

Sites Reservoir Project

Water Reservoir and Watershed Committee

January 12, 2022

Item 3

Outline

Why Sites Reservoir?

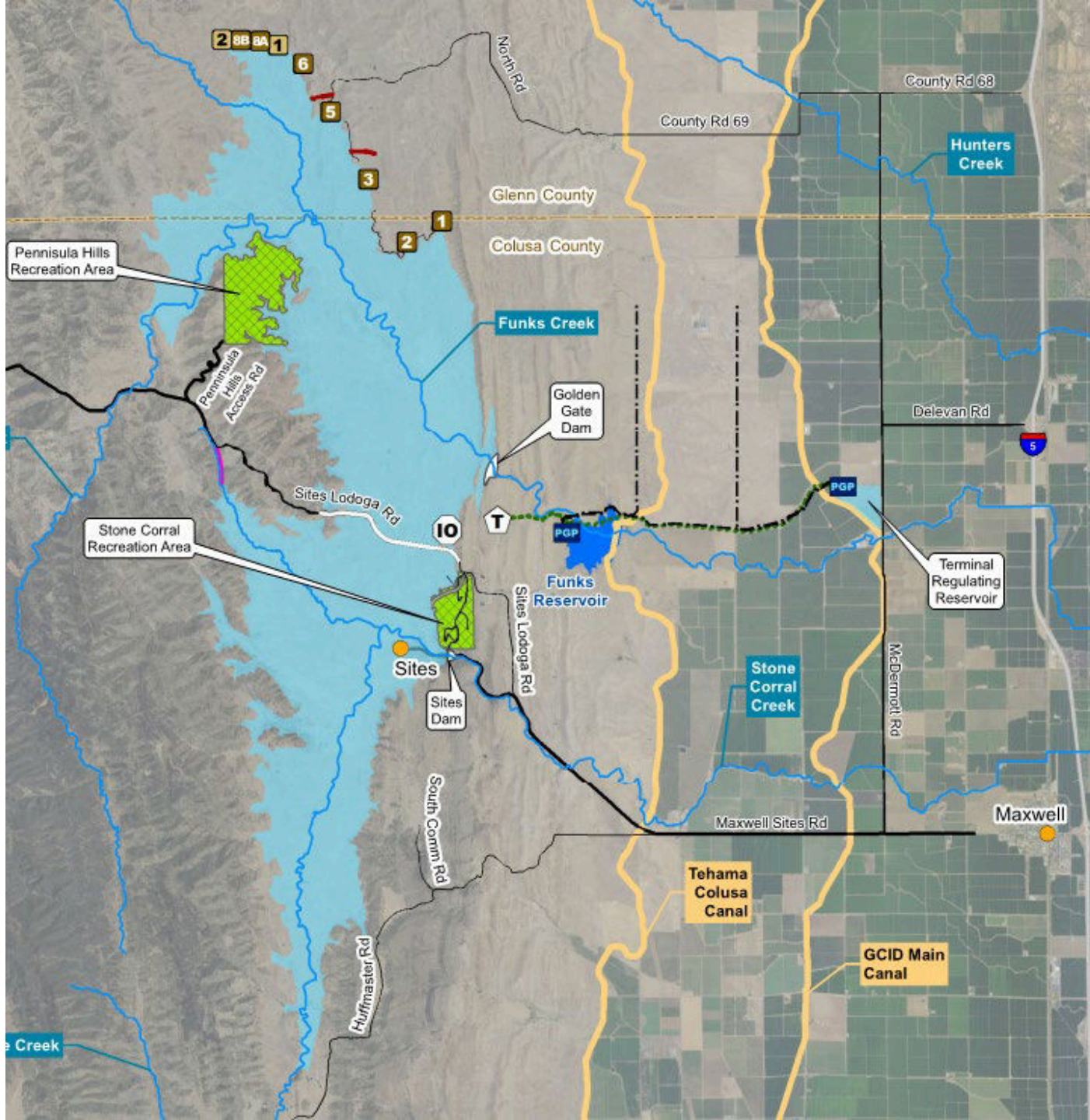
