

Storm Drainage Rate Study

CITY OF DAVIS
CITY COUNCIL MEETING
DECEMBER 15, 2020

SCI Consulting Group

- Jerry Bradshaw
- Susan Barnes

Storm Drainage System Overview

- Facilities:
 - 130 miles of gravity pipes
 - 16 miles of open channel
 - 7 detention / retention basins
 - 19 pump stations
 - 2,000 maintenance holes
 - 3,300 inlets / catch basins
- Infrastructure is aging considerably and in need of upgrades to address capacity
- Services:
 - Local drainage & flood control
 - Plan / Design / Build for the Future
 - Environmental – Pollution Prevention



Project Overview

Financial Analysis Revenue Requirement

Utilities Commission
• Five Visits since May

Cost of Service Rate Structure

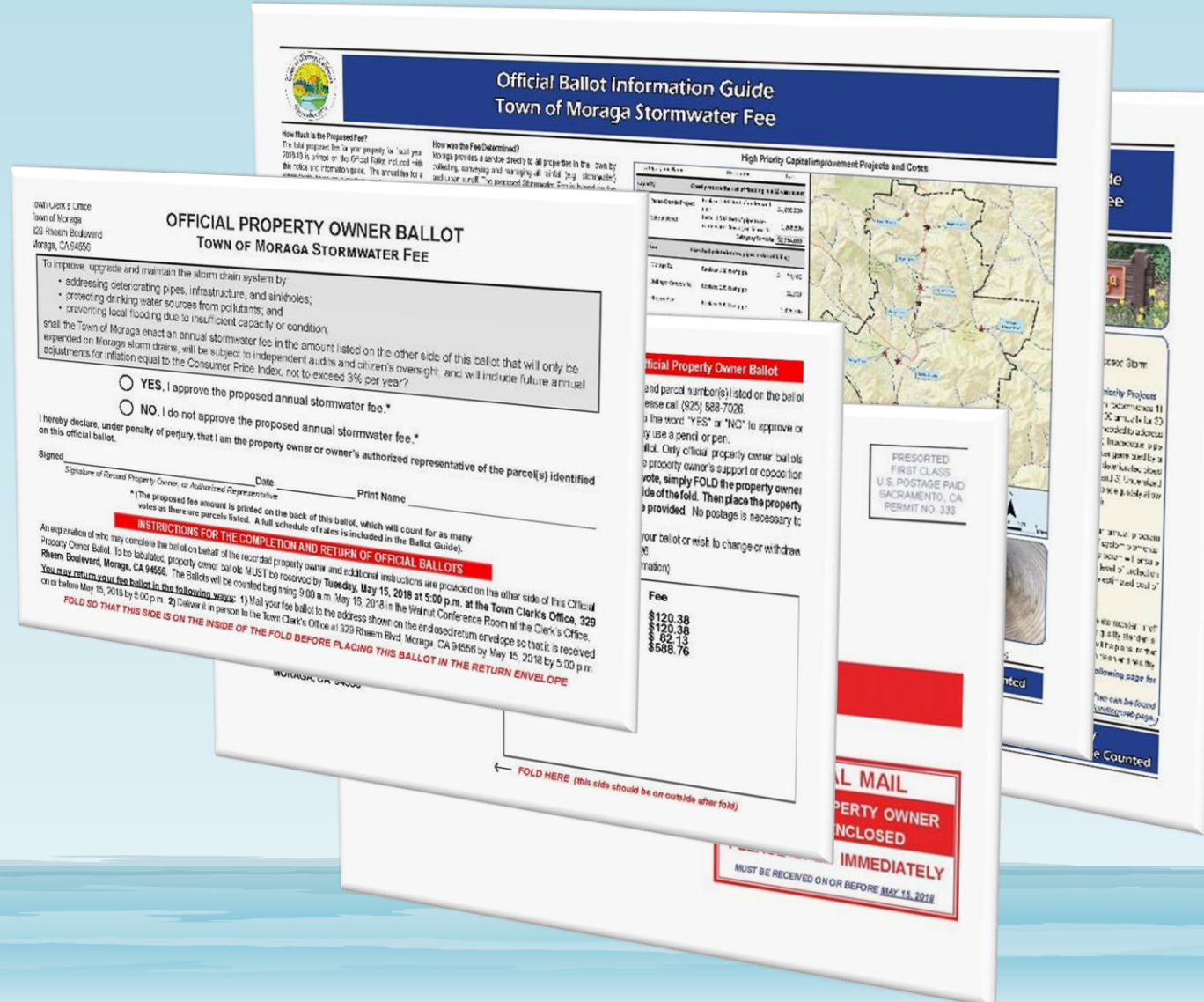
-
- *Approve Rates*
 - *Initiate Prop 218 Process*

