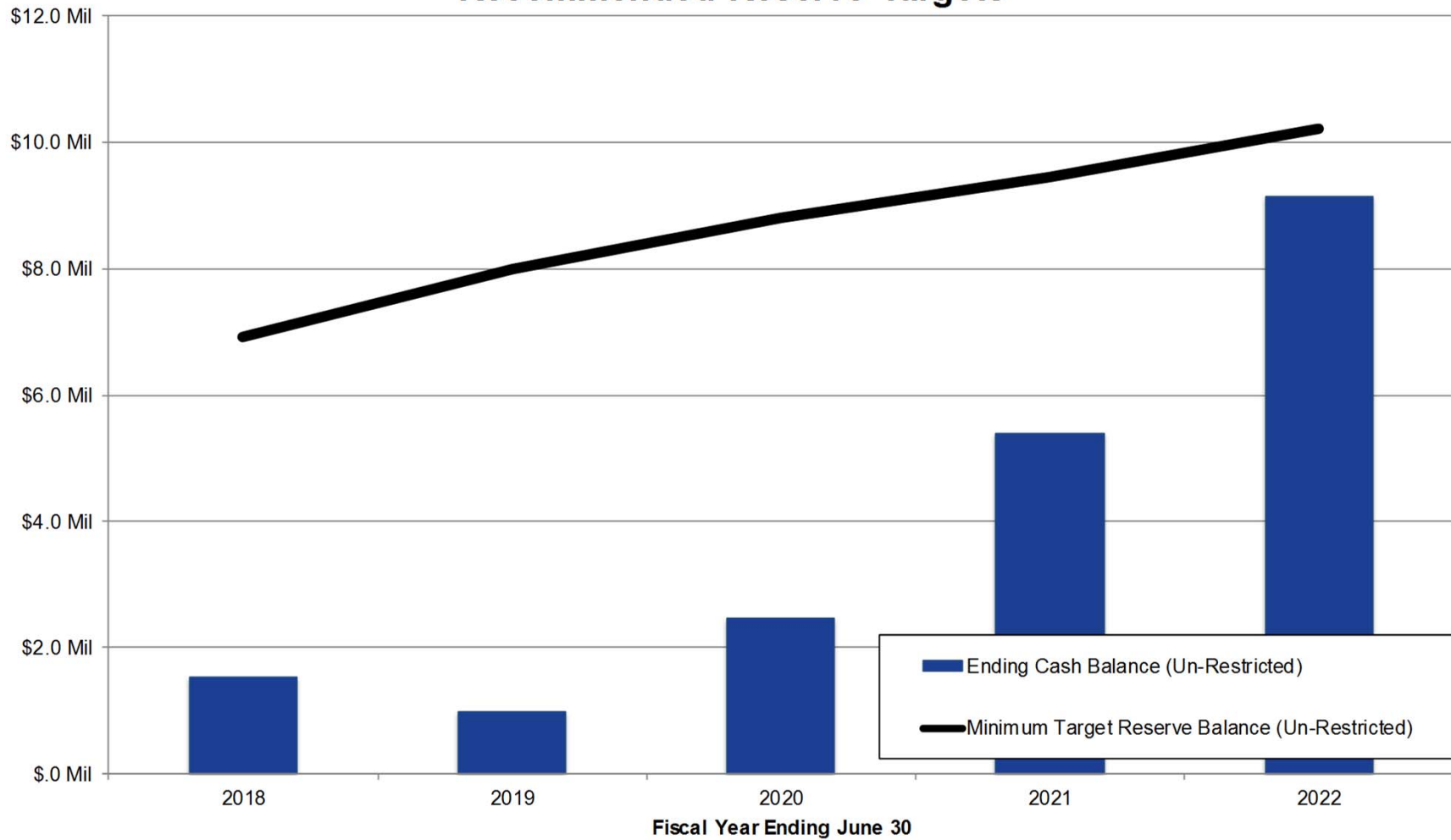
Financial Plan - Alternative #2

Water Revenue Requirements vs.
Revenue Under Existing and Increased Rates



Alternative #2

**Cash Balances vs.
Recommended Reserve Targets**



Financial Plan - Alternative #3

Funds the following:

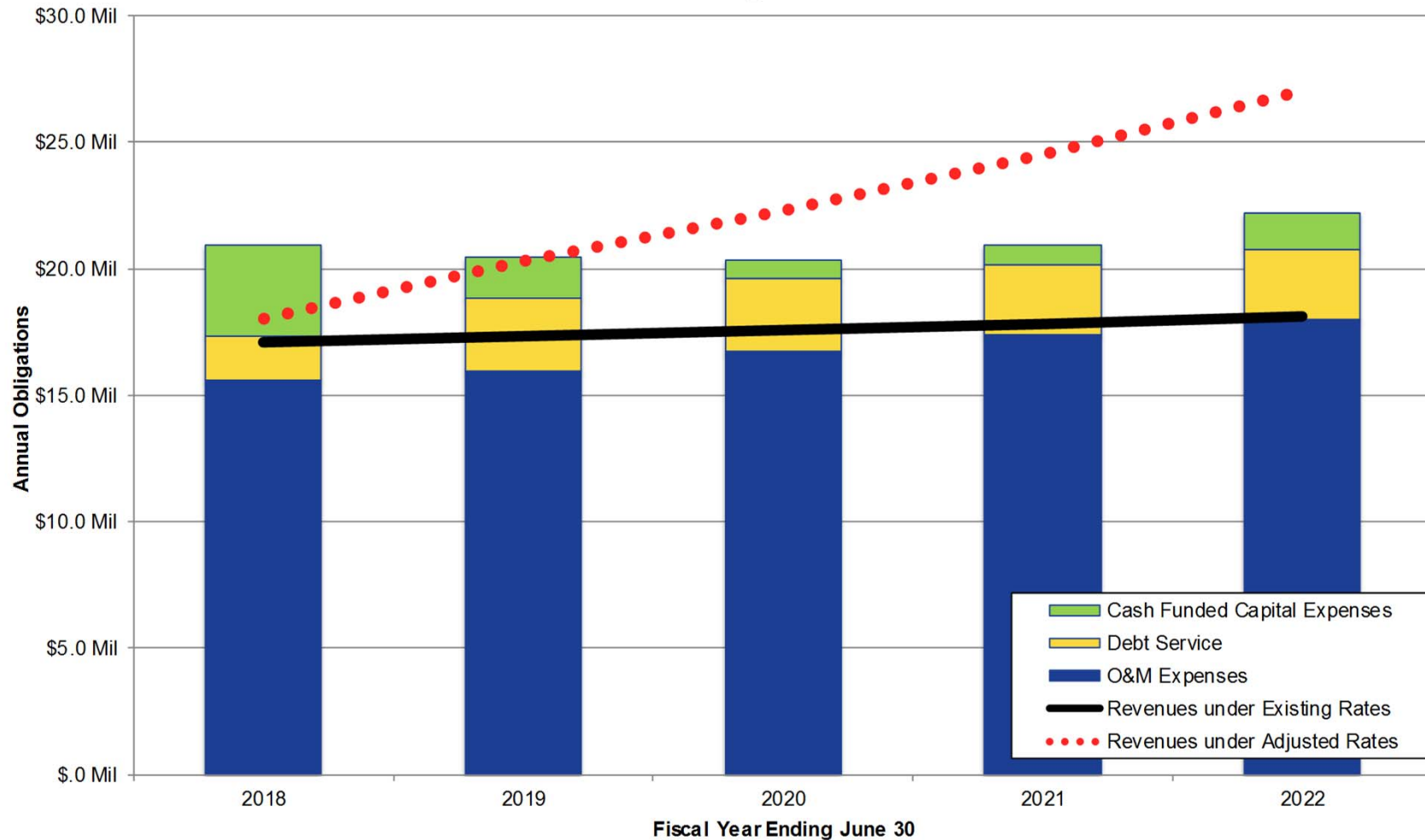
- ✓ All Expenses and Reserve Contributions Noted in Alternative #2
- ✓ Reflects the Impact of 9 Percent Annual Increases
- ✓ Allows for Funding All of the Proposed Capital Projects, Plus Approx. \$630,000 Additional