Project Overview and Investment to Date

What does it cost? Feasibility Project Cost Estimate

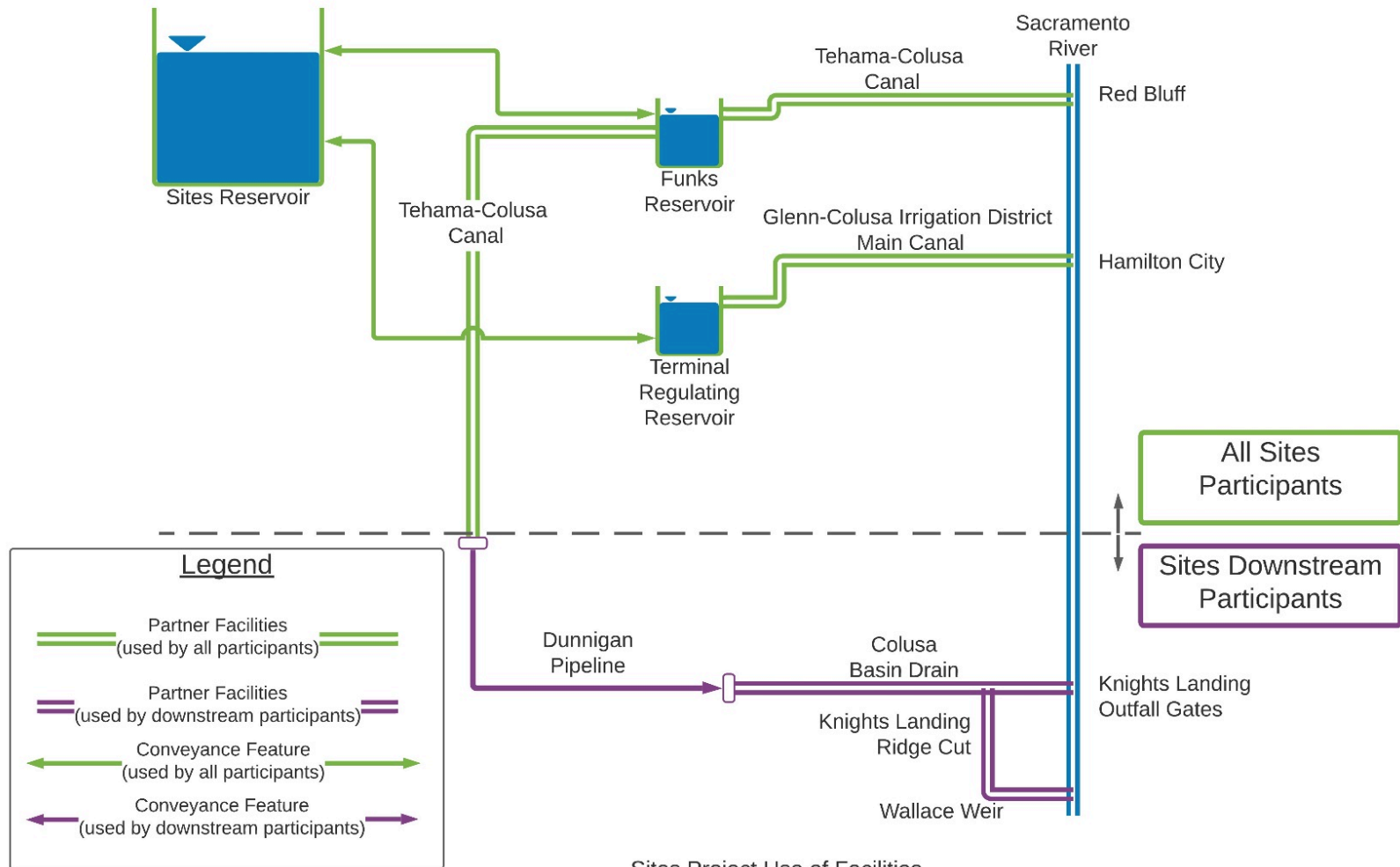
What do we get? Affordability, Storage, and Benefits