Prop 218 Process Balloting Required

Start at the End – Proposition 218 Process

- After Rates Are Determined
- Mail Notice of Hearing
- Conduct Hearing
 - Majority protest can stop process

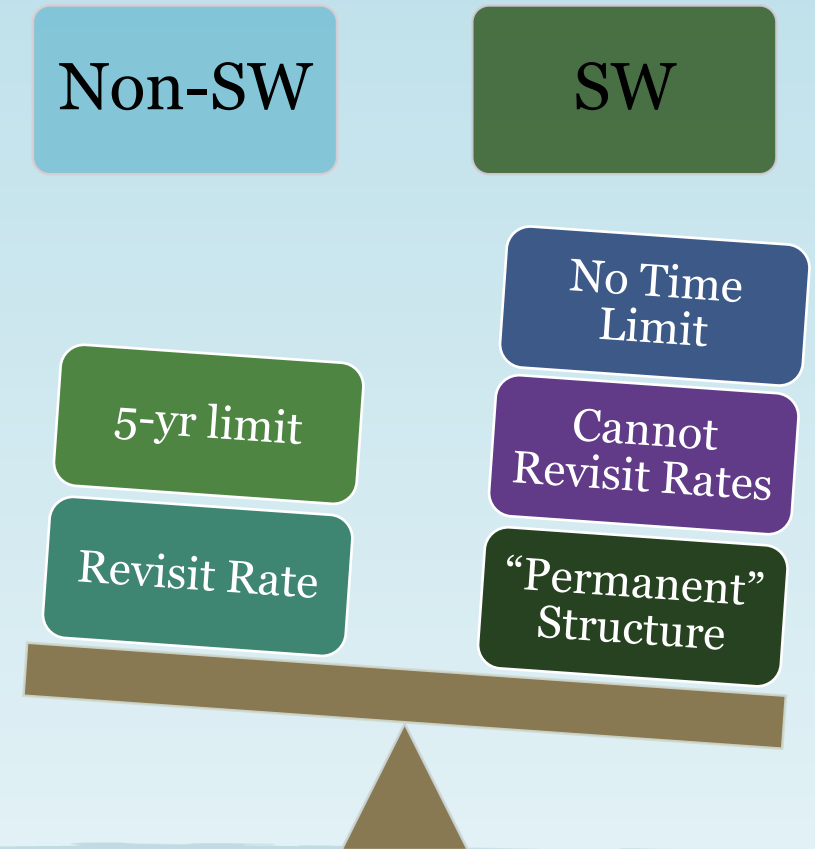
- Mail Ballot Packet
- Tabulate Votes & Final Action



Rate Duration & Future Increases

- Rates are limited to 5-year duration
 - For Water, Sewer or Garbage
 - Stormwater not included
- Gov Code §53739
 - Fees submitted for voter approval (stormwater)
 - No duration limit

All fees may include inflationary formula if stated in Ordinance or Resolution or Ballot



Balloting Process

Not an Election

- *Not tied election dates*
- *No impartial analysis*
- *No arguments pro/con*
- *Only mail ballots*
- *Registrar of Voters not involved*
- *One vote per ~~person~~ ^{parcel}*

Voter Universe – Property Owners

- *Commercial*
- *Apartments & rentals*
- *Tax exempt properties*
- *Government agencies*
 - *City*
 - *Schools*
- *Tenants have no vote*
 - *Through the landlord..??*



