



Valley Water

Clean Water • Healthy Environment • Flood Protection

Preliminary Fiscal Year 2021-2025 (FY21-25) Capital Improvement Program (CIP) and FY 21 Groundwater Charges.

Preliminary FY21-25 CIP and Groundwater Charge Board Actions Today

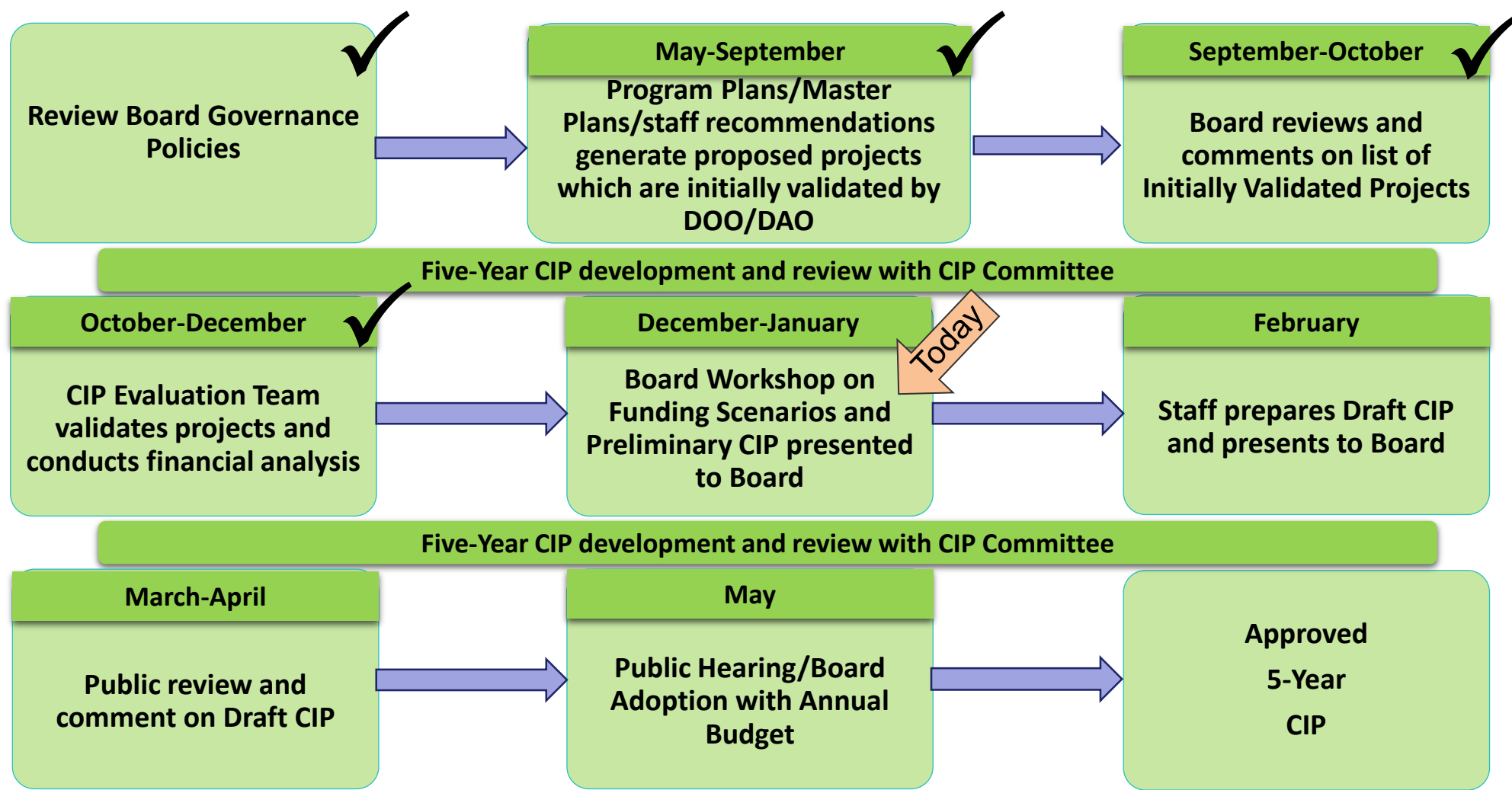
1. Review the Fiscal Year 2021-2025 (FY 21-25) Preliminary CIP and provide direction to staff for development of the Draft FY 21-25 CIP;
2. Discuss and provide direction on the preliminary FY 2020-21 (FY21) Groundwater Production Charge analysis prepared by staff; and
3. Provide direction regarding whether to include three newly proposed water supply projects into the Draft FY 21-25 CIP.

Preliminary FY21-25 CIP and Groundwater Charges Presentation Outline

1. Annual CIP Process
 - CIP Committee – 2020 Draft Workplan
2. Preliminary FY 21-25 CIP
 - Project Categories
 - Completed and Proposed Projects – Water Utility
3. Preliminary FY 21-25 CIP
 - (Flood Protection, Stewardship, Buildings and Grounds, and IT)
4. Preliminary FY 21 Revenue and Fund 12 and 26 Overview
5. Preliminary FY 21 Groundwater Charge Analysis

Annual CIP Process Overview

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CIP Committee – Draft 2020 Workplan

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Draft CIP Committee 2020 Workplan													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
CIP Implementation													
Safe, Clean Water Projects Implementation													
Other Capital Projects Implementation													
• Calero Dam Seismic Upgrade and Water Reliability Analysis			X										
Capital Project Monitoring													
Construction		X			X			X			X		
Design			X			X			X			X	
Planning/Feasibility	X			X			X			X			
Upcoming Consultant Agreements and Amendments	X												
Project Planning Studies for Board Review/Approval													
CIP Development													
Preliminary CIP												X	
New Projects	X								X				

Preliminary FY21-25 CIP

Project Categories

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1. Regulatory requirements (6 projects)
2. Repair or replacement of aging infrastructure (28 projects)
3. District commitment [Safe, Clean Water (SCW); Fish and Aquatic Habitat Collaborative Effort (FAHCE)] (21 projects)
4. Water Supply Master Plan “No Regrets” Option (0 projects)
5. Board Policy (7 projects)
6. Discretionary projects as directed by the Board (6 projects)

Preliminary FY21-25 CIP

A. Regulatory Requirements

Key Projects

- Anderson Dam Seismic Retrofit
- Calero Dam Seismic Retrofit
- Guadalupe Dam Seismic Retrofit
- SMP Mitigation, Stream & Watershed Land Preservation



Preliminary FY21-25 CIP

B. Repair or Replacement of Aging Infrastructure

Key Projects

- 10-Year Pipeline Rehabilitation
- Almaden Valley Pipeline Replacement (new)
- RWTP Reliability Improvements
- Palo Alto Flood Basin Tide Gate Structure Improvements
- Watershed Asset Rehabilitation
- ERP System Improvements



Preliminary FY21-25 CIP

C. Valley Water Commitment (SCW, FAHCE)

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Key Projects

- IRP2 Additional Line Valves
- San Francisquito Creek, SF Bay to Searsville Dam
- Llagas Creek – Upper, Buena Vista to Llagas Rd
- Almaden Lake Improvements
- Coyote Creek, Montague Expy to Tully Rd
- Guadalupe River – Upper, I-280 to Blossom Hill Rd



Preliminary FY21-25 CIP

D. Water Supply Master Plan “No Regrets”

Key Projects

- No capital projects planned for FY21-25 CIP

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Preliminary FY21-25 CIP

E. Board Policy

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Key Projects

- Pacheco Reservoir Expansion Project
- Expedited Purified Water Program
- Berryessa Creek, Lower Penitencia Creek to Calaveras Blvd
- Coyote Warehouse



Preliminary FY21-25 CIP

F. Board Directed Discretionary Projects

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Key Projects

- Land Rights - South County Recycled Water Pipeline (new)



Preliminary FY21-25 CIP Projects to Close in FY 2020

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• Main and Madrone Pipeline Replacement	\$17.5 M
• Canoas Creek Rodent Damage Repair	\$6.9 M
• Watershed Habitat Enhancement Studies	\$2.7 M
• E-Discovery Management System	<u>\$560 K</u>

TOTAL	\$28 M
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Validated, Unfunded Projects Buildings and Grounds Projects

(Revenue Source: Groundwater Charges/Property Tax)

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Project Name	Total Project Value (\$K)	Remaining Cost (\$K) (FY20 to Completion)	Phase
FY21 Validated and Unfunded Projects			
Fleet and Facility Annex Improvements	\$4,719	\$4,719	N/A
Total	\$4,719	\$4,719	N/A

Validated, Unfunded Projects

Water Supply Projects

(Revenue Source: Groundwater Charges)

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Project Name	Total Project Value (\$K)	Remaining Cost (\$K) (FY20 to Completion)	Phase
FY21 Validated and Unfunded Projects			
RWTP Ammonia Storage and Metering Facility Upgrade	\$5,851	\$5,851	N/A
Dam Seismic Retrofit at 2 Dams (Chesbro & Uvas)	\$89,500	\$89,500	N/A
Long-Term Purified Water Program Elements	\$207,125	\$207,125	N/A
So. County Recycled Water New Storage Tank	\$7,000	\$7,000	N/A
Alamitos Diversion Dam Improvements	\$3,182	\$2,345	N/A
Coyote Diversion Dam Improvements	\$2,460	\$2,138	N/A
Total	\$315,118	\$313,959	N/A

Capital Reimbursements

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Reimbursements anticipated to be received between FY21 and FY25 = \$252M

- Grants and Cost Share including Measure AA: \$233M
- State Subvention Reimbursements = ~\$19M