Capital Improvement Projects – Alt #3

Proposed Capital Improvement Projects in Estimated Future Values (1)	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22	Total
Rate-Funded Capital Projects:						
G Av. Waterline Repair at Railroad Crossing - pipe is leaking	-	61,800	-	-	-	61,800
Recoat 5.0 MG Reservoir at Plant 22	-	679,800	-	-	-	679,800
Service Line Reconstruction City Wide	250,000	257,500	265,225	273,182	281,377	1,327,284
Pipeline Replacement Program - construct replacement pipelines within existing streets at various locations	450,000	463,500	477,405	491,727	506,479	2,389,111
I-15 at Ranchero Interchange - construct new pipelines and pump station to provide service to commercial area	2,500,000	-	-	-	-	2,500,000
Additional Capital Projects (<i>Alternative #3</i>)	-	-	-	-	626,116	626,116
Sub-Total: Rate Funded Capital Projects	3,200,000	1,462,600	742,630	764,909	1,413,972	7,584,111
Other Capital Projects (Developer, Grant, Loan and Cash Funded):						
I-15 at Ranchero Interchange Reservoir, Pump Station Upgrade and Pipeline (<i>developer funded</i>)	\$ -	\$ -	\$ -	\$ 4,644,090	\$ 4,783,412	\$ 9,427,502
Reclaimed Water Distribution System (<i>grant, loan and cash funded</i>)	13,113,331	4,160,170	-	-	-	17,509,501
Sub-Total: Other Capital Projects	\$13,113,331	\$ 4,160,170	\$ -	\$ 4,644,090	\$ 4,783,412	\$26,937,003
Total: Capital Projects	\$16,313,331	\$ 5,622,770	\$ 742,630	\$ 5,408,999	\$ 6,197,385	\$34,521,114