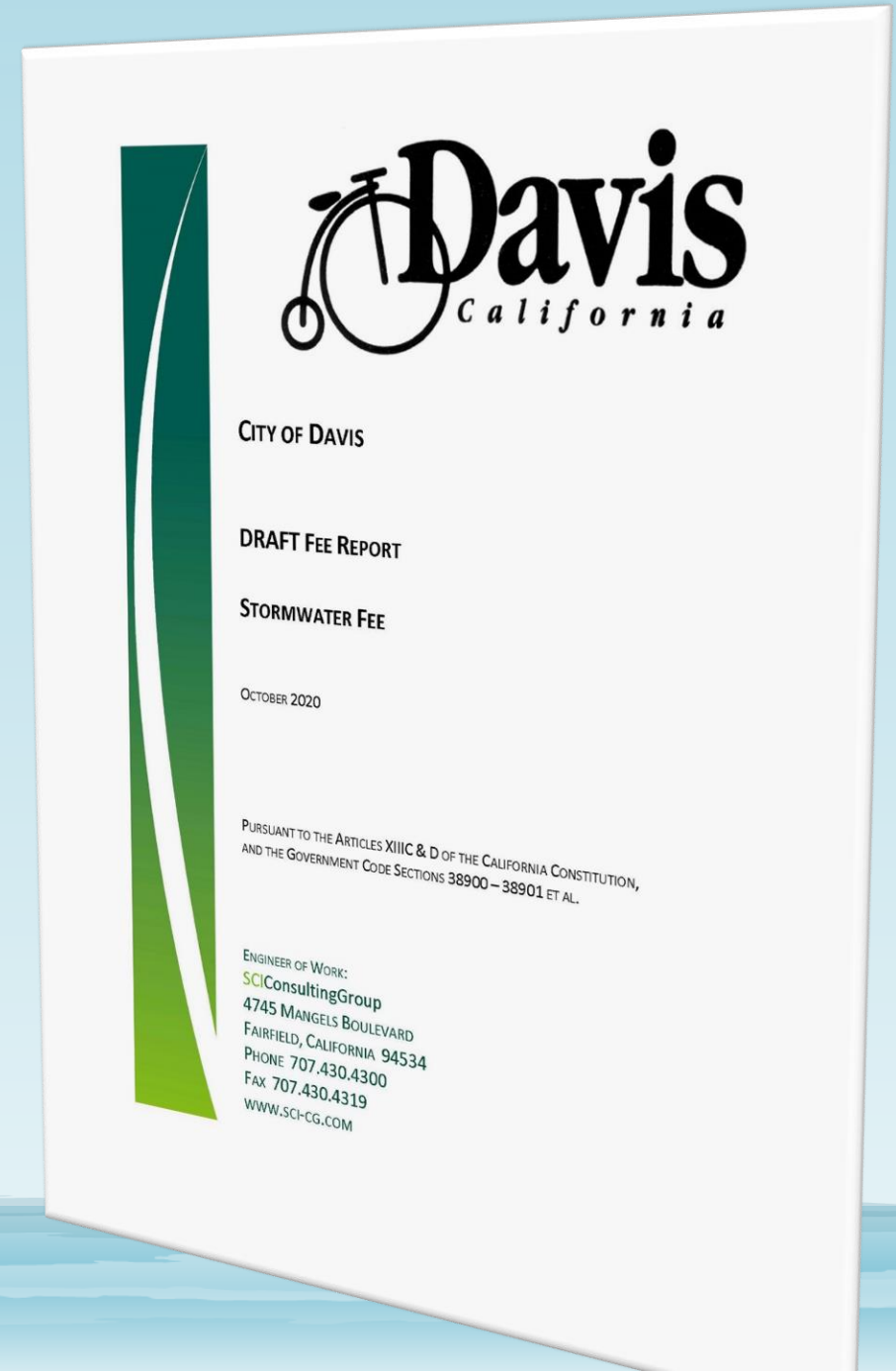
Politics

- A New Paradigm for Rate Setting
 - *Not just for Engineers and Financial Consultants*
 - *Add: Political Consultants and Public Opinion Polling*
- Community Engagement – Pro-Active (*not re-active*)
 - *Stakeholder Engagement – early and often*
 - *Community Meetings*
 - *Media (social and traditional)*



Stormwater Fee Study (Fee Report)

1. Define Facilities and Services
2. State Revenue Requirement
 - *Operations*
 - *Regulatory*
 - *Capital*
3. Establish Apportionment
 - *Structure*
 - *Prop 218-Compliant*
4. Fee Schedule
 - *First Year Rates*
 - *Inflationary Factor for Future Years*



Facilities & Services

FACILITIES AND SERVICES

The City operates and maintains a municipal separate storm sewer system within the City's boundaries. The system is made up of man-made drainage systems including, but not limited to, curbs and gutters, integrated storm drainage pipes, inlets, outfalls, culverts, channels, pump stations, force mains, detention ponds, siphons and access roads. The system serves the entire City.