State Subvention Reimbursements

- Project must be federally authorized, then appropriated through State budget process
- Subventions reimburses 50% -100% of local share
- The Board has reserved the authority to determine which projects will be funded by state subvention reimbursements; if not specifically allocated by the Board, reimbursements will go back into Fund reserves

State Subvention Reimbursements

State Flood Control Subventions Program

- Safe, Clean Water Subventions previously designated to remain in SCW Fund
- Watershed/Stream Stewardship Fund Remaining subventions funding \$1.7M
- Projects designated to receive subventions:

Project	Amount
Lower Penitencia	\$5M
Cunningham Flood Detention Certification	\$3M
Lower Silver Creek	\$9M
Llagas Ck Lower – Capacity	\$1.1M

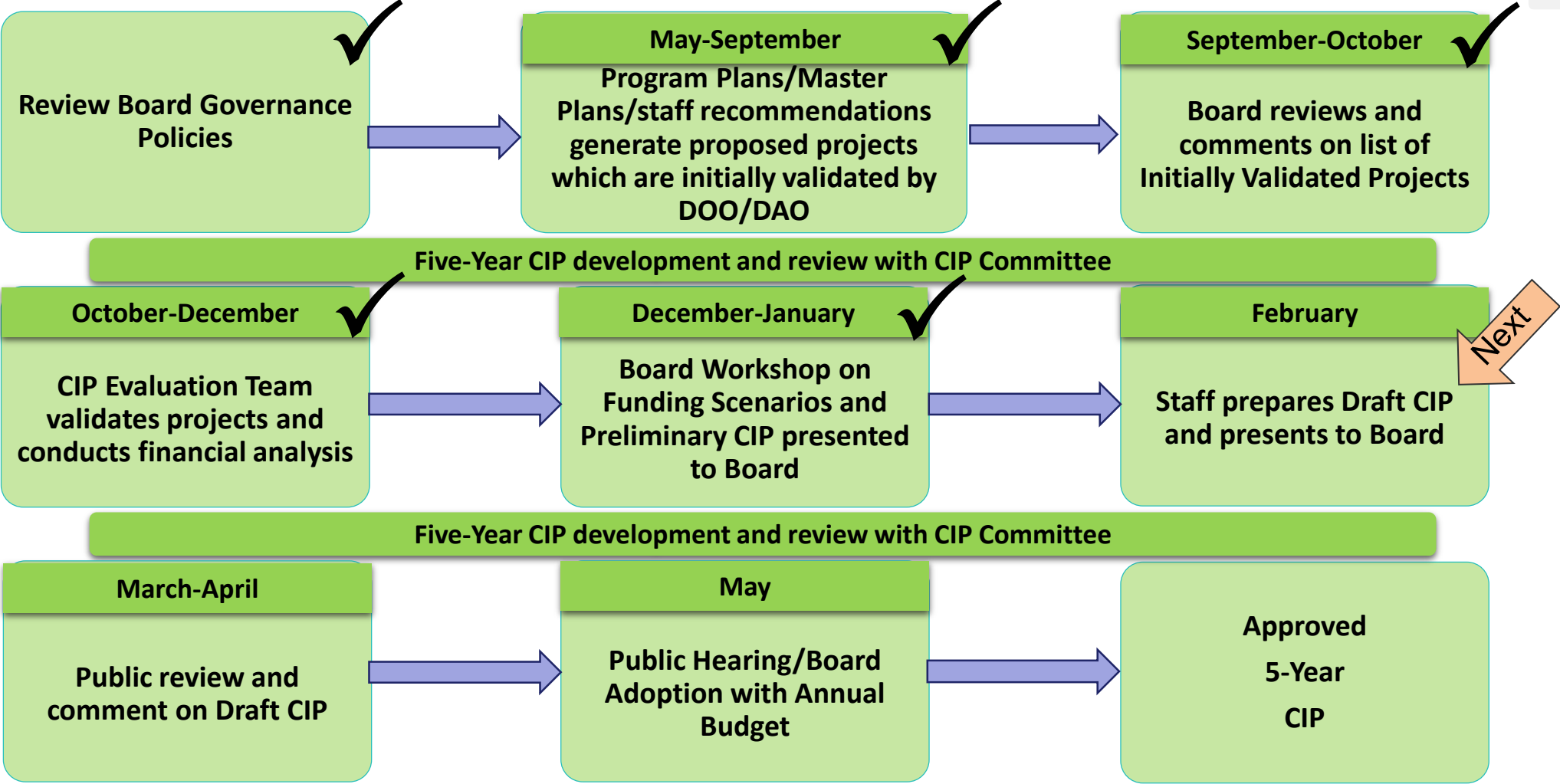
Preliminary FY21-25 CIP Summary of Project Costs

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	Appropriated / Actuals through FY-20	Remaining Cost to Completion	Total Project Costs
Water Supply	\$624 M	\$2,890 M	\$3,515 M
Flood Protection	\$849 M	\$785 M	\$1,634 M
Stewardship	\$39 M	\$124 M	\$163 M
Buildings/Grounds	\$2 M	\$46 M	\$48 M
Information Technology	\$22 M	\$32 M	\$54 M
TOTAL CIP	\$1,536 M	\$3,877 M	\$5,413 M

Annual CIP Process Overview

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Questions Regarding FY 2021-25 Preliminary CIP

Preliminary FY 21 Revenue and Fund 12 and 26 Overview

Valley Water Share of former Redevelopment Agency (RDA) Property Tax

	FY 12 Actual	FY 13 Actual	FY 14 Actual	FY 15 Actual	FY 16 Actual	FY 17 Actual	FY 18 Actual	FY 19 Actual	FY 20 Estimate (1)
Pass Thru and Residual Distributions (\$K)									
General Fund	56	123	254	181	267	311	460	367	490
Watersheds	354	1,186	2,321	1,787	2,572	2,990	4,786	3,835	5,180
Water Utility	48	286	284	265	334	401	552	486	580
Sub-total	458	1,595	2,859	2,233	3,173	3,702	5,798	4,688	6,250
Other Apportionments (\$K)									
(E.g. District Share of Property Sale Proceeds)									
General Fund	0	41	59	48	44	220	40	529	0
Watersheds	0	470	854	450	407	2,102	387	5,398	0
Water Utility	0	46	54	54	56	199	42	497	0
Sub-total	0	557	967	552	507	2,521	469	6,424	0
TOTAL	\$ 458	\$ 2,152	\$ 3,826	\$ 2,785	\$ 3,680	\$ 6,223	\$ 6,267	\$ 11,112	\$ 6,250

(1) FY2020 Estimate Provided by the County Auditor-Controller Office

Valley Water Share of former Redevelopment Agency (RDA) Property Tax Cont...