Next Steps

Project Map



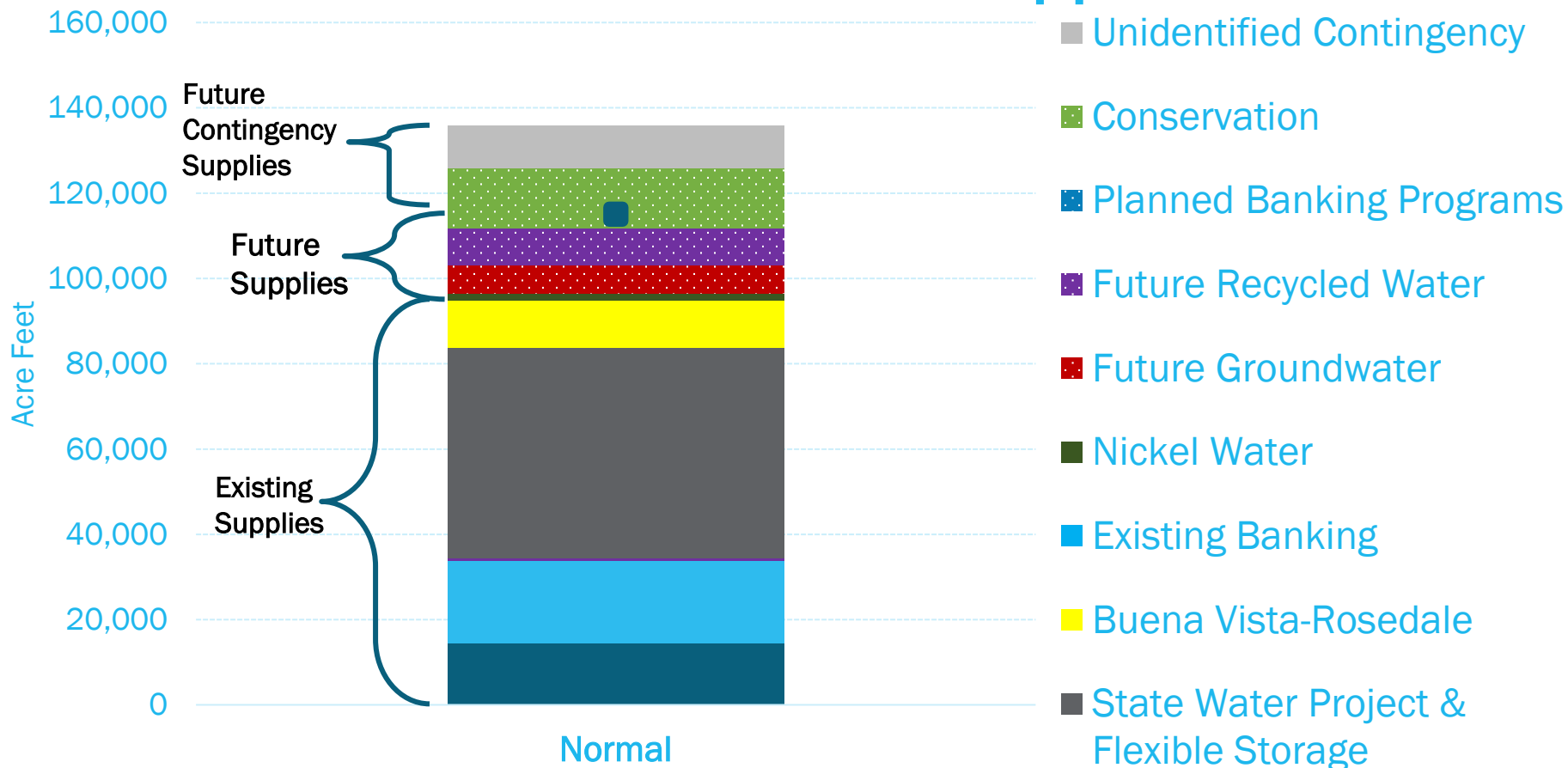
How Sites Will Work



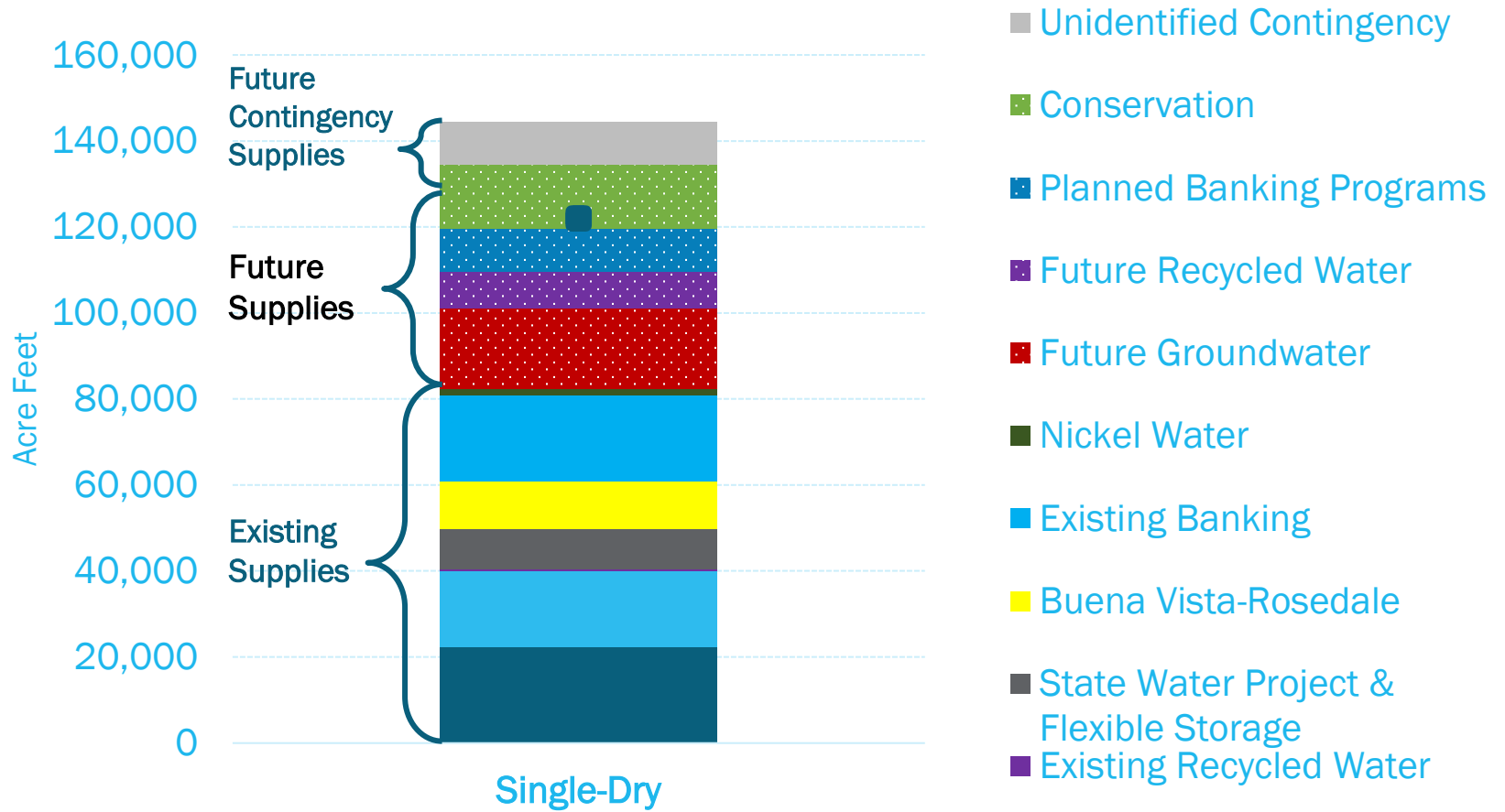
Sites Project Use of Facilities

Portfolio Elements	Uncertainties
Existing Water Supplies	<ul style="list-style-type: none"> Climate change exceeds those estimates already included in UWMP analysis Temporary disruption of groundwater and banking programs due to emerging constituents of emerging concern (CECs) Increased regulatory constraints on SWP supplies State approval of Groundwater Sustainability Plan
Active Water Conservation	<ul style="list-style-type: none"> New conservation mandates (interior 42 gpcd and higher irrigation efficiency) may increase conservation Fiscal investments and enforcement implications Nature of future development
Recycled Water	<ul style="list-style-type: none"> Conservation mandates may decrease supply and decrease demand for non-potable irrigation water
Planned Groundwater Banking (Rosedale Expansion)	<ul style="list-style-type: none"> CECs Siting of proposed wells
Planned Groundwater Banking (NLF Semitropic)	<ul style="list-style-type: none"> Contract negotiations for transfer to SCV Water
Future Groundwater – Alluvial (Retired Ag Production)	<ul style="list-style-type: none"> Siting and permitting of wells CECs
Future Groundwater - Saugus	<ul style="list-style-type: none"> Siting and permitting of wells CECs
Sites Reservoir	<ul style="list-style-type: none"> Climate change may result in higher winter flows in the Sacramento River and greater project yield Additional benefits from Delta Conveyance Facility Increased regulatory constraints on operating criteria

2050 Normal Year Supplies



2050 Single-Dry Year Supplies



Multiple Paths to Maintain Reliability

Demand Management

- In UWMP as active conservation
- Additional conservation may be mandated (interior water use from 50 to 42 gcpd)
- Irrigation efficiency mandates pending

Recycled Water

- In UWMP
- Availability based on New Drop program
- Potential supply impact due to interior Demand Management (see above)