The primary storm drainage service provided by the City is the collection, conveyance, and overall management of stormwater and non-stormwater runoff from parcels.

By definition, all parcels that shed stormwater into the City's system, either directly or indirectly, utilize, or are served by, the City's storm drainage system. The need and necessity of this service are derived from property improvements, which historically have increased the amount of stormwater runoff from the parcel by constructing impervious surfaces such as rooftops, pavement areas, and certain types of landscaping that restrict or retard the percolation of water into the soil beyond the conditions found in the natural, or unimproved, state. As such, open space land (in a natural condition) and agricultural lands that demonstrate stormwater absorption equal to or greater than natural conditions, are not charged a fee. Other vacant land that was once improved or has been prepared for future improvements do not qualify as open space or natural land and will typically be charged a fee.

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South Davis Station #5



Richards Tunnel Station #6 *Built: 1924*



Financial Analysis

- Fund Structure

- 541 & 544

- *542 & 543 are strictly for development improvements*

- Revenues

- User Fees

- Interest

- Misc

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FUND NO	TITLE	WORKING CAPITAL LESS ENCUMB June 30, 2019	FY 2019/20 ADOPTED BUDGET			WORKING CAPITAL LESS ENCUMB June 30, 2020
			REVENUES	EXPENDITURES	ADJUSTMENTS AND TRANSFERS	
STORM SEWER FUNDS						
541	STORM SWR/DRN - MAINT & OPER	327,748	1,304,988	991,289	(393,625) ¹	247,822
542	STORM SWR/DRN - CAP REPL RESRV	721,265	22,400	1,500,444	393,625 ¹	(363,154)
543	STORM SWR/DRN - CAP EXP RESRV	2,159,357	68,880	65,794		2,162,443
544	STORM SEWER - QUALITY	763,978	626,080	975,724	0	414,334

Expenditures

- Primary
 - El Macero (7411)
 - Facility Maintenance (7414)
 - Water Quality (7730)
- Other
 - Integrated Pest Control
 - Public Works Permits
 - Engineering Support
 - Utility Accounting
 - General Administration
 - Interdepartmental Charges

Fiscal Year 2019/20		EXPENDITURES BY CATEGORY					FUNDING SOURCES			ENT SUMMARY	
		Salaries & Benefits	Operations & Maintenance	Contracts & Professional Services	Inter-departmental Charges	Capital Outlay	Program Total	General Fund	Other Funds		Program Total
Adopted Budget	Financial	Program									
		7300 - Wastewater Inter-Dept Charges		-	-	438,222	-	438,222	438,222		
		7411 - El Macero Maintenance District	48,388	151,070	10,000	-	-	209,458	-	209,458	209,458
		7414 - Storm Drain Facility Maintenance	686,484	233,475	10,000	137,135	-	1,067,094	-	1,067,094	1,067,094
		7465 - Storm Drainage Inter-Dept Charges		-	-	58,820	-	58,820	-	58,820	58,820
	Budget	7701 - Solid Waste	362,806	11,103,130	86,000	91,140	-	11,643,076	-	11,643,076	11,643,076
		7715 - Integrated Pest Management	200,796	2,910	-	54,780	-	258,486	187,715	70,771	258,486
		7720 - Habitat Management	105,957	19,500	4,000	111	-	129,568	129,568	-	129,568
		7725 - Wastewater Regulatory Management	247,800	164,127	90,500	38,355	-	540,782	-	540,782	540,782
		7730 - Stormwater Regulatory Management	273,090	70,150	14,500	18,053	-	375,793	-	375,793	375,793
		7735 - Water Regulatory Management	209,874	106,750	25,150	18,911	-	360,685	-	360,685	360,685
		7740 - Water Conservation	285,266	50,550	102,000	53,954	-	491,770	-	491,770	491,770
		7745 - Wastewater Pretreatment	189,005	75,377	27,500	9,751	-	301,633	-	301,633	301,633
		7765 - Solid Waste Inter-Dept Charges	-	-	-	538,414	-	538,414	-	538,414	538,414