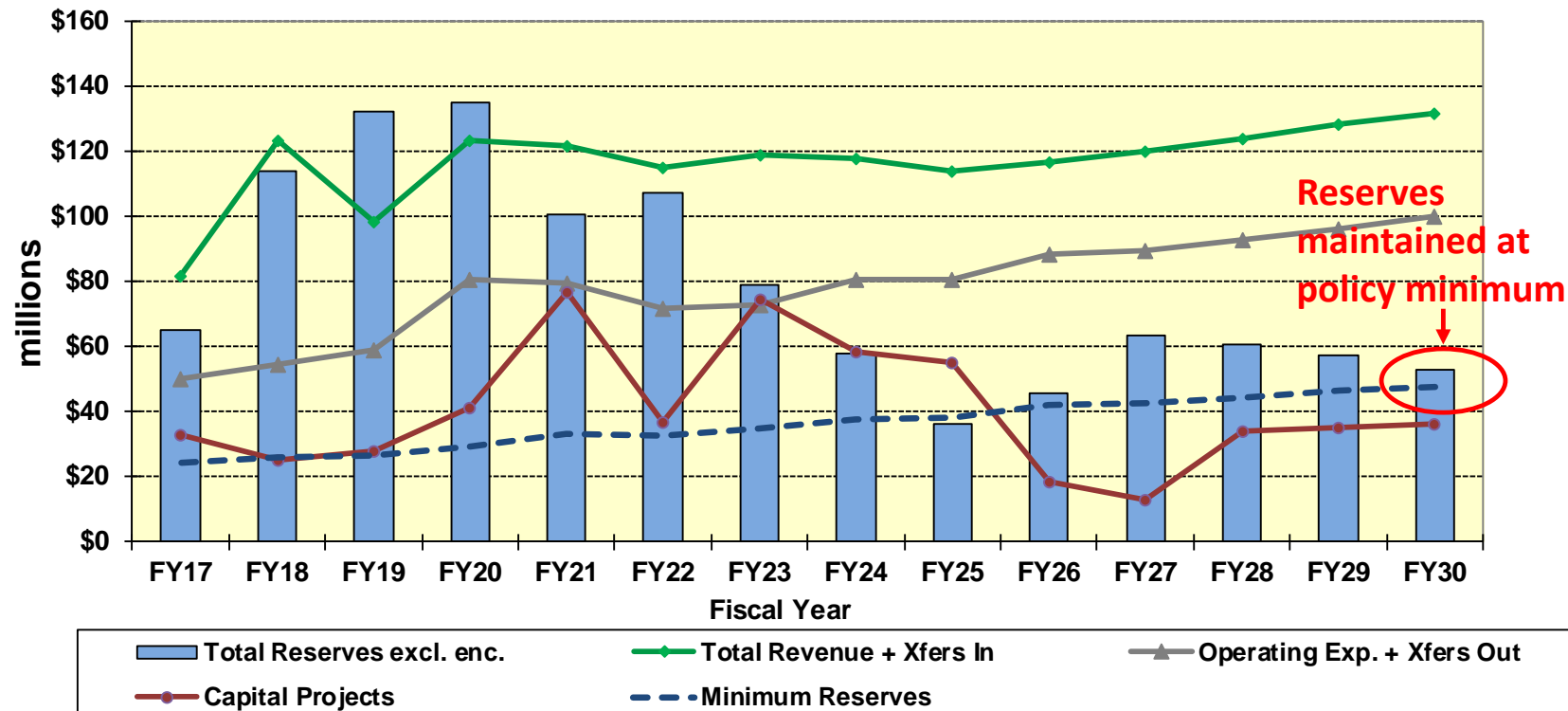
24

	FY 21 Prjctn	FY 22 Prjctn	FY 23 Prjctn	FY 24 Prjctn	FY 25 Prjctn	FY 26 Prjctn	FY 27 Prjctn	FY 28 Prjctn	FY 29 Prjctn	FY 30 Prjctn
Pass Thru and Residual Distributions (\$K)										
General Fund	518	536	554	574	594	612	662	682	703	724
Watersheds	5,434	5,624	5,821	6,025	6,235	6,423	6,950	7,160	7,377	7,601
Water Utility	518	536	554	574	594	612	662	682	703	724
Sub-total	6,469	6,695	6,930	7,172	7,423	7,646	8,274	8,524	8,783	9,048
Annual Proj Growth	3.5%	3.5%	3.5%	3.5%	3.5%	3.0%	3.0%	3.0%	3.0%	3.0%
Other Apportionments (\$K)										
(E.g. District Share of Property Sale Proceeds)										
General Fund	42	0	0	0	0	0	0	0	0	0
Watersheds	446	0	0	0	0	0	0	0	0	0
Water Utility	42	0	0	0	0	0	0	0	0	0
Sub-total	530	0	0	0	0	0	0	0	0	0
TOTAL	\$ 6,999	\$ 6,695	\$ 6,930	\$ 7,172	\$ 7,423	\$ 7,646	\$ 8,274	\$ 8,524	\$ 8,783	\$ 9,048

WSS Fund Update

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Projection



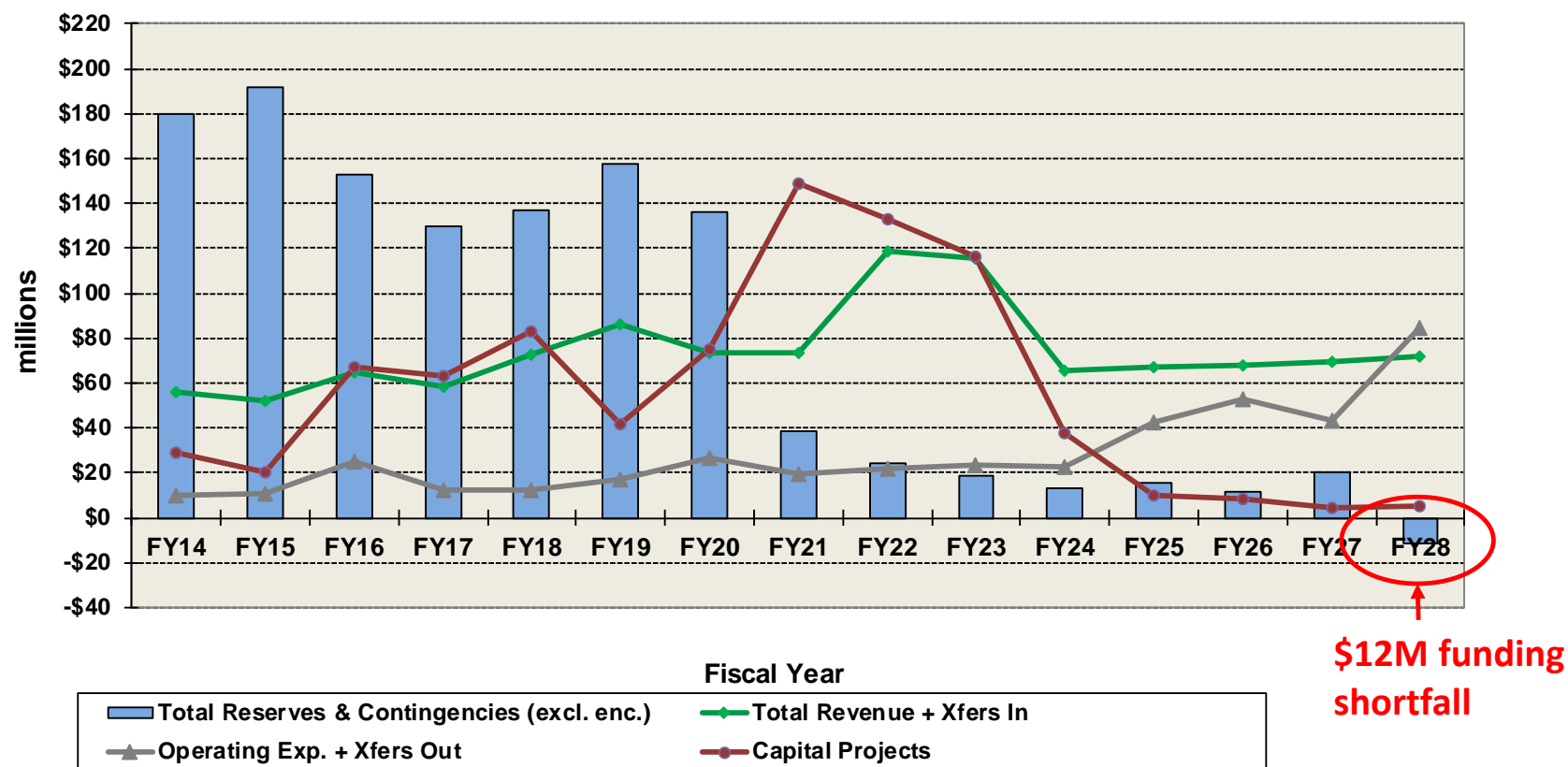
Key Assumptions

- Includes \$96M Guadalupe River Project (Tasman Dr. to I-880)
- O&M backlog placeholder
 - \$2M/yr FY 21 to FY 25
 - \$7M/yr FY 26 to FY 30

SCW Fund Update

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Projection



Key Assumptions

- Reflects Scenario "2" flood protection costs
- Assumes \$80M NRCS Reimbursements for Upper Llagas Creek to fully construct Phases 1 & 2
- Assumes receipt of \$20M in outside funding sources from grants and partnerships for San Francisquito Creek
- Includes corrections & refinements to Prelim CIP

Preliminary FY 21 Groundwater Production Charge Analysis

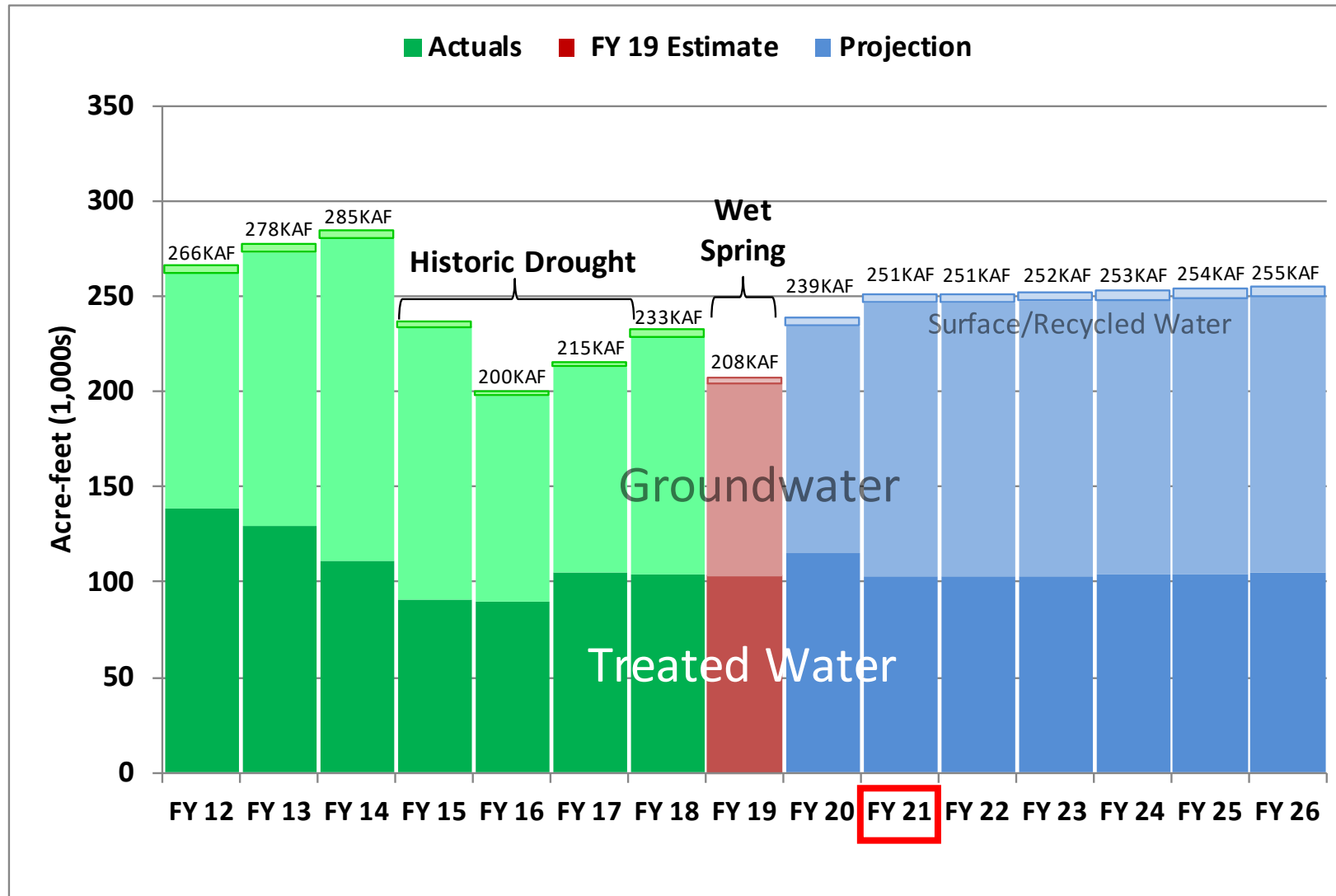
January 14, 2020

Topics

1. Water Usage
2. Financial Analysis
3. Investment Scenarios
4. Preliminary Groundwater Charge Forecast Scenarios
5. Translation to Modified Groundwater Benefit Zones
6. Other Information
7. Schedule
8. Summary