Rosedale Banking Recovery

- In UWMP
- Provided for in existing contract
- Well site acquisition required

Additional Saugus Dry-year Wells

- In UWMP
- 4 Additional Dry-year wells
- Site acquisition for 2 of 4 wells and DDW Permitting

NLF Semitropic Bank

- In UWMP
- Existing Program
- Required Agreement with FivePoint to transfer to SCVWA

AVEK Banking Program

- Alternative Program
- Adjudicated groundwater basin
- Storage South of the Tehachapi Mountains

Sites Reservoir

- Alternative Program
- Long-term Climate Change Hedge
- Complements GW Banking Programs

2021 Reliability Plan Scenarios

Component	Base	1	2	3	4	5
Alluvial & Existing Saugus	*	*	*	*	*	*
SWP and BVRRB	*	*	*	*	*	*
Existing Banking Programs	*	*	*	*	*	*
Saugus Wells 3 and 4		*	*	*		
Saugus Wells 5 - 8		*				
Additional Rosedale Bank Capacity		*	*	*	*	
Sites Reservoir				*	*	*
AVEK High Desert Bank			*		*	*
McMullin GSA Aquaterra Bank						*

Investments to Date and Proposed



Project Phases

- Phase 1 – Formation of JPA and state funding Prop 1 award **(Complete)**
- Phase 2 – Certification of environmental impact report and statement and acquisition of key permits (In-progress)
- Phase 3 – Final design and right-of-way acquisition (Mid 2023-2024)
- Phase 4 – Construction and commissioning (Mid-late 2024-2030)
- Phase 5 – Construction close-out and operations (2030 and beyond)

**Delays in securing permits or water rights, could affect the Construction schedule & it will be adjusted accordingly.

Investment to Date and Proposed

Phase 1: Apr 2016 – Mar 2019 (Complete)

- \$60/AF initial cash call (\$48.50 actual)
- Funded State Prop 1 Application
- Successful application award \$816 Million

Phase 2A: Apr 2019 – June 2020 (Complete)

- \$60/AF cash call
- Value Planning resulting in smaller reservoir size and new “foot-print” with anticipated cost savings

Phase 2B: July 2020 – Dec 2021 (In Progress)

- \$100/AF cash call (incl. \$10/AF for Sites JPA membership fee)
- Updating environmental documents, feasibility study; working on permitting and water right; remain eligible for \$836M in state funding

Amendment 3/Phase 2C: Jan 2022 – Dec 2024 (Not Started)

- Up to \$400/AF cash call (\$100/AF in 2022; \$140/AF in 2023; \$160/AF in 2023)
- Secure critical permits/water rights
- Complete environmental review
- Advance design & pre-construction
- Ready to finance

A3 Costs: up to \$400/AF *releases*

What is the Cost of Water?

Feasibility Project Cost Estimate



Feasibility Project Cost Estimate

approved June 2021

Serving California's **environment, families,** and **farms** takes:

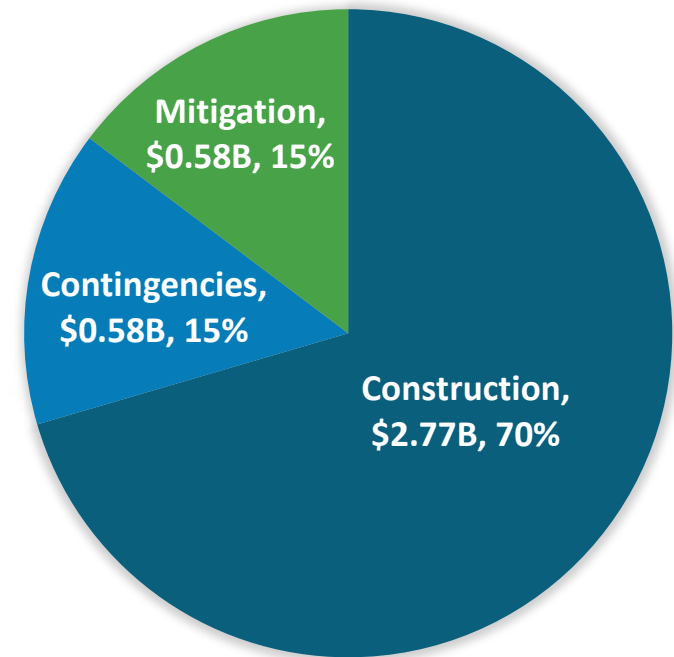
1.5 million acre-ft of storage

9 new dams

23 miles of big pipes (9-23ft)