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The Current O&M Activity

- Revenues & Expenses
 - Slight Deficit
- Approximately a \$2 million Enterprise

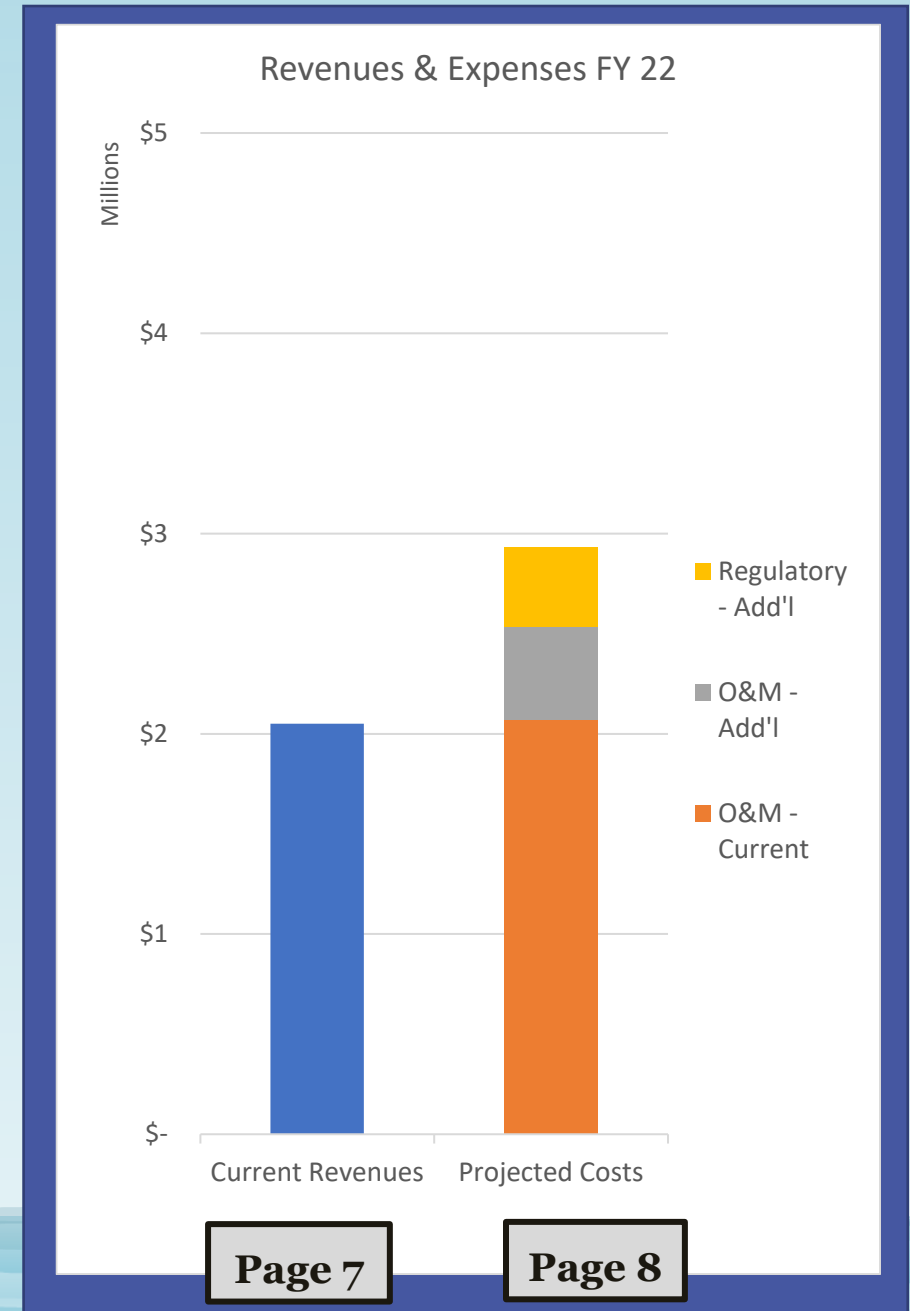
		FY20	FY 21
Revenues			
541	Storm Sew/Drn - M & O	1,305	1,342
544	Storm Sewer - Quality	626	626
	Total Rev	1,931	1,968
Expenditures			
7411	El Macero Mtce District	206	211
7414	Storm Drain Facility Mtce	1,062	1,103
7730	Stormwater Regulatory	381	387
	Support Costs	335	312
	Baseline Subtotal	1,983	2,013

Looking to the Future – Additional Needs (FY 22)