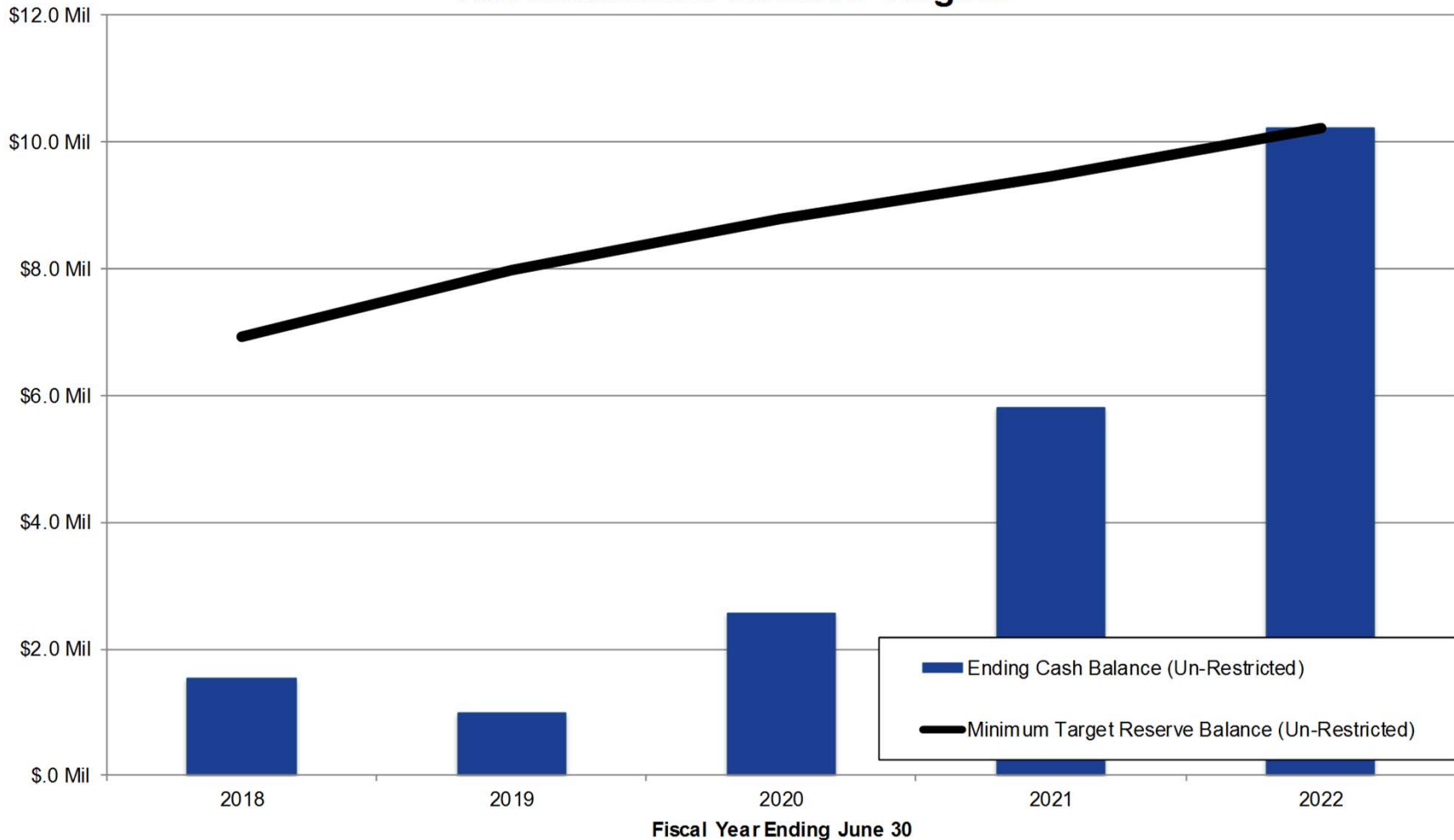
Financial Plan - Alternative #3

Water Revenue Requirements vs.
Revenue Under Existing and Increased Rates



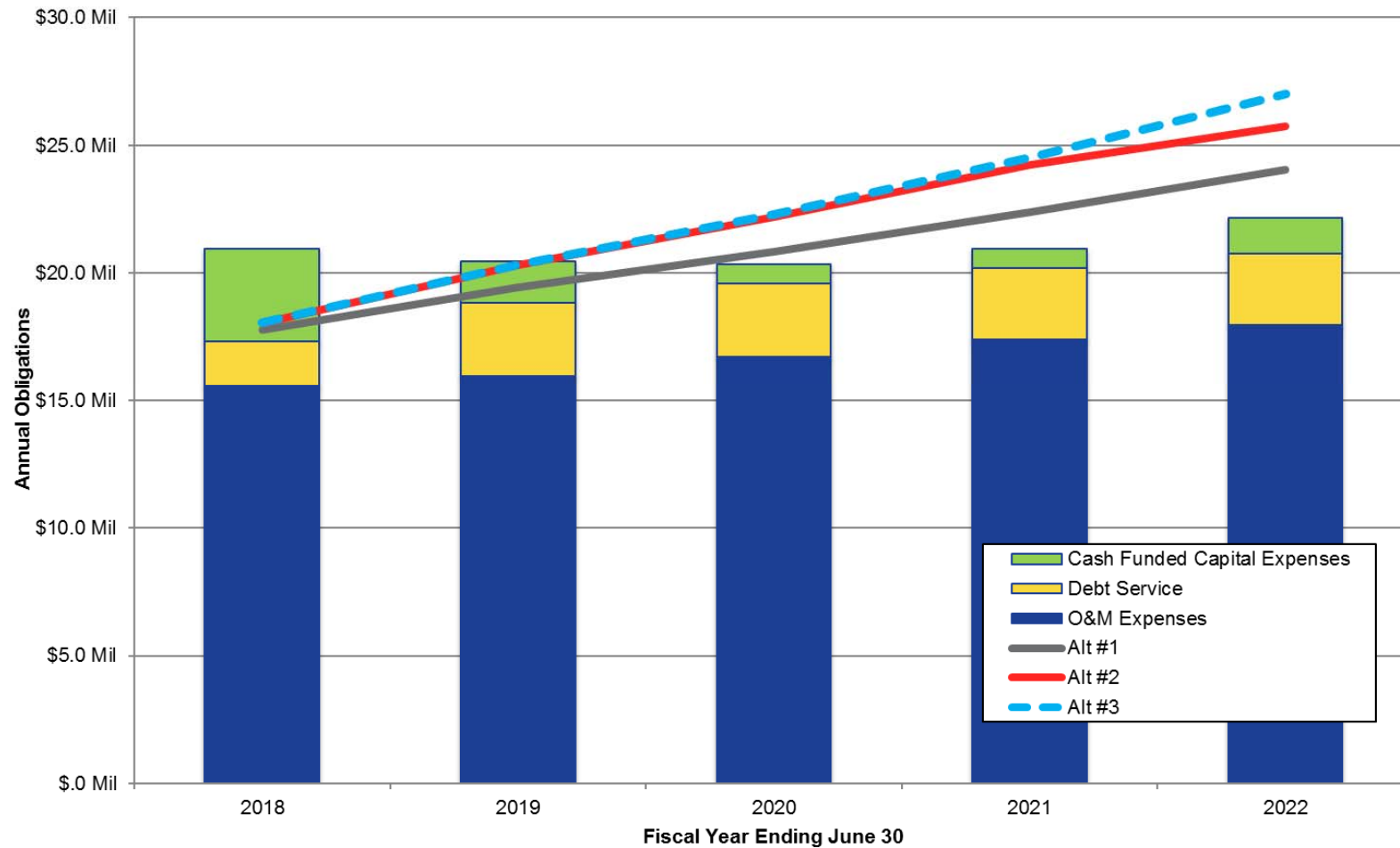
Alternative #3

**Cash Balances vs.
Recommended Reserve Targets**



Financial Plan Alternatives Comparison

**Water Revenue Requirements vs.
Revenue Under Existing and Increased Rates**



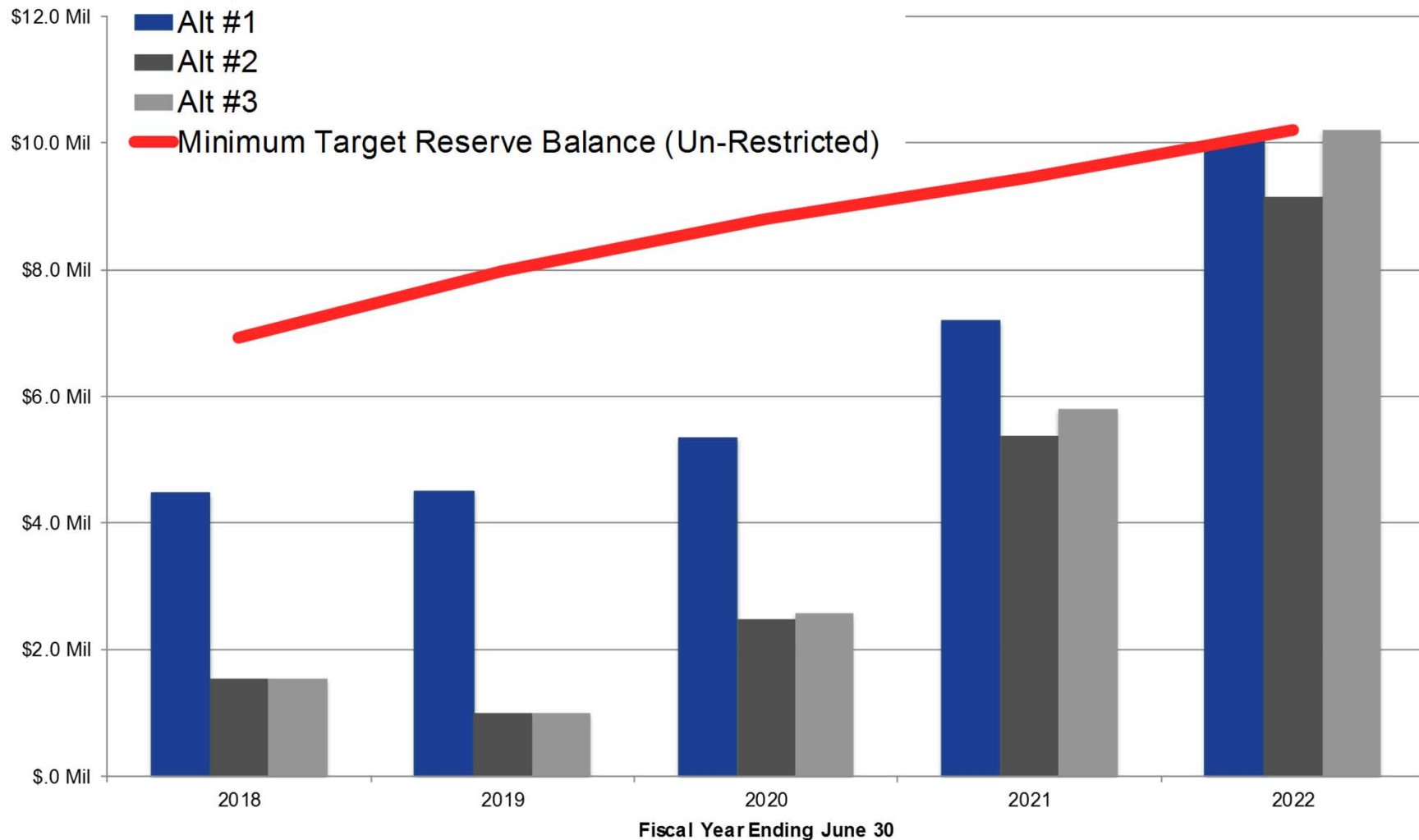
Financial Plan Alternatives Comparison

Comparison of Impacts to Rate Revenue:

Increase in Rate Revenue Needed	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Alternative #1	6.50%	6.25%	6.25%	6.25%	6.25%
Alternative #2	9.00%	9.00%	8.50%	8.00%	5.00%
Alternative #3	9.00%	9.00%	9.00%	9.00%	9.00%

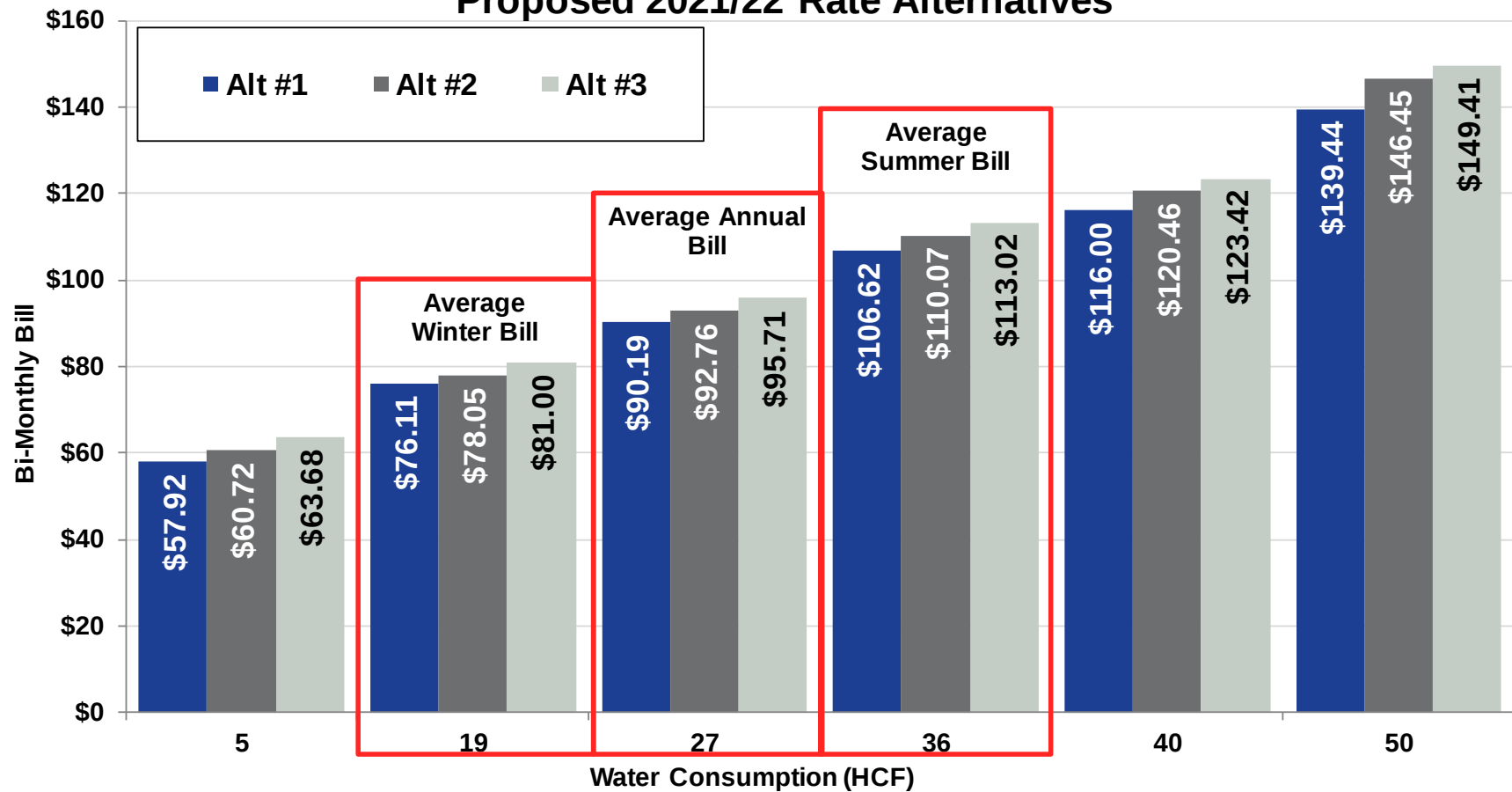
Financial Plan Alternatives Comparison

Cash Balances



Alternative Comparison – Average Impact

Residential Water Bill Comparison
Proposed 2021/22 Rate Alternatives



Bill Comps based upon rates designed to collect 45% fixed / 55% variable matching current rate structure.

2. Financial Plan Results

Board Direction Needed:

1. O&M Expenditures:

- Purchase Additional Water Rights
- Apply Full Cost Allocation

2. CIP Funding Levels:

- 100% of Proposed Capital Projects
- Reduced Level of Funding

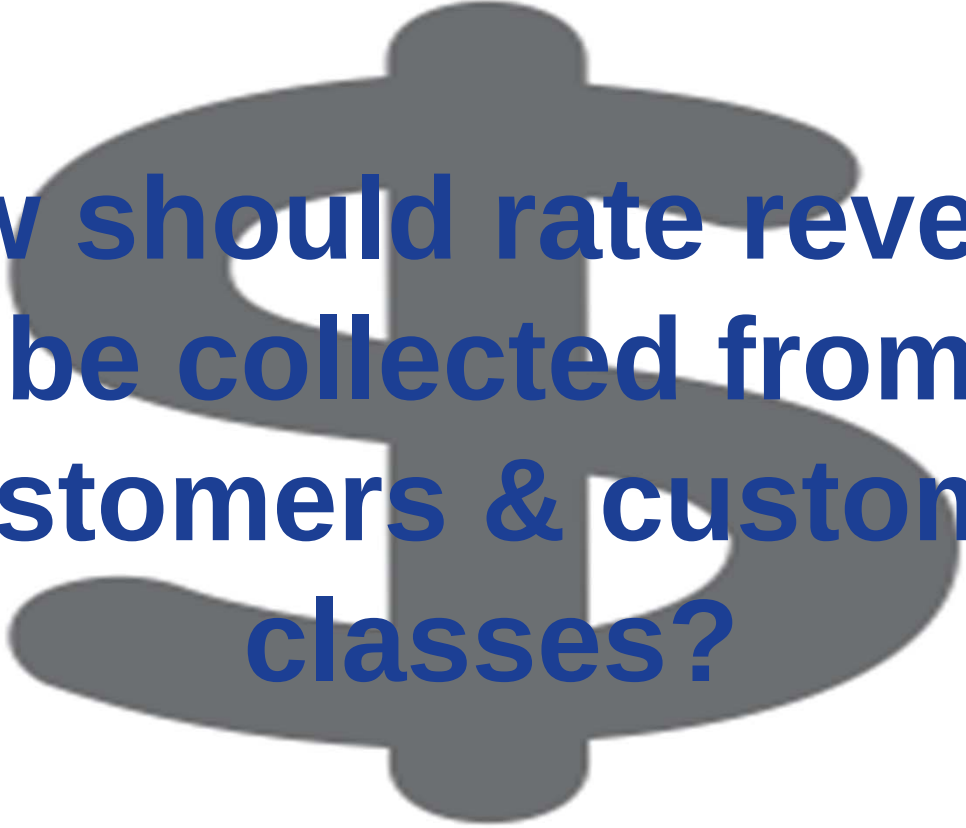
3. Reserve Fund Levels:

- Adjust Current Minimum Target to Industry Standard
- Add Contamination Mitigation Reserve



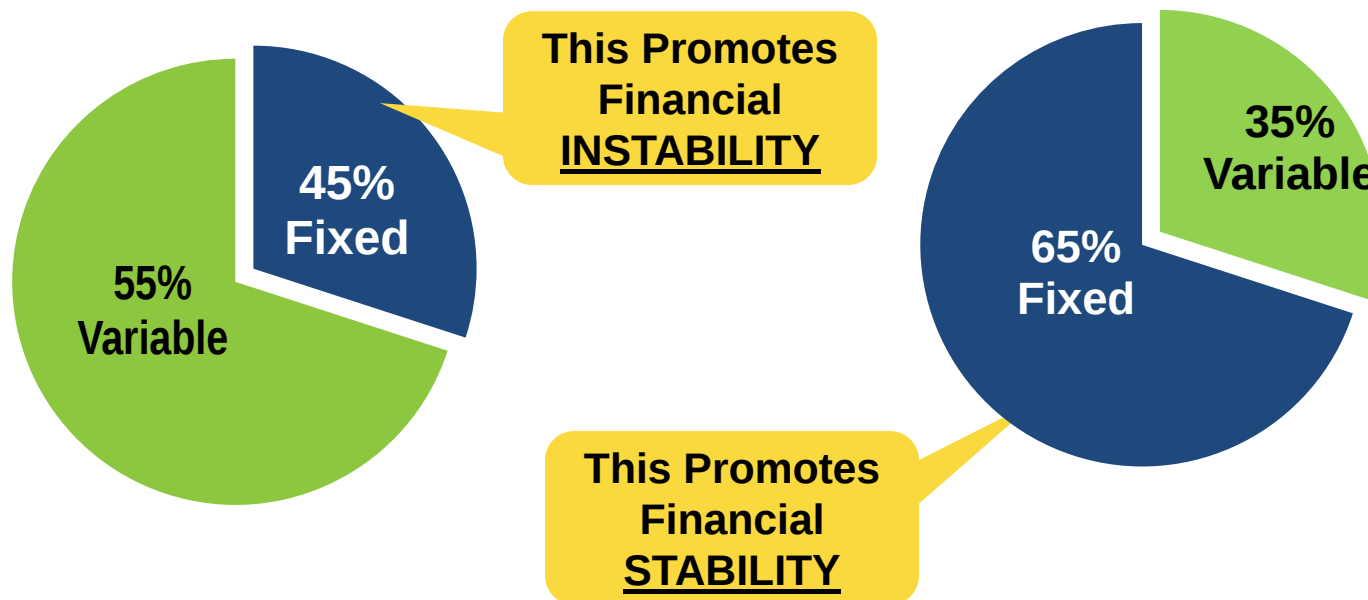
3. Rate Design Results

**How should rate revenue
be collected from
customers & customer
classes?**



3. Rate Design Results

What are Fixed vs. Variable %'s



Due to Drought/Conservation Impacts, Financial Stability Now Plays a Bigger Role in Rate Design Than in the Past.