Water Usage (District Managed)

As of 11/26/19



Water Usage (District Managed)

Year	1,000's Acre-feet (District Managed Use)				
	TW	GW	SW/RW	Total	
FY '03	138.3	146.5	3.5	288.3	Slight Wet Spring
FY '04	136.0	162.4	4.1	302.4	
FY '05	130.7	140.1	3.8	274.6	Wet Spring
FY '06	131.6	138.5	4.2	274.3	Wet Spring
FY '07	140.2	157.6	4.3	302.1	
FY '08	124.9	172.4	6.8	304.1	
FY '09	119.0	162.2	3.8	285.0	Drought
FY '10	103.5	143.1	3.9	250.4	Wet Spring, Drought
FY '11	113.3	134.6	3.4	251.2	Slight Wet Spring
FY '12	139.0	123.7	3.5	266.1	
FY '13	129.5	143.9	4.3	277.7	
FY '14	111.6	168.8	4.5	284.8	
FY '15	90.7	143.5	2.3	236.5	Historic Drought
FY '16	89.9	108.3	2.2	200.4	Historic Drought
FY '17	104.6	108.4	2.3	215.4	~225 KAF assuming Montevina at full capacity
FY '18	103.9	125.1	2.6	231.7	
FY '19 Est	103.7	101.0	3.0	207.7	Wet Spring
FY '20 Bud				239.4	
FY '21 Fcst				251.4	230 KAF
FY '22 Fcst				251.4	230 KAF

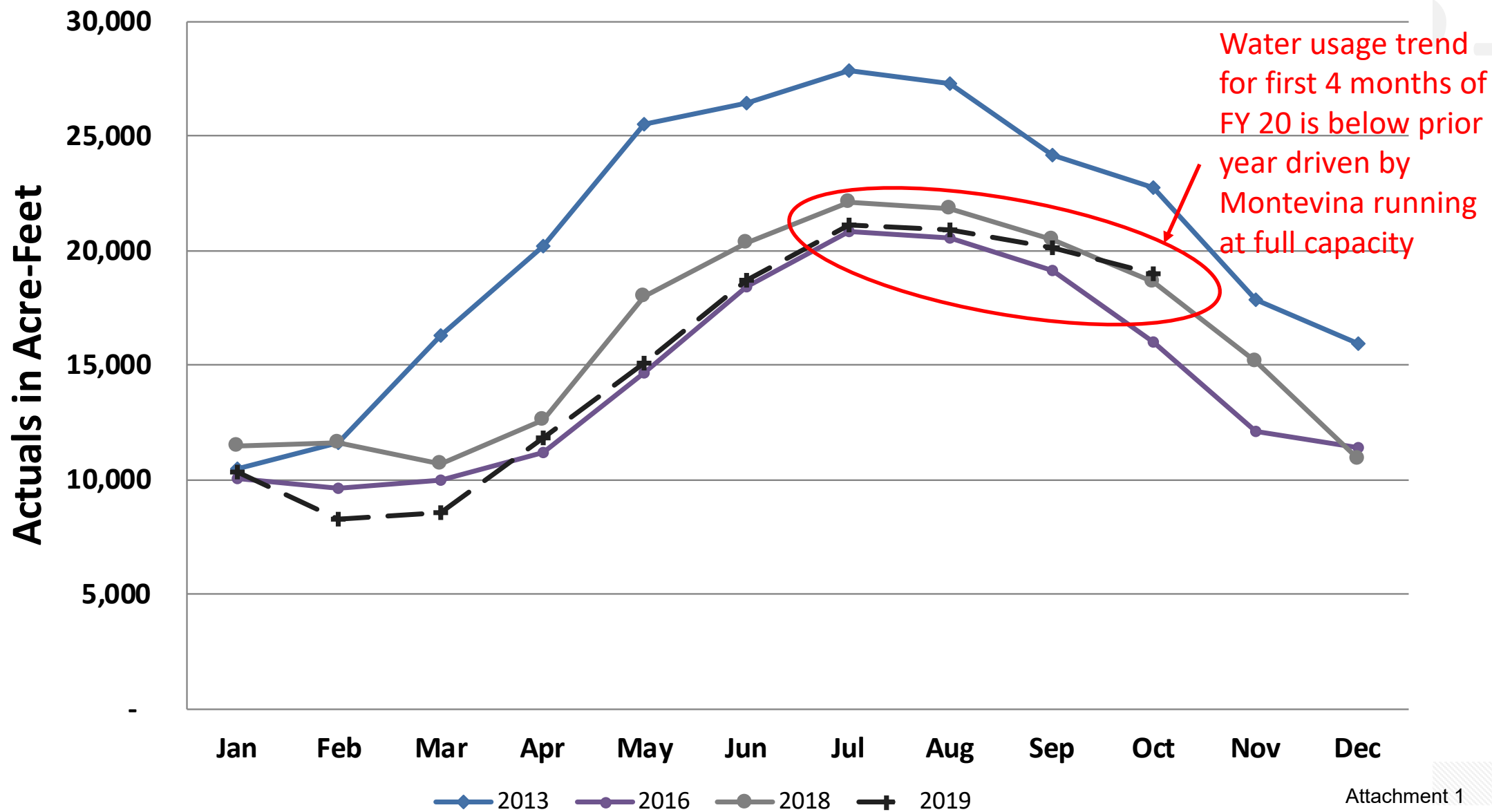
Key Questions

1. Will water usage bounce back in FY 20?
 - Wet springs occur about 30% of the time
 - A repeat of FY 19 water usage = \$40M revenue shortfall
2. Should water usage forecast be adjusted downward for FY 21 & beyond?
 - Prelim GW charge scenarios based on 230KAF

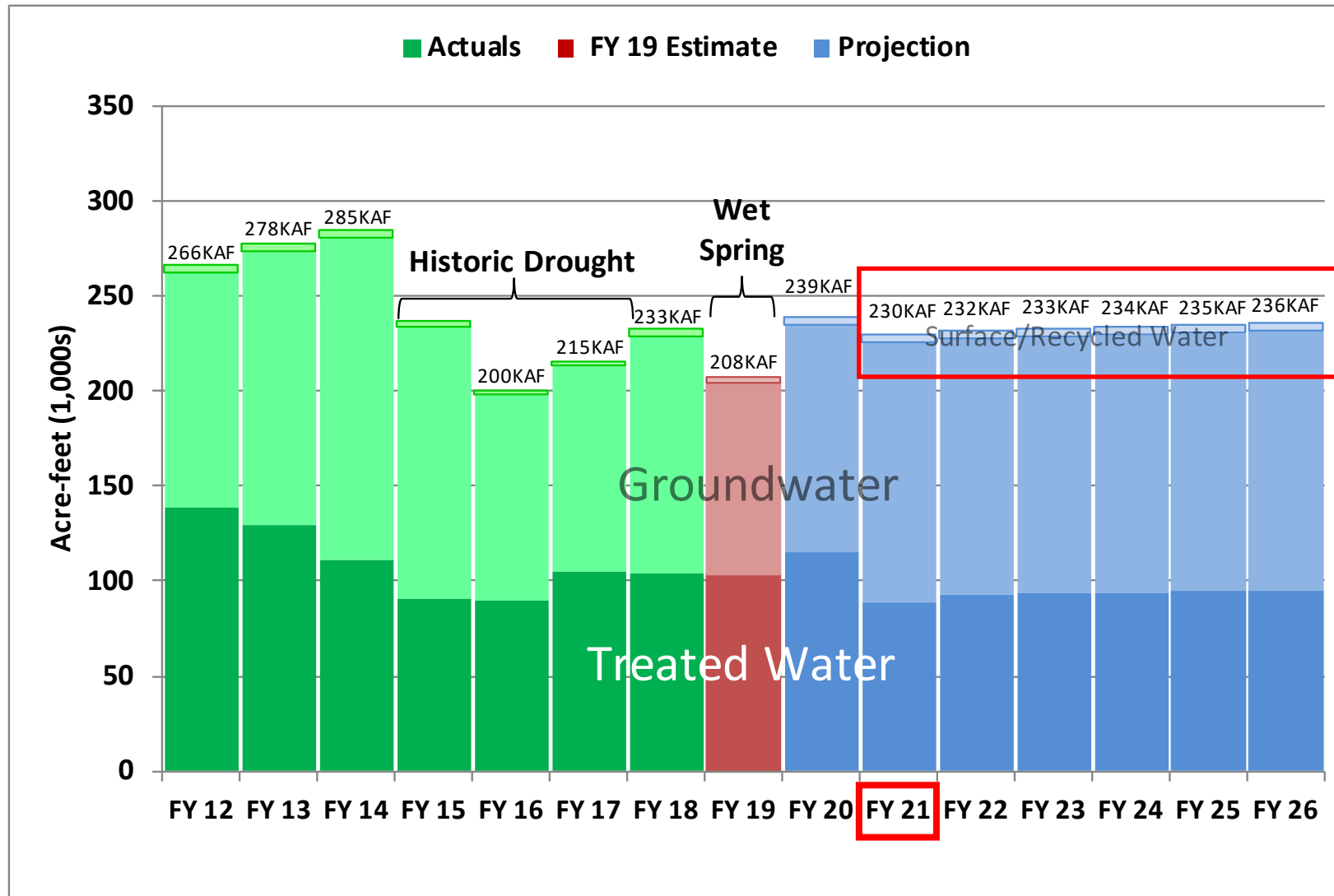
Next Steps

- Discuss water usage trends/projections with retailers
- Continue to monitor FY 20 water usage actuals