- Water Quality Program = **\$399 k**
 - *\$289 k – Construction Inspection, Illicit Discharge Enforcement, & Annual Report*
 - *\$110 k – Trash Amendments, Pesticides, Basin Plan, & future Permit Requirements*
- Operations & Maintenance = **\$469 k**
 - *\$315 k – Staff augmentation for necessary maintenance*
 - *\$154 k – Contract services for pipe hydro cleaning & channel cleaning*
- **Total Additional Needs = \$868 k**
 - *Approximately 42% over baseline O&M*

Baseline O&M Costs (FY 22)

		FY20	FY 21	FY 22
Revenues				
541	Storm Sew/Drn - M & O	1,305	1,342	1,424
544	Storm Sewer - Quality	626	626	626
	Total Rev	1,931	1,968	2,050
Expenditures				
7411	El Macero Mtce District	206	211	216
7414	Storm Drain Facility Mtce	1,062	1,103	1,134
7730	Stormwater Regulatory	381	387	398
	Support Costs	335	312	319
	Baseline Subtotal	1,983	2,013	2,067
	Add'l Regulatory Needs		375	397
	Add'l Operational Needs		457	469
	OPERATIONS TOTAL	1,983	2,846	2,934



Capital Improvements

Shown in thousands

Projects / Programs	Cost
SDS #6 Replacement	\$ 1,922
SDS #3 Replacement	16,752
SDS #5 Raising & Upgrades	7,140
Covell Channel Widening	1,579
Plans & Studies (Asset, Capacity, Ponds, Basins)	1,000
Annual Misc Upgrades (inlets, trash racks, siphons, sumps)	900
Total Capital Improvement Program	\$ 29,293

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30-year Model

- Utilities often look at 10- or 20-year horizon
 - Basis for 5-year rate schedule
- Stormwater Rates extend well beyond 5-year window
- Some debt runs up to 30 years
- Elements
- Assumptions



Escalation Rates		
Revenues	2.60%	Based on Consumer Price Index ("CPI") average over past 30 years, with an annual cap of 3% and "banking" allowed
O & M Costs	2.78%	Based on the "Leland Model" with personnel at 3.26% and other operating costs at 2.0%
CIP Costs	2.60%	Based on Construction Cost Index average over past 30 years
Interest Earned		
Reserve Interest	2.00%	As recommended by City staff
Debt Assumptions		
Interest	4.00%	
Debt Issuance Cost	2.00%	
Debt Reserve Amount		One year's debt service
Debt Service Structure		Level payments
Debt Service Coverage	110%	Ratio of pledged revenue to debt service