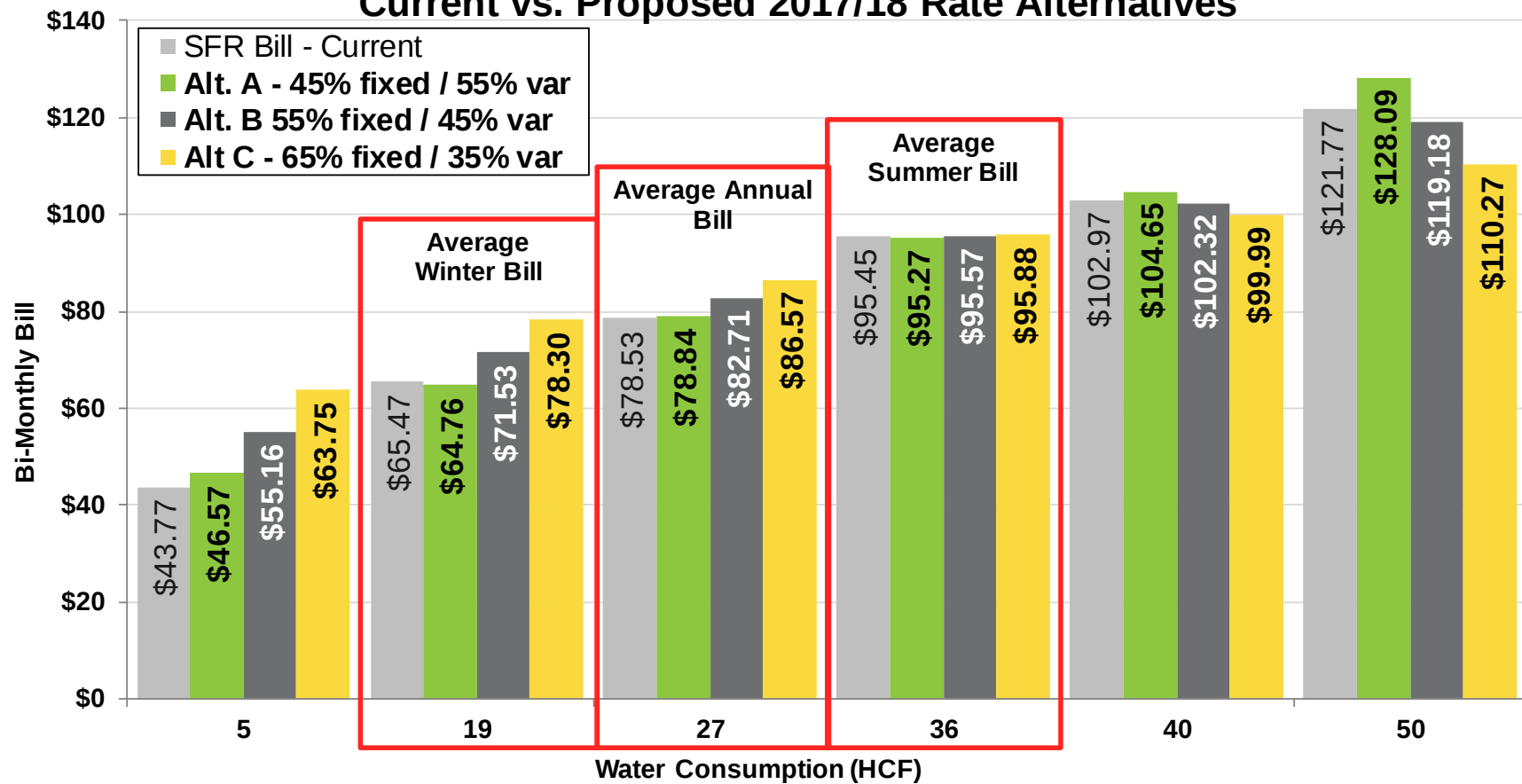


Water Utility

Rate Impacts

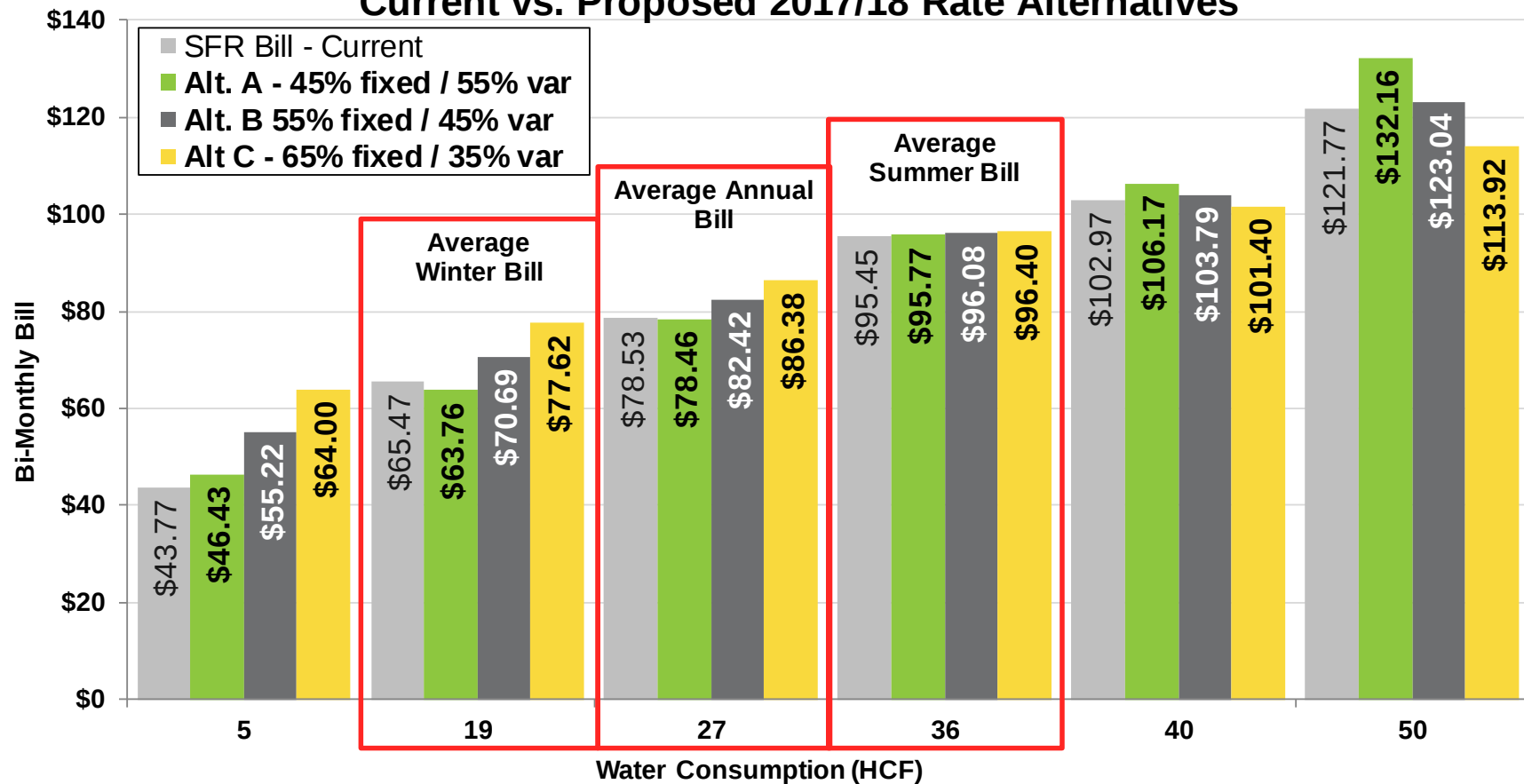
Alternative #1

Residential Water Bill Comparison
Current vs. Proposed 2017/18 Rate Alternatives



Alternatives #2 & 3

Residential Water Bill Comparison
Current vs. Proposed 2017/18 Rate Alternatives



3. Rate Design Results

Board Direction Needed (Water utility):

1. What % of Rate Revenue Should be Collected from Fixed vs. Volumetric Rates?
 - Higher Fixed % Provides More Revenue Stability
 - Higher Volumetric % Provides a Greater Conservation Incentive



4. Summary of Board Direction Needed

■ Financial Plan

- ✓ Apply Full Cost Allocation
- ✓ Purchase Additional Water Rights
- ✓ Strive to Meet Industry Standard Reserve Targets
- ✓ CIP Funding Level

■ Rate Design

- ✓ % of Rate Revenue from Fixed vs % Variable Charges

Sewer Utility

Financial Plan & Rate Impacts

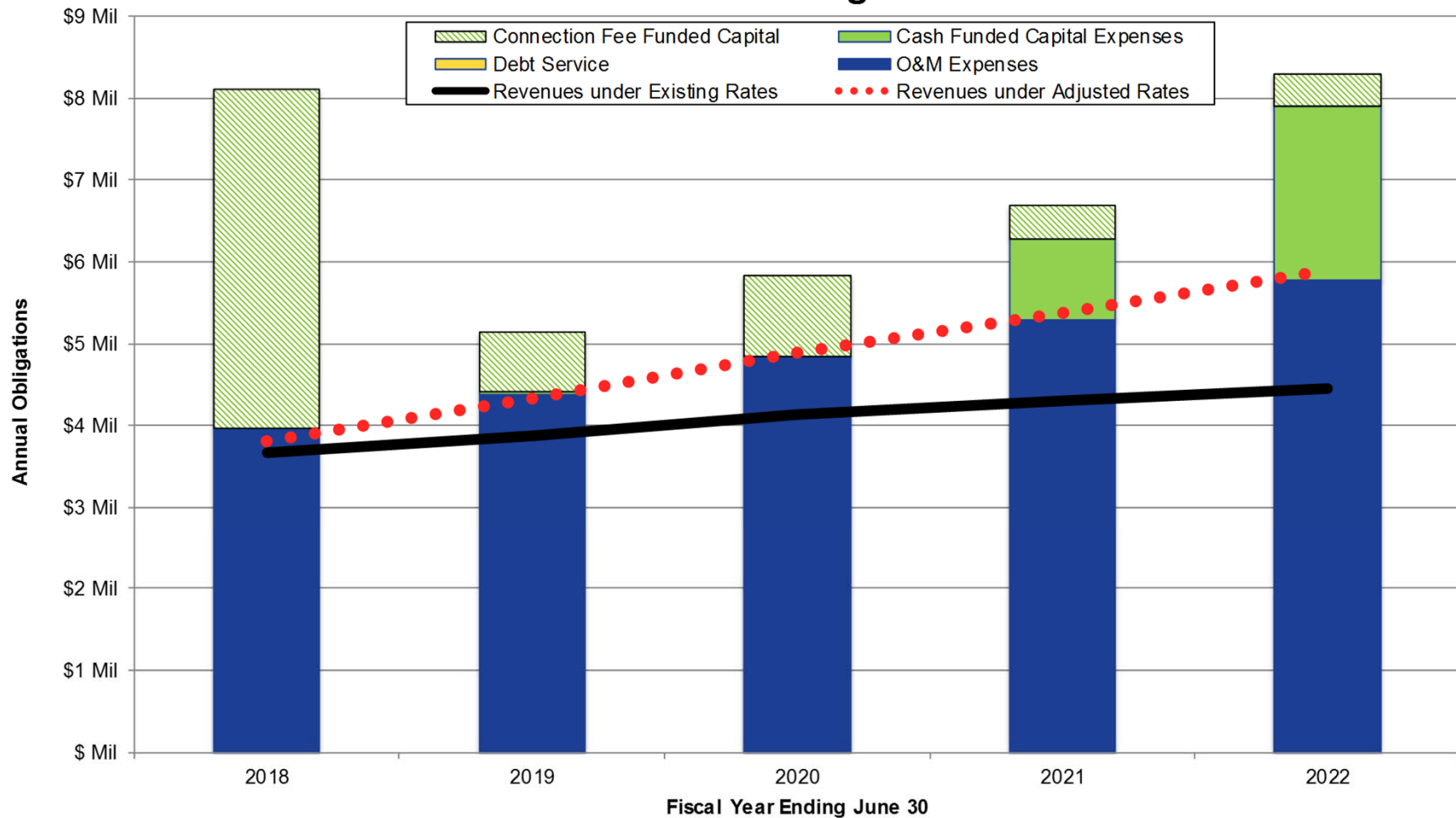
Sewer Financial Plan

Funds the following:

- ✓ Allocation of budgeted costs which should be shared by the sewer fund (currently paid by water)
- ✓ Capital Improvement Project Schedule
- ✓ Operating Fund Reserve Target of 180 days O&M
- ✓ Capital Fund Reserve Target of 6% net assets
- ✓ Expected 8% increases by VVWRA (based upon previous 5 years)
 - Increases beyond 8% will be automatically “passed on” as an additional increase to the rates in future years

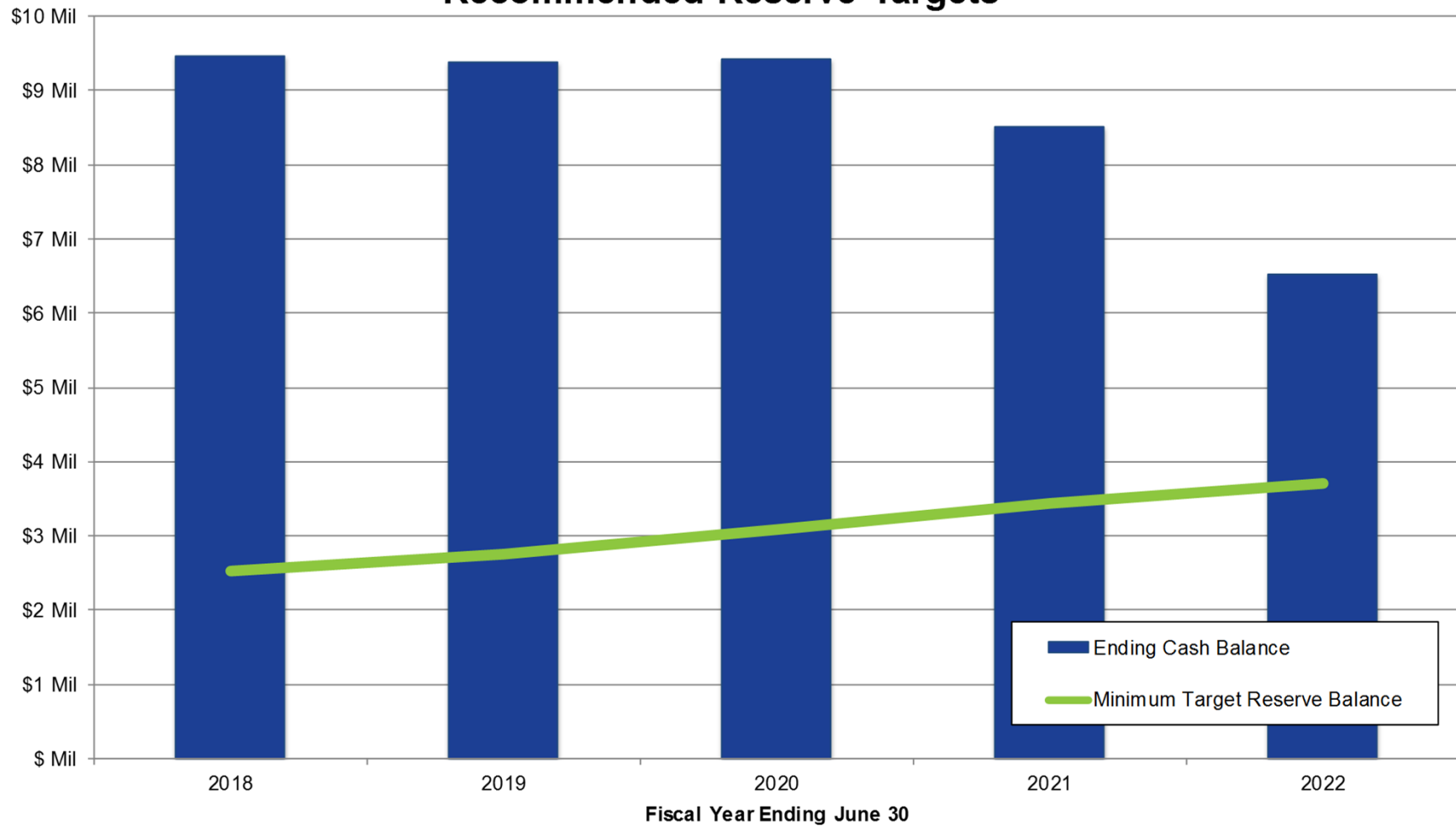
Sewer Financial Plan, cont.

**Sewer Revenue Requirements vs.
Revenue Under Existing and Increased Rates**



Sewer Financial Plan, cont.