Historic Water Usage (Groundwater & Treated Water)



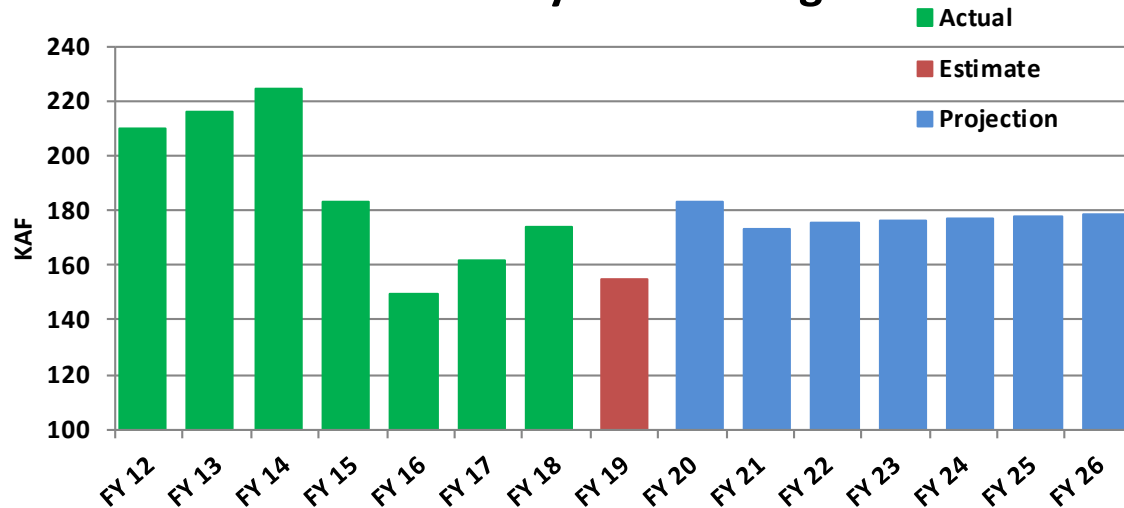
Water Usage (District Managed)



Revised Projection
as of 1/14/20

Water Usage Trend by Zone

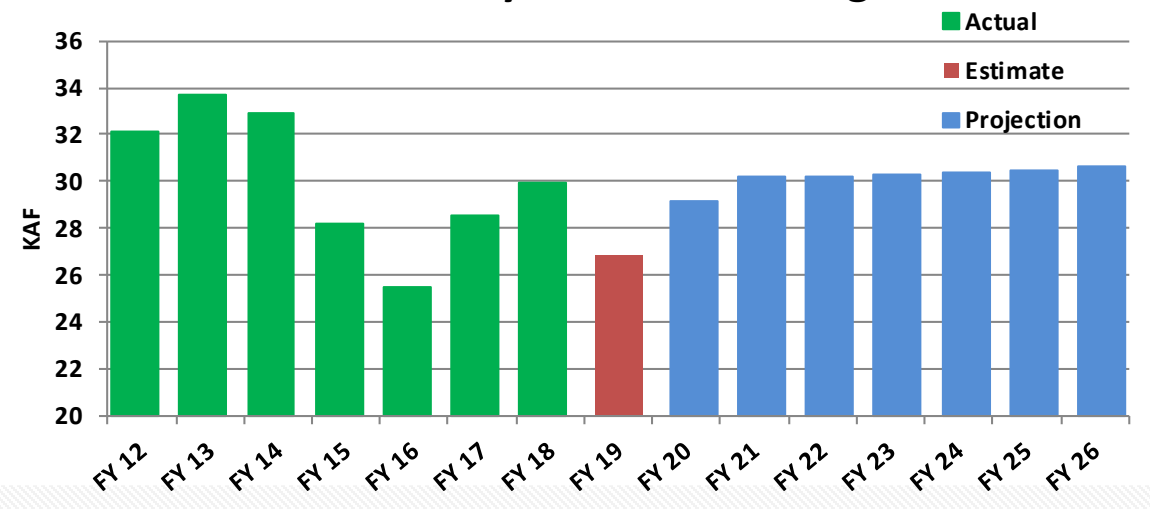
North County Water Usage



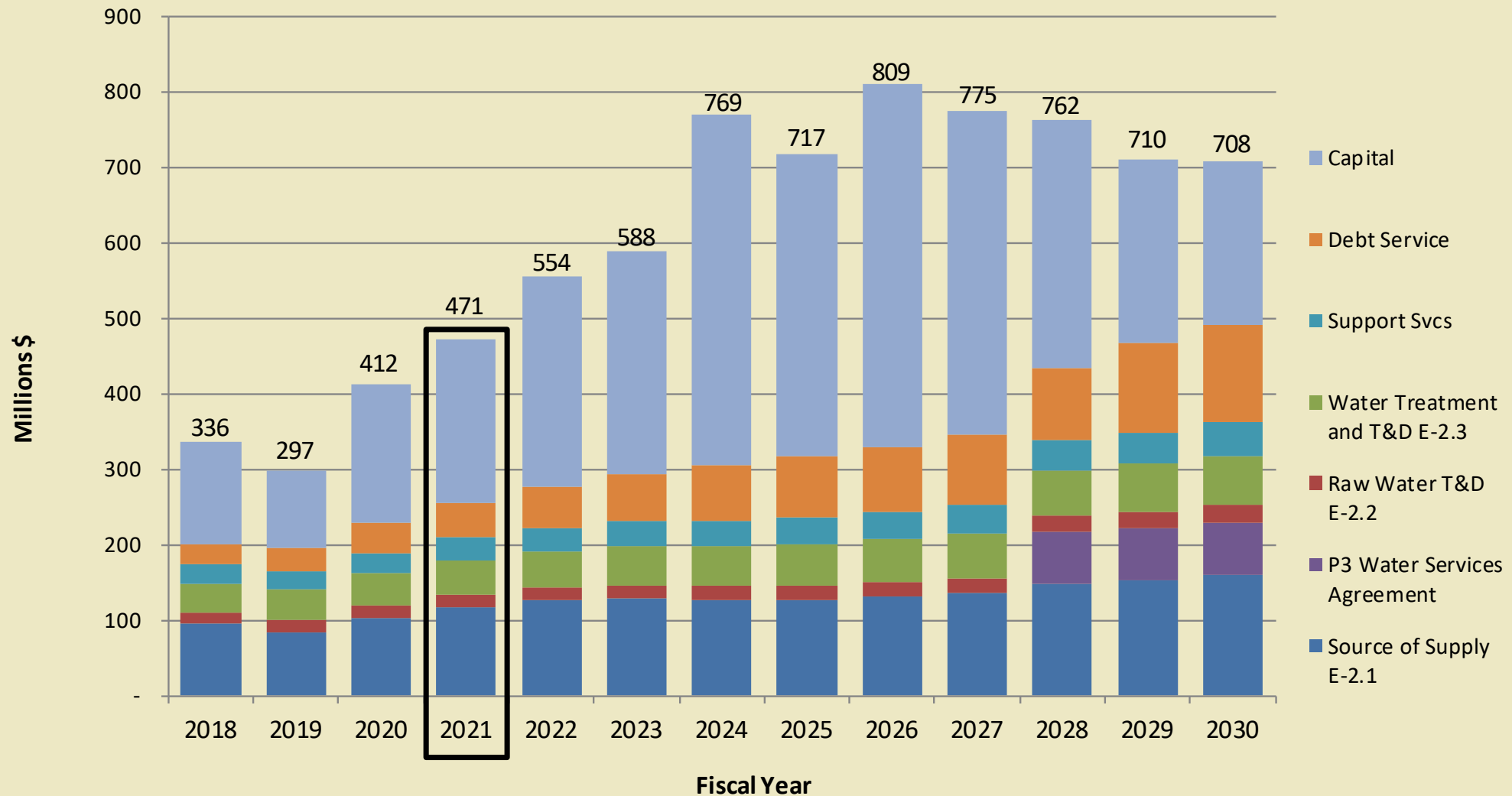
North County Water Usage includes Groundwater, Treated Water & Surface Water

South County Water Usage includes Groundwater, Surface Water & Recycled Water

South County M&I Water Usage



Financial Analysis: Preliminary Cost Projection



Delta Conveyance Project

Status:

- Technical analysis is proceeding to refine project design
- Bureau of Reclamation has not indicated degree to which it will support Central Valley Project (CVP) participation
- Staff anticipates re-initiation of negotiations to amend State Water Project (SWP) contract to include Delta Conveyance project in late January 2020