Rate Comparisons

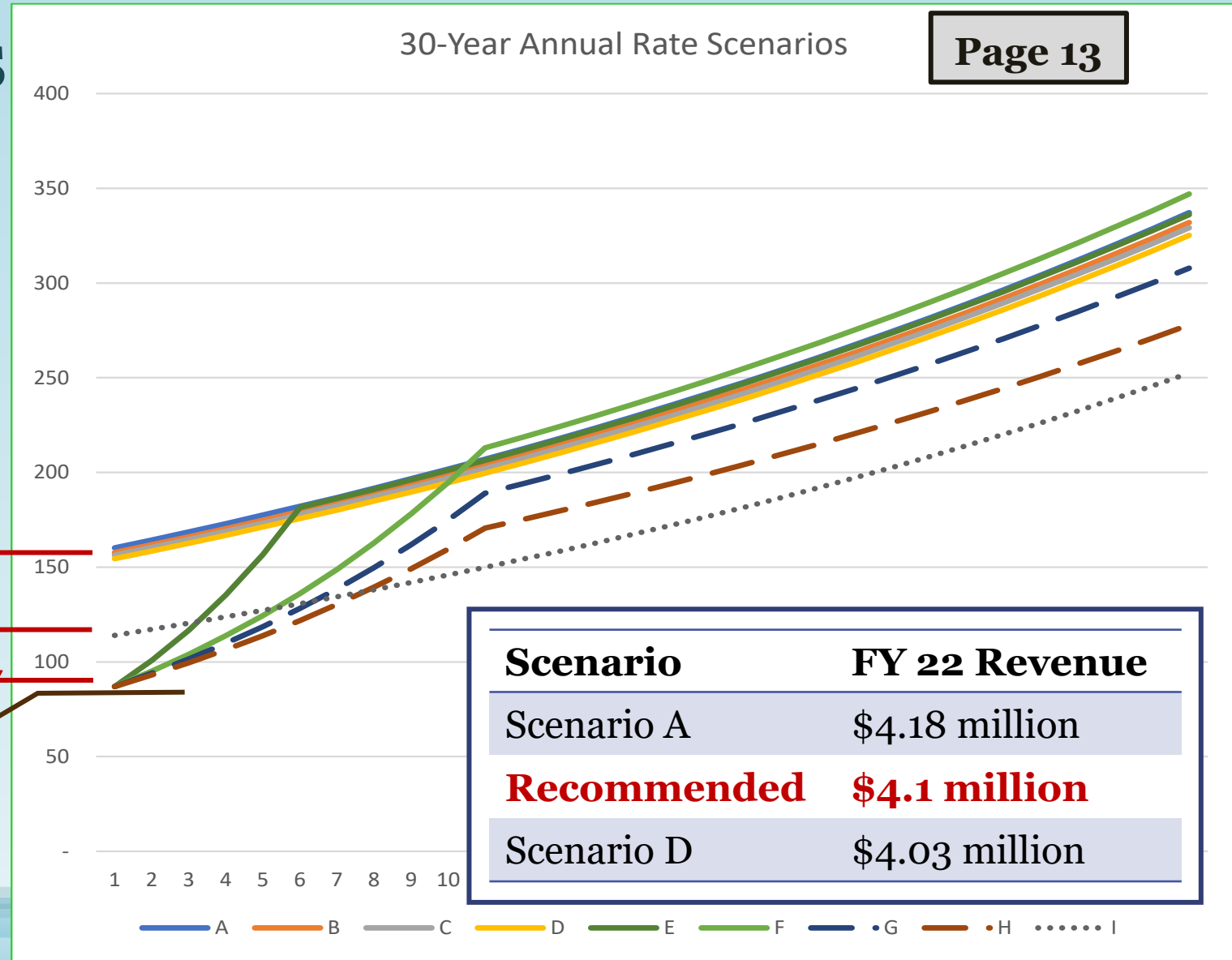
- Family A – D
 - \$29 m CIP in 30-years
 - Rates not phased in
- Family E – F
 - \$29 m CIP in 30-years
 - Rates phased in (5 or 10 yrs)
- Family G – H
 - Partial CIP in 30-years
 - \$20 m / \$10 m
 - Rates phased in (10 yrs)
- Line I
 - Minimal CIP
 - Rates not phased in
 - Rates increase @ 2.78% fixed

\$155/160

\$114

\$87

\$72 (existing)



Revenue Recommendation

- Average of four basic scenarios (A – D)

Pros

- Includes full \$29.3 m CIP
- Allows early CIP and Reserve implementation
- Not sensitive to if (how much) debt is used
 - *Allows City flexibility in applying debt / delivering projects*

Cons

- Proposed rates are higher than current rates
 - *Community Acceptance*



Convert Revenue Requirements to Rates

- Total SFEs = 26,090
- Revenue Requirement = \$4.1 m
- Rate = ($\$4.1\text{ m} / 26,090 =$) \$157.15 per year
 - **\$13.10 per month for average home**