20 million cubic yards of fill

ESTIMATED PROJECT COSTS
(\$3.9B, 2021\$)



Estimated construction costs are based on the class 4 cost estimate for alternative 1 approved by the Reservoir Committee and Authority Board in June 2021

Sites cost components

Fixed Costs

Every year, regardless of water supply benefits

- Debt service (**finance participants**)
- Admin and General
- Operations and Maintenance
- Replacements
- Sufficiency reserves

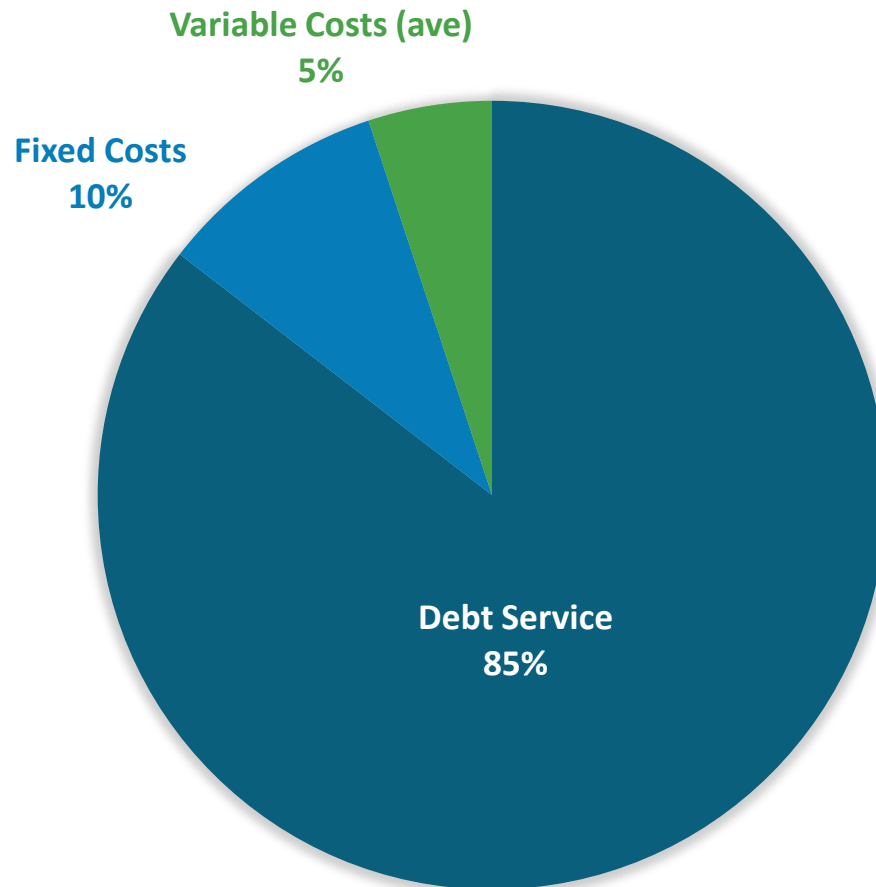
Variable Costs

Varies based on water supply benefits

- Power consumption (pumping)
- Power generation (releasing, revenue)
- Wheeling costs

Debt service is the biggest annual cost

FINANCING PARTICIPANTS ANNUAL PROJECT COSTS



What do we get?

Affordability, Storage, and Benefits



Storage Allocation



Storage space:
 $5,000\text{AF} * 6.234 =$
31,172 AF



Lease
Storage



Hold Water



Take Water



Sell Water



Total Storage: 1.5 MAF

North of Delta Participants
257 TAF

South of Delta Participants
788 TAF

Bureau of Reclamation
91 TAF

State of CA
244 TAF

Normal Operating
Dead Pool
0-120 TAF

Melded way of looking at affordability

Melded, project-wide affordability metric:

$$\frac{\$}{AF} = \frac{\textit{average project costs}}{\textit{average project deliveries}}$$