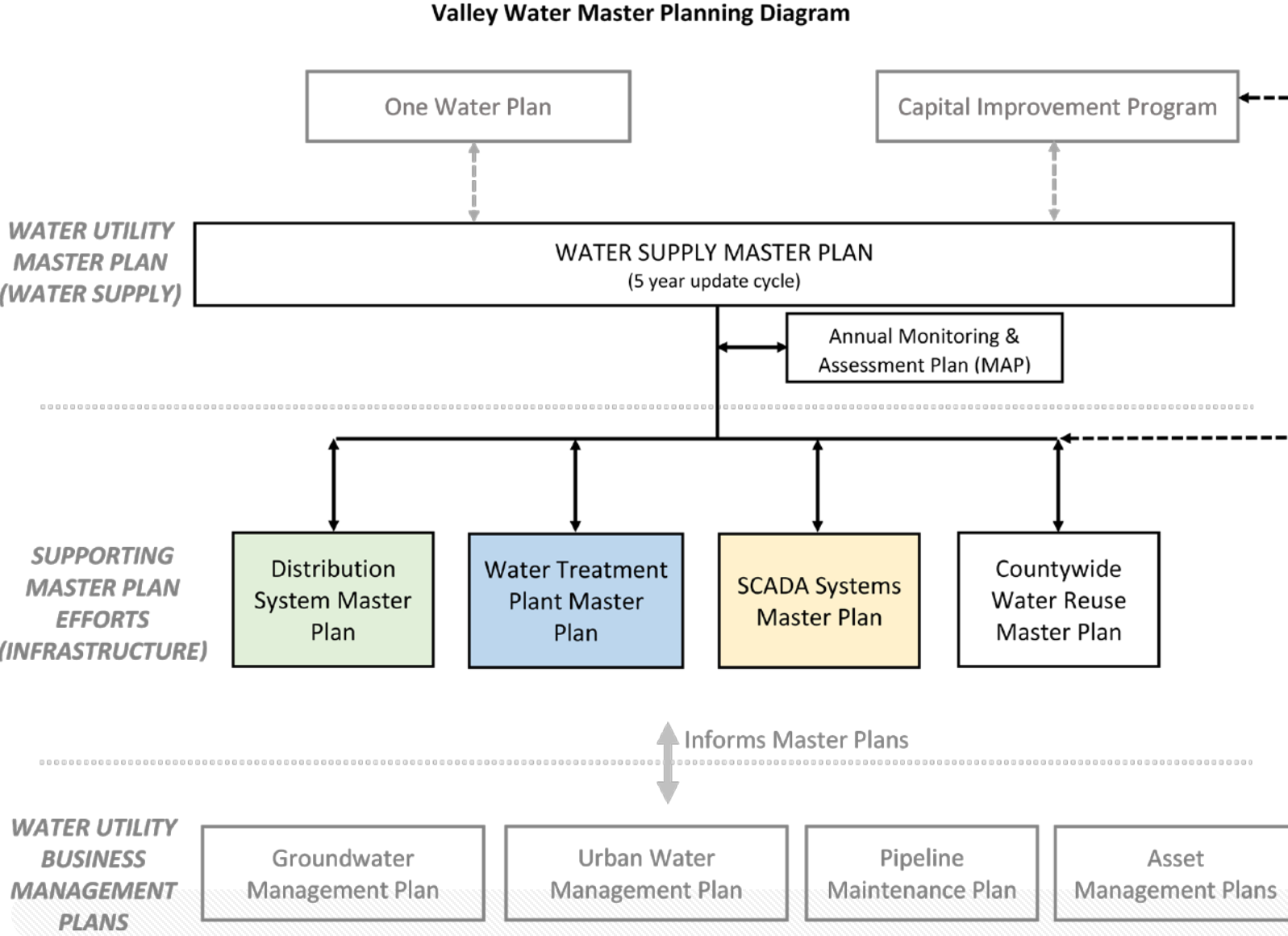
Cost Estimate:

\$M	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30
Gap Funding	7.8	7.8	3.9							
SWP 2.4% (State Side)				1.1	2.4	3.3	4.5	6.4	8.4	10.3
SWP 3.2% (CVP side)				1.4	3.1	4.2	5.8	8.2	10.7	13.2
Total	7.8	7.8	3.9	2.5	5.5	7.5	10.3	14.7	19.1	23.6

Included in
"Baseline" scenario

- No new project costs have been provided, cost estimates based on prior year information adjusted for timing
- Gap Funding based on 5.6% of \$350M spread over 2.5 years

Newly Proposed Water Supply Projects Master Planning Diagram



Newly Proposed Water Supply Projects SCADA Implementation

Develop a comprehensive implementation plan that coordinates aging/obsolete infrastructure, standardization, and other operational improvements.

Deliverables:

- Update to 2011 Master Plan resulting in a coordinated suite of improvement projects for the Boards consideration
- Detailed design and implementation standards for the design of new projects
- Provide owners engineering support through construction

Resources: \$6.7 million



Newly Proposed Water Supply Projects

WTP Implementation

Develop a comprehensive implementation plan that coordinates regulatory-driven changes, aging infrastructure, and other operational improvements.

Deliverables:

- Develop a Master Plan looking out 30 years resulting in a coordinated suite of improvement projects for the Boards consideration
- Develop an implementation plan with a programmatic EIR

Resources: \$8.4 million



Newly Proposed Water Supply Projects Distribution System Implementation

Develop a comprehensive implementation plan that coordinates aging infrastructure, future growth/retailer needs, and other operational improvements.

Deliverables:

- Develop a Master Plan looking out 30 years resulting in a coordinated suite of improvement projects for the Boards consideration
- Develop an implementation plan with a programmatic EIR

Resources: \$8.1 million



Water Retailer reliance on Treated Water

Background:

Treated Water provides in-lieu recharge to help protect groundwater basin

Issue:

Increased retailer interest in reliance on treated water

- Due to increased life-cycle cost of groundwater wells
- Groundwater provides 40% of water used in county and is the largest emergency supply
- Groundwater basins are currently full

Proposed Solution:

Staff proposes to increase TW surcharge from \$100/AF to \$200/AF for FY 21

- Provides increased economic incentive for Treated Water Retailers to sustain use of groundwater
- Emerging conditions such as climate change increase the importance of ensuring a steady balance between groundwater and treated water beneficial uses

Investment Scenarios

1) Baseline: WSMP 80% Level Of Service

- ▶ Baseline Projects*
 - ▶ Almaden Valley Pipeline Replacement
 - ▶ Land Rights – South County RW Pipeline
 - ▶ SCADA, WTP, Distr. Sys. Implementation
- ▶ Delta Conveyance (State side)
 - ▶ Paid for by water charges, not SWP Tax
- ▶ ~~Delta Conveyance (CVP side)~~
- ▶ No Regrets Package
- ▶ Potable Reuse Phase 1 to produce 24KAF by FY 28
 - ▶ Based on \$690M capital project, District contributes 30% “pay as you go”
 - ▶ P3 reserve at \$10M in FY 21 growing to \$20M by FY 28
- ▶ Pacheco Reservoir
 - ▶ \$250M WIIN funding + WIFIA loan
 - ▶ Partner Agencies pay 20% of project
- ▶ Transfer-Bethany Pipeline
- ▶ South County Recharge
 - ▶ Timing = beyond FY 30
- ▶ \$200M warranty placeholder for dams & WTP's

2) Baseline + No WIIN Funding

- ▶ Baseline Projects*
 - ▶ Almaden Valley Pipeline Replacement
 - ▶ Land Rights – South County RW Pipeline
 - ▶ SCADA, WTP, Distr. Sys. Implementation
- ▶ Delta Conveyance (State side)
 - ▶ Paid for by water charges, not SWP Tax
- ▶ ~~Delta Conveyance (CVP side)~~
- ▶ No Regrets Package
- ▶ Potable Reuse Phase 1 to produce 24KAF by FY 28
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 - ▶ Partner Agencies pay 20% of project
- ▶ Transfer-Bethany Pipeline
- ▶ South County Recharge
 - ▶ Timing = beyond FY 30
- ▶ \$200M warranty placeholder for dams & WTP's

3) Baseline, No WIIN + Revised Purified Wtr

- ▶ Baseline Projects*
 - ▶ Almaden Valley Pipeline Replacement
 - ▶ Land Rights – South County RW Pipeline
 - ▶ SCADA, WTP, Distr. Sys. Implementation
- ▶ Delta Conveyance (State side)
 - ▶ Paid for by water charges, not SWP Tax
- ▶ ~~Delta Conveyance (CVP side)~~
- ▶ No Regrets Package
- ▶ Potable Reuse Palo Alto Agreement to produce 13KAF by FY 30
 - ▶ Based on \$614M IPR capital project, District builds, finances and operates (Not a P3)
 - ▶ ~~P3 reserve at \$10M in FY 21 growing to \$20M by FY 28~~
- ▶ Pacheco Reservoir
 - ▶ ~~\$250M WIIN funding~~ + WIFIA loan
 - ▶ Partner Agencies pay 20% of project
- ▶ Transfer-Bethany Pipeline
- ▶ South County Recharge
 - ▶ Timing = beyond FY 30
- ▶ \$200M warranty placeholder for dams & WTP's