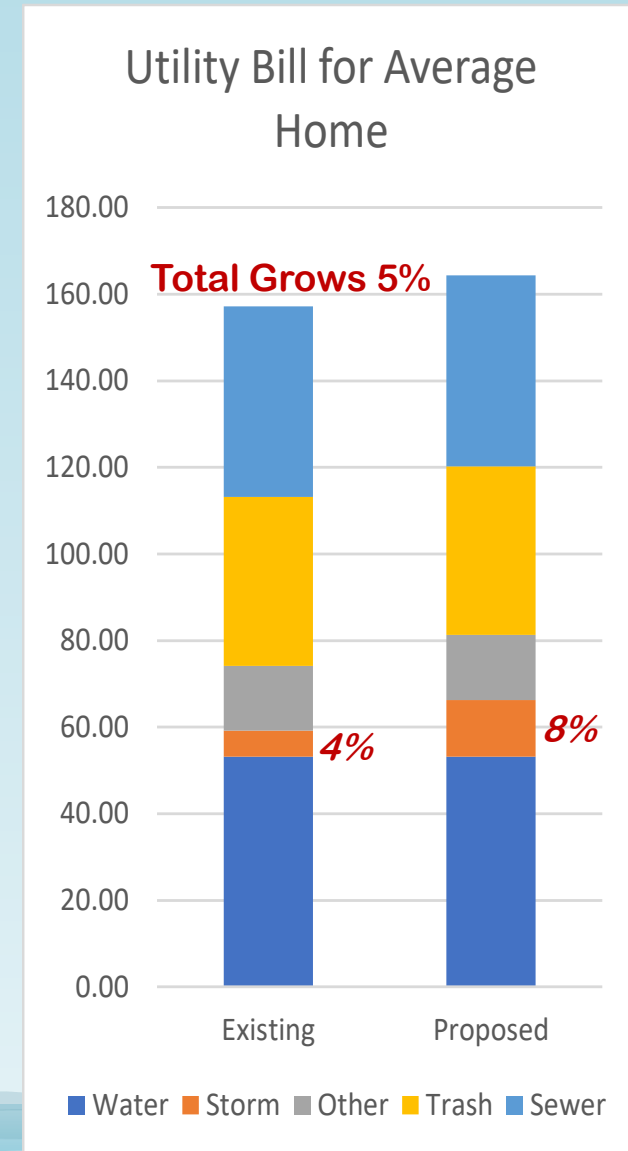
Land Use Category			Proposed Monthly Rate FY 2022		
Residential *					
Small	Under 0.14	ac	\$	10.23	per parcel
Medium	0.14 to 0.22	ac	\$	13.10	per parcel
Large	0.23 to 0.27	ac	\$	17.45	per parcel
Very Large	Over 0.27	ac	\$	19.47	per parcel
Condo - 1 Level			\$	8.52	per parcel
Condo - 2+ Levels			\$	3.95	per parcel
Non-Residential **					
Mobile Home Park			\$	98.20	per acre
Apartment			\$	104.08	per acre
Comm / Industrial / Retail			\$	137.86	per acre
Office			\$	113.63	per acre
Institutional			\$	98.20	per acre
Institutional w/ Field			\$	68.89	per acre
Park			\$	8.22	per acre
Vacant (developed)			\$	8.22	per acre
Open Space / Agricultural					not charged

* Single-Family Residential category also includes du- tri- and four-plex units

** Non-SFR parcels size is calculated to a hundredth of an acre

Context of Other City Utilities

Average SF Customer Utility Bill			
Water Charges	Water Base Charge (Meter Size)	\$	13.07
	Water Consumption Charge	\$	40.08
Stormwater Charges	Storm Drainage	\$	3.43
	Sanitary Sewer (Drainage Water Quality)*	\$	1.46
Non-PWUO Charges	Municipal Service Tax*	\$	8.43
	Public Safety Charge*	\$	6.61
Solid Waste Charge	65 gal garbage	\$	38.95
Sewer Charges	Sewer Base Charge	\$	3.94
	Sewer Volume Charge	\$	21.91
	Sewer Per Unit Charge	\$	18.26
		\$	156.14



Other Rate Considerations

- Credit for Low Impact Development (LID)
 - 25% Rate Credit
 - Mostly for new development
- Inflationary Factor
 - Equal to Consumer Price Index (CPI-U, SF Bay Area)
 - Not to exceed 3% in any single year
 - *Excess CPI can be “banked” and used later*
 - Keeps future rate increases capped

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Utility Commission Process

- Five Meetings
 - *May, June, July, September & October*
- Discussion Points on Cost of Service Study:
 - *Need for updating infrastructure to handle current & future conditions*
 - *Greywater and green infrastructure (LID) impacts to system*
 - *Debt versus Pay-as-you-Go approach to capital improvements*
 - *Importance of additional studies and assessments → future needs*
 - *Consideration of current economic impacts (e.g., COVID)*
- Commission Action
 - *Support Staff Recommendation*
 - *Eliminate “CPI Banking”*

Next Steps

- **Tonight**
 - **Receive Rate Study**
 - **Approve Rates**
 - **Initiate Prop 218 Process**
- Prop 218 Process (4 - 6 months)
 - Notice of Hearing
 - Conduct Hearing
 - Mail Ballots
 - Tabulate Ballots
 - Concluding Action by Council
- **Community Engagement**
 - Stakeholders Outreach
 - Community Meetings
 - During 45-day Notice Period
 - Media Management
 - Social
 - Print
 - Mail (prop 218 Mailings)
 - Other Channels



Timeline