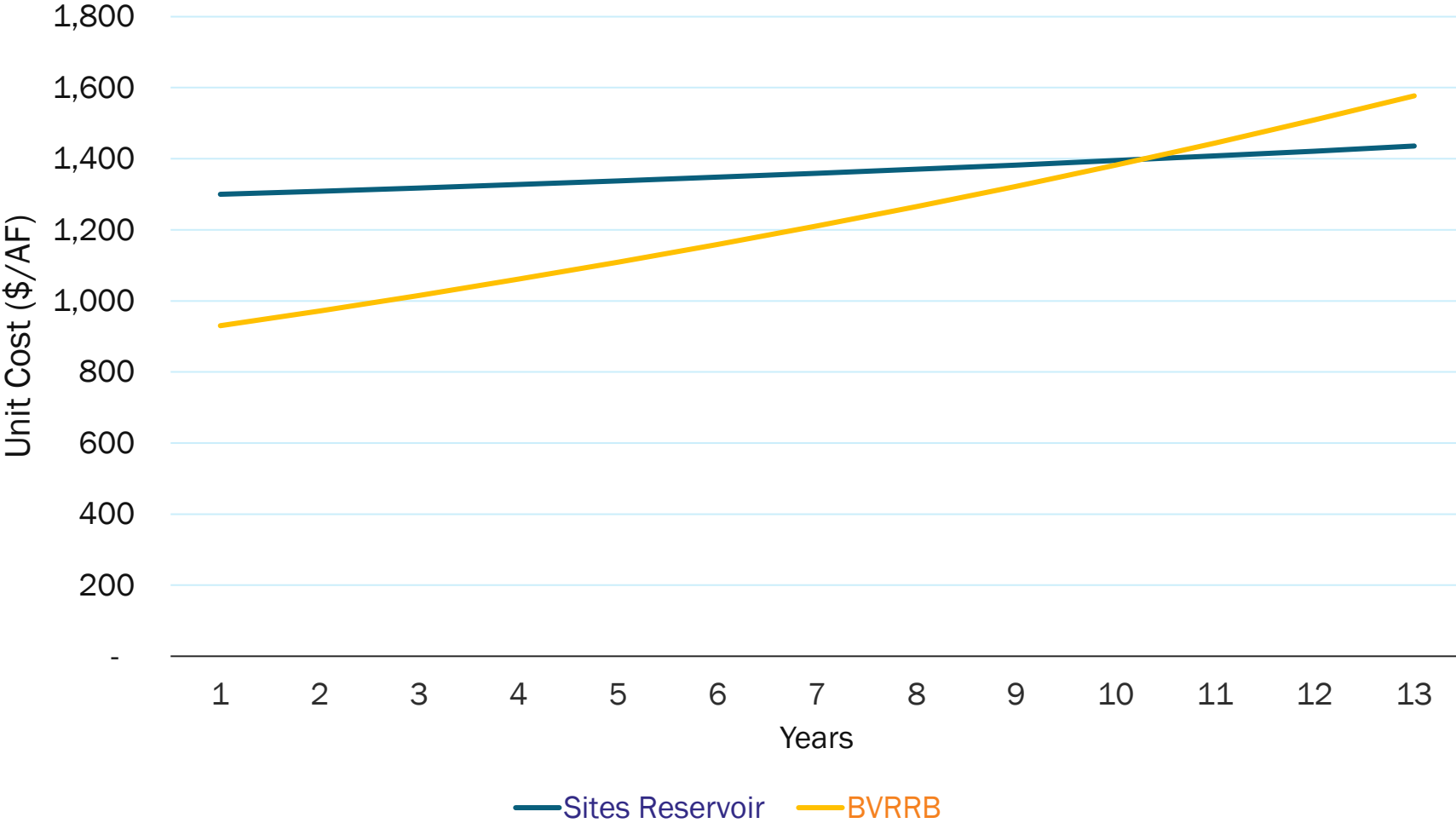
This is a useful metric, but it...

- is not how you will pay
- does not answer “what does it cost?” for your agency
- assumes “average” operations

Affordability

1. Storage account: **31,172 AF**
2. Share of base facilities, 2.2% of \$4.3B: **\$92.5M**
3. Downstream Facilities, 2.8% of \$165M, **\$4.6M**
4. Average annual costs (financed): **\$4.3M**
5. Average release target: **5,000 AF**
6. Delta carriage is **15% to 35%**
7. South of Delta Unit Costs: **1,000-1,300 AF**
8. **Permitting also could impact unit costs**
9. **Comparable to BVRRB Costs**

Sites Reservoir vs. Buena Vista Rosedale Costs



What moves the needle on affordability?

Type of Year Water is Available

Dry-Year Yield 10,000 AF

Critical Years 9,000 AF

- Use of water in wetter year types

Revenues

- Transfer pricing
- Leasing storage



Potential Impact of Sites Reservoir Costs on Water User Costs

- Annualized Sites Reservoir costs: \$4.9M
- 2050 Annual Water Sales: 101,000 AF = 44MCCF
- Cost/Water Sales = \$0.11 CFF
- Cost for 15 CCF per month: \$1.67/mo

Next Steps



Next Steps

Complete Amendment 3 Sites Participation Agreement

- Committing to AF of water @ \$400/AF

Rebalancing –

- Decreasing participation can happen now or before entering financing agreement (Phase 3).
- Increasing AF is dependent on decreases made by others, active participants will have “first right of refusal” before new participants are given opportunity.