4) Baseline, No WIIN + Revised PW + CVP side

- ▶ Baseline Projects*
 - ▶ Almaden Valley Pipeline Replacement
 - ▶ Land Rights – South County RW Pipeline
 - ▶ SCADA, WTP, Distr. Sys. Implementation
- ▶ Delta Conveyance (State side)
 - ▶ Paid for by water charges, not SWP Tax
- ▶ **Delta Conveyance (CVP side)**
- ▶ No Regrets Package
- ▶ Potable Reuse Palo Alto Alt 1 to produce 13KAF by FY 30
 - ▶ Based on \$614M IPR capital project, District builds, finances and operates (Not a P3)
 - ▶ ~~P3 reserve at \$10M in FY 21 growing to \$20M by FY 28~~
- ▶ Pacheco Reservoir
 - ▶ ~~\$250M WIIN funding~~ + WIFIA loan
 - ▶ Partner Agencies pay 20% of project
- ▶ Transfer-Bethany Pipeline
- ▶ South County Recharge
 - ▶ Timing = beyond FY 30
- ▶ \$200M warranty placeholder for dams & WTP's

Exceeds 80% LOS goal

* Includes but not limited to dam seismic retrofits, Rinconada WTP reliability improvement, 10-year pipeline rehabilitation program

Attachment 1
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Background:

- **Baseline Scenario slightly exceeds 80% LOS goal (due to resource uncertainties discussed in 2019)**
- **Scaled down and pushed out the 24KAF Purified Water Indirect Potable Reuse (IPR) Project under Scenario 3 to produce 10-13KAF by FY 30 as potential DPR:**
 - **Regulations for direct potable reuse (DPR) expected by end of 2023 (draft regulations in 2022)**
 - **DPR project may lower total cost due to avoiding long pipelines to recharge areas**
 - **Can be staged, and still meets 80% LOS goal**
- **Monitoring and Assessment Plan (MAP) review in Fall 2020 will include updated 2040 demand forecast**

For Consideration:

1. **Given reduced short-term water demand projection, wait for the Fall 2020 Monitoring and Assessment Plan review to determine if a shortfall exists**
2. **Pursue substitute water supply investment to make up 11-14KAF shortfall (to reach 24KAF)**
 - **Incremental purified water investments (Assume P3?)**
 - **Incremental Delta Conveyance “CVP side” commitment (25%, 50%, 100%?)**
 - **Continue to advance broader portfolio options (e.g., Sites, LVE)**

Preliminary Groundwater Charge Increase Scenarios

No. County M&I Groundwater Charge Y-Y Growth %

	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30
May 2019	6.6%	6.6%	6.6%	6.6%	6.6%	6.6%	6.6%	6.6%	6.6%	
Baseline	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
1) Baseline - Wtr Use at 230KAF	8.1%	8.1%	8.1%	8.1%	8.1%	8.1%	8.1%	8.1%	8.1%	8.1%
2) Baseline - Wtr Use at 230KAF, No WIIN Funding	8.7%	8.7%	8.7%	8.7%	8.7%	8.7%	8.7%	8.7%	8.7%	8.7%
3a) Baseline - Wtr Use at 230KAF, No WIIN, Rvsd PW	8.7%	8.7%	8.7%	8.7%	8.7%	8.7%	8.7%	8.7%	8.7%	8.7%
3b) Baseline - Wtr Use at 230KAF, No WIIN, Rvsd PW, \$200 TW Srchrg	8.4%	8.4%	8.4%	8.4%	8.4%	8.4%	8.4%	8.4%	8.4%	8.4%
4) Baseline - Wtr Use at 230KAF, No WIIN, Rvsd PW, \$200 TW, + CVP	8.6%	8.6%	8.6%	8.6%	8.6%	8.6%	8.6%	8.6%	8.6%	8.6%

So. County M&I Groundwater Charge Y-Y Growth %

	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30
May 2019	6.9%	6.9%	6.9%	6.9%	6.9%	6.9%	6.9%	6.9%	6.9%	
Baseline	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%
1) Baseline - Wtr Use at 230KAF	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%
2) Baseline - Wtr Use at 230KAF, No WIIN Funding	5.1%	5.1%	5.1%	5.1%	5.1%	5.1%	5.1%	5.1%	5.1%	5.1%
3a) Baseline - Wtr Use at 230KAF, No WIIN, Rvsd PW	5.1%	5.1%	5.1%	5.1%	5.1%	5.1%	5.1%	5.1%	5.1%	5.1%
3b) Baseline - Wtr Use at 230KAF, No WIIN, Rvsd PW, \$200 TW Srchrg	5.1%	5.1%	5.1%	5.1%	5.1%	5.1%	5.1%	5.1%	5.1%	5.1%
4) Baseline - Wtr Use at 230KAF, No WIIN, Rvsd PW, \$200 TW, + CVP	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%

Preliminary Monthly Impact to Average Household Scenarios

No. County M&I Groundwater Charge Impact to Avg. Household

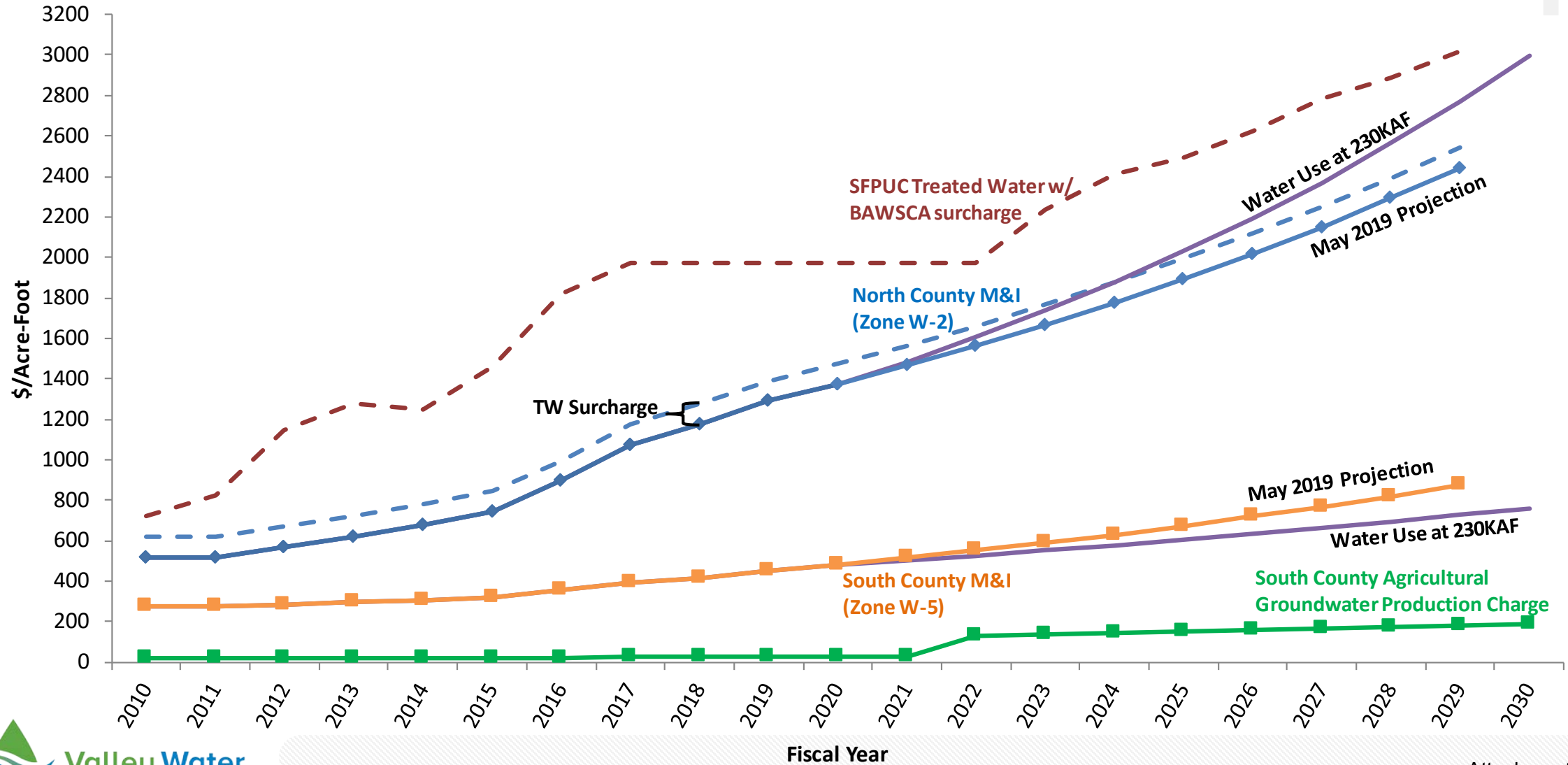
	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30
May 2019	\$3.13	\$3.33	\$3.55	\$3.78	\$4.03	\$4.30	\$4.58	\$4.89	\$5.21	
Baseline	\$3.08	\$3.28	\$3.49	\$3.72	\$3.96	\$4.21	\$4.49	\$4.78	\$5.09	\$5.42
1) Baseline - Wtr Use at 230KAF	\$3.83	\$4.14	\$4.48	\$4.84	\$5.23	\$5.66	\$6.12	\$6.61	\$7.15	\$7.73
2) Baseline - Wtr Use at 230KAF, No WIIN Funding	\$4.12	\$4.48	\$4.86	\$5.29	\$5.75	\$6.25	\$6.79	\$7.38	\$8.02	\$8.72
3a) Baseline - Wtr Use at 230KAF, No WIIN, Rvsd PW	\$4.12	\$4.48	\$4.86	\$5.29	\$5.75	\$6.25	\$6.79	\$7.38	\$8.02	\$8.72
3b) Baseline - Wtr Use at 230KAF, No WIIN, Rvsd PW, \$200 TW Src	\$3.97	\$4.31	\$4.67	\$5.06	\$5.49	\$5.95	\$6.45	\$6.99	\$7.58	\$8.21
4) Baseline - Wtr Use at 230KAF, No WIIN, Rvsd PW, \$200 TW, + C\	\$4.07	\$4.42	\$4.80	\$5.21	\$5.66	\$6.15	\$6.68	\$7.25	\$7.87	\$8.55