**Un-Restricted Cash Balances vs.
Recommended Reserve Targets**

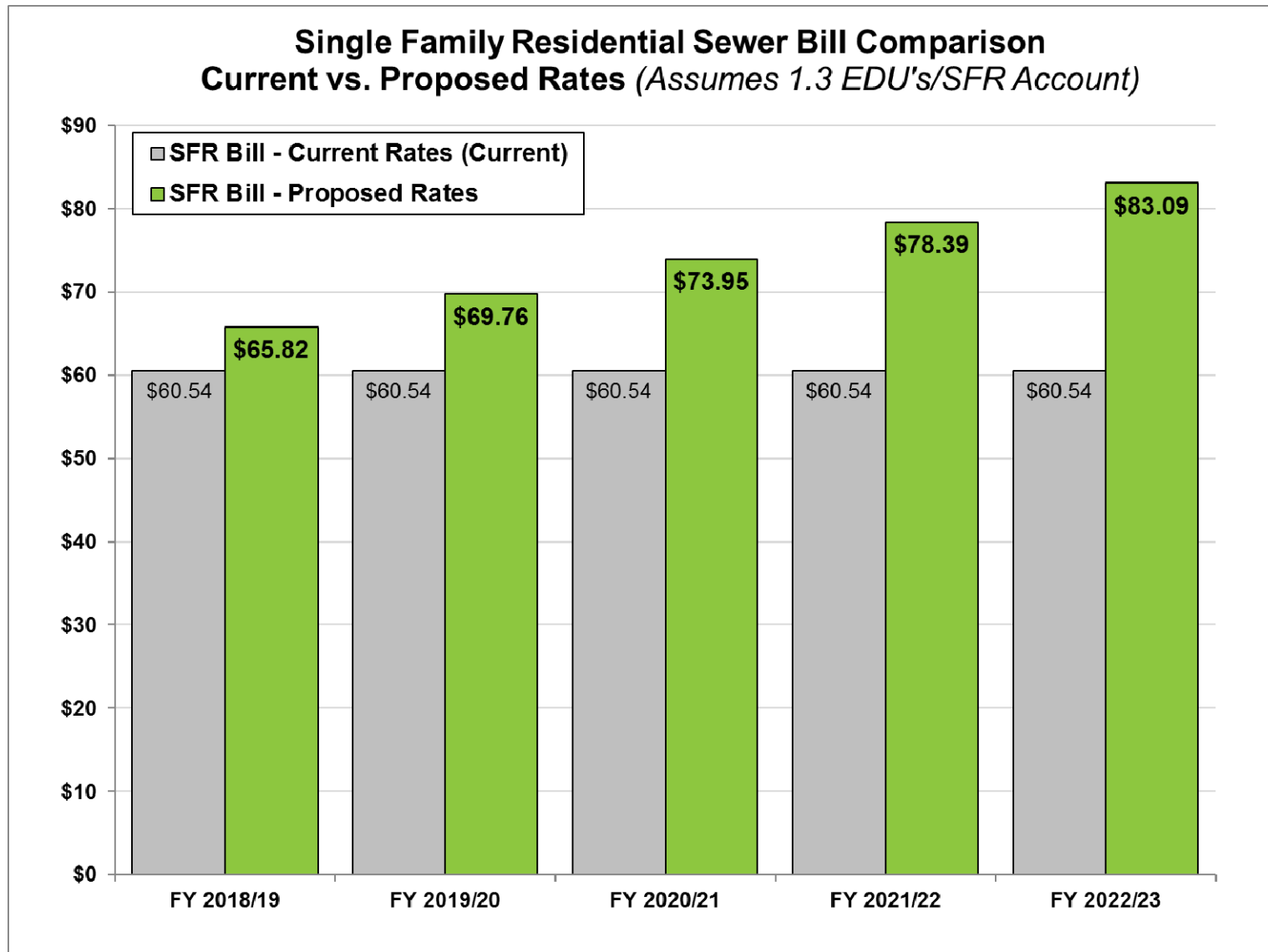


Capital Improvement Projects

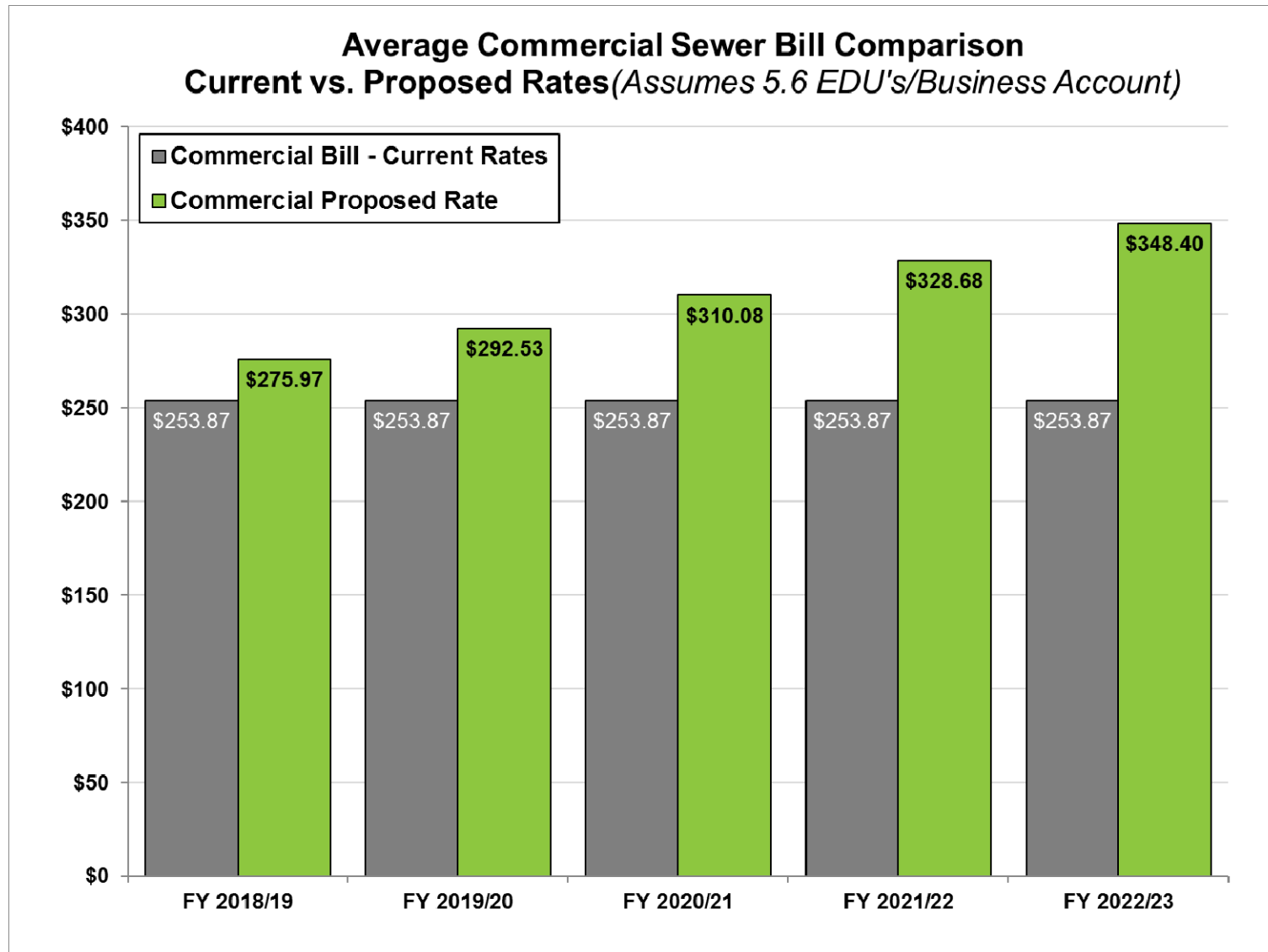
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I-15 at Ranchero Improvements - construct sewer conveyance system together with Amargosa sewer diversion to supply larger wastewater flows for recycled water uses	\$3,700,000	\$ -	\$ -	\$ -	\$ -	\$ 3,700,000
Zone J separation - SP2 Sewer	-	-	-	-	-	-
Main St. Sewer Replacement (C Av. to I Av.)	100,000	216,300	222,789	-	-	539,089
Main St. Sewer Replacement (Topaz Av. to Fuente Av.)	-	257,500	-	-	-	257,500
Maple Av. Sewer Replacement (Sultana Av. to Mojave Av.)	340,000	257,500	530,450	546,364	-	1,674,314
Golf Course Sewer Line - New Sewer	-	-	-	-	-	-
I Av. Lift Station and Force Main Upgrade	-	-	-	710,273	731,581	1,441,853
I Av. Sewer Replacement (Muscatal Av. to Hercules Av.)	-	-	1,241,253	1,278,491	-	2,519,744
Total	\$4,140,000	\$ 731,300	\$1,994,492	\$2,535,127	\$ 731,581	\$ 10,132,499

1. Assumes construction cost inflation of 3% per year (per ENR), added to City's cost estimate (provided 8/24/2017).

Single Family Bill Impact



Commercial Bill Impact



Question & Answers