Recommendation

- Authorize General Manager to execute Amendment 3

Questions?

Back up slides

Future of Funding & Plan of Finance

State and Federal

State

- \$836M in Prop 1 Funding (\$40.8M Early Funding)

Federal

- WIIN Act – over \$100M committed to date (\$80M appropriation for FY 2022)
- Infrastructure Bill - \$1.15B for western water storage

Participants (Landowners/Districts)

Short Term

- Cash Calls: \$620/AF (2016-2024)
- Possibility of early financing if permitting & water right application are complete

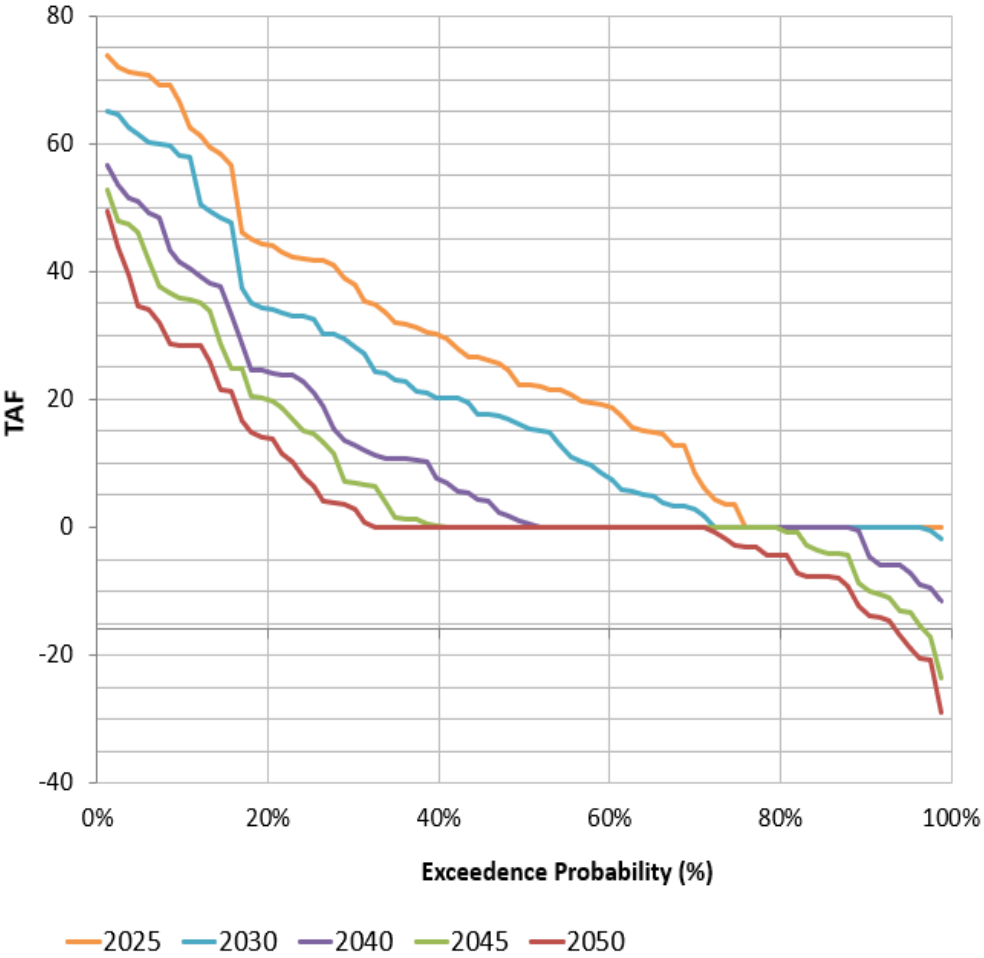
Long Term (Phases 3-5)

- WIFIA Loan (letter of interest submitted, \$600M)
- USDA Loan (\$449M)
- Fixed Rate Bonds
- Pay-Go

Current Facilities w/Active Conservation



Select Demand Years:
2025
2030
2040
2045
2050



Current Facilities without Active Conservation



Select Demand Years:
2025
2030
2040
2045
2050