So. County M&I Groundwater Charge impact to Avg. Household

	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30
May 2019	\$1.14	\$1.22	\$1.31	\$1.40	\$1.49	\$1.60	\$1.71	\$1.82	\$1.95	
Baseline	\$0.78	\$0.82	\$0.85	\$0.89	\$0.94	\$0.98	\$1.03	\$1.07	\$1.12	\$1.18
1) Baseline - Wtr Use at 230KAF	\$0.78	\$0.82	\$0.85	\$0.89	\$0.94	\$0.98	\$1.03	\$1.07	\$1.12	\$1.18
2) Baseline - Wtr Use at 230KAF, No WIIN Funding	\$0.84	\$0.89	\$0.93	\$0.98	\$1.03	\$1.08	\$1.14	\$1.20	\$1.26	\$1.32
3a) Baseline - Wtr Use at 230KAF, No WIIN, Rvsd PW	\$0.84	\$0.89	\$0.93	\$0.98	\$1.03	\$1.08	\$1.14	\$1.20	\$1.26	\$1.32
3b) Baseline - Wtr Use at 230KAF, No WIIN, Rvsd PW, \$200 TW Src	\$0.84	\$0.89	\$0.93	\$0.98	\$1.03	\$1.08	\$1.14	\$1.20	\$1.26	\$1.32
4) Baseline - Wtr Use at 230KAF, No WIIN, Rvsd PW, \$200 TW, + C\	\$0.88	\$0.92	\$0.97	\$1.03	\$1.08	\$1.14	\$1.20	\$1.26	\$1.33	\$1.40

Preliminary Groundwater Production Charge Projection

M&I Groundwater Charge Projection



How does the preliminary analysis translate to New and Modified Zones?

	Existing W-2	
	FY 20	FY 21*
M&I Groundwater	\$1,374.00/AF	\$1,485.00/AF
Ag Groundwater	\$28.86/AF	\$30.22/AF
* FY 21 assumes Baseline Scenario with 230KAF water usage		

Modified W-2
FY 21*
\$X/AF
\$30.22/AF

Staff still working on details of cost allocations between new and modified zones

	Existing W-5	
	FY 20	FY 21*
M&I Groundwater	\$481.00/AF	\$504.00/AF
Ag Groundwater	\$28.86/AF	\$30.22/AF
* FY 21 assumes Baseline Scenario with 230KAF water usage		

Modified W-5	New W-7	New W-8
FY 21*	FY 21*	FY 21*
\$X/AF	\$X/AF	\$X/AF
\$30.22/AF	\$30.22/AF	\$30.22/AF

- Ag groundwater charge remains consistent between Existing and Modified zones to align with Board direction to maintain Open Space Credit policy as is through FY 21

Other Charges, Taxes, Reserves Information

	FY 2020	FY 2021
<u>Other Charges</u>	<u>Budget</u>	<u>Projection</u>
Contract TW Surcharge (\$/AF)	\$100.00	\$200.00
Non-contract TW Surcharge (\$/AF)	\$200.00	\$200.00
Surface Water Master Charge (\$/AF)	\$37.50	\$39.15
<u>SWP Tax</u>		
Revenue	\$18M	\$18M
Cost per average household	\$27/Yr	\$27/Yr
1% Ad Valorem Taxes	\$8.1M	\$8.2M
Drought Reserve	\$10.0M	\$10.0M
P3 Reserve	\$8.0M	\$10.0M
Cumulative GP 5 Funds	\$6.9M	\$10.7M

Jan 14	Board Meeting: Preliminary Groundwater Charge Analysis
Jan 15	Water Retailers Meeting: Preliminary Groundwater Charge Analysis
Jan 22	Water Commission Meeting: Prelim Groundwater Charge Analysis
Feb 11	Board Meeting: Budget development update & Set time & place of Public Hearing
Feb 28	Mail notice of public hearing and file PAWS report
Mar 18	Water Retailers Meeting: FY 19 Groundwater Charge Recommendation
Mar 24	Board Meeting: Budget development update
Mar 31	Landscape Committee Meeting
Apr 6	Ag Water Advisory Committee
Apr 8	Water Commission Meeting
Apr 14	Open Public Hearing
Apr TBD	Continue Public Hearing in South County
Apr 28	Conclude Public Hearing
Apr 29-30	Board Meeting: Budget work study session
May 12	Adopt budget & groundwater production and other water charges

- Scenarios with reduced water usage range from 8.1% to 8.7% annual increases in North County M&I groundwater charge, & 4.7% to 5.3% in South County
- Potential FY 20 increase ranges from \$3.83 to \$4.12 per month for the average household in North County, and \$0.78 to \$0.88 per month in South County
- Board direction on following issues to be incorporated into Report on Protection and Augmentation of Water Supplies (PAWS) scheduled for February 28, 2020
 - Water demand projection reduction to 230KAF?
 - TW surcharge increase to \$200/AF?
 - Add Newly Proposed Water Supply Projects?
 - Wait for Fall 2020 MAP review, or pursue substitute investment to make up 11-14KAF shortfall?
 - Other?

Master Plan Projects

- **Baseline Projects¹**
- **Delta Conveyance Project**
- **Additional Conservation & Stormwater Projects**
- **Potable Reuse (Phase 1-24,000 AF by FY28)**
- **Pacheco Reservoir Expansion**
- **Transfer-Bethany Pipeline**
- **South County Recharge**

¹ Dam seismic retrofits, Rinconada Water Treatment Plan reliability improvement project, 10-year pipeline rehabilitation program, Vasona pumping plan upgrade, 100,000 AFY water conservation savings, and assumes 33,000 AFY of countywide non-potable recycled water.



Project	Average Annual Yield (AFY)	Valley Water Lifecycle Cost ³	Unit Cost (AF)	Risk
Delta Conveyance Project	41,000	\$630 million	\$600	High/Extreme
Additional Conservation & Stormwater Projects	11,000	\$100 million	\$400	Medium
Potable Reuse	19,000	\$1.2 billion	\$2,000	Medium
Pacheco Reservoir Expansion ¹	6,000 ²	\$340 million ⁴	\$2,000	Medium
Transfer-Bethany Pipeline ²	3,500	\$78 million	\$700	Medium
South County Recharge	2,000	\$20 million	\$400	Medium

Ultimately the amount of project yield and benefit that is usable by Valley Water depends on the portfolio of water supply projects that Valley Water ultimately implements and the outcome of ongoing regulatory processes.

¹ Assumes Prop. 1 Water Storage Investment Program funding. Costs would roughly double without funding.

² Based on Prop. 1 Water Storage Investment Program (WISP) application.

³ Valley Water lifecycle (100 year) costs are presented in 2018 present value dollars.

⁴ Assumes Prop. 1 and WIIN funding, WIFIA loan, and partner agencies pay 20% of the project.

Attachment 1

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Current Project

- Remove Reservoir Operating Restriction to Restore Full Storage and Water Supply

Alternative 1 – (Lowered Spillway)

- Modify Spillway & Accept Permanent Reduced Storage and Water Supply

Alternative 2 – (Decommission Dam)

- Remove Dam & Change to Uncontrolled Stream-flow with No Storage and Very Limited Recharge Supply

Net Benefit and BCR Results

Benefit	Base Case	Alt. 1	Alt. 2
Full Project – No Residual Value Adjustment (\$M)			
Total Benefits (NPV)	\$155.4	\$73.1	\$25.5
Total Cost (NPV)	\$115.5	\$59.3	\$58.5
Net Benefits (NPV)	\$39.9	\$13.8	(\$33.0)
Benefit-Cost Ratio	1.35	1.23	0.44

Note: Under both Alternatives 1 and 2, Valley Water would incur additional costs to match Base Case water supply quantity of 5,751 acre-feet per year.

- Alt. 1: Replacement Water Supply (3,545 acre-feet per year) to offset the system originated water supply shortfall would cost at least \$86.6M and result in **net \$30.4M (NPV) increase in water supply cost** compared to Base Case.
- Alt. 2: Replacement Water Supply (5,448 acre-feet per year) to offset the system originated water supply shortfall would cost \$133.0M and result in **net \$76M (NPV) increase in water supply cost** compared to Base Case.

Current Project

- Reservoir will be drawn down so that it has a high volume of unused storage space for catchment and rainfall storage

Alternative 1 – (Lowered Spillway)

- Future downstream flood risk higher

Alternative 2 – (Decommission Dam)

- Future downstream flood risk higher

Calero Dam – Expansion Costs

Table 1: Raise Scenarios Storage and Costs

RAISE	POOL ELEV. *	TOTAL STORAGE AF	ADDITIONAL STORAGE AF	COST \$	COST PER ACRE FOOT \$
10 feet	495	13164.2	3230.2	152,000,000	46,900
20 feet	505	17769.3	7835.3	222,000,000	28,300
30 feet	515	23169.1	13235.1	332,000,000	25,100
40 feet	525	29872.0	19938.0	465,000,000	23,300
50 feet	535	37534.7	27600.7	622,000,000	22,500
60 feet	545	46058.9	36124.9	805,000,000	22,300
70 feet	555	55375.2	45441.2	1,022,000,000	22,500

*All elevations are in units of feet and in reference to NAVD88 unless otherwise stated.



Valley Water

Clean Water • Healthy Environment • Flood Protection