SITES Project Overview

Tehama-Colusa Canal

Glenn-Colusa Irrigation District Canal

Proposed Holthouse Reservoir

> Proposed Terminal Regulating Reservoir

2016 July 20 Draft, planning phase concepts

Proposed Sites Reservoir

Why Sites?

If the reservoir operated in 2016:

California NEEDS Sites Reservoir

If constructed, Sites would already have captured some **1,065,000***

acre-feet of water this year

© CA Rice Commission

That's **347billion**

gallons of water



Source: CA Department of Water Resources

*Through May 1

Why SITES is Good for California

- 1. Restore operational flexibility to State's water system
- 2. Achieve the co-equal goals (2009 Delta Reform Act)
- 3. Dedicate water to DFW & SWRCB
- 4. Contribute flows to meet SWRCB's pending actions
- 5. Help mitigate for the effects of climate change
- 6. Contribute to State's renewable energy goals

Benefits of SITES to N. California

1. Job creation

- Construction
- Operations & support recreation

2. Additional water

- Beneficial uses such as agriculture
- Environment & ecosystem for fish and birds

3. Local ownership

- More control over how the water is to be used now and into the future
- More receptive to the needs of the community and landowners

SITES Proposition 1 (Phase 1)

Tehama-Colusa Canal

Glenn-Colusa Irrigation District Canal

Proposed Holthouse Reservoir

> Proposed Terminal Regulating Reservoir

2016 July 20 Draft, planning phase concepts

Proposed Sites Reservoir

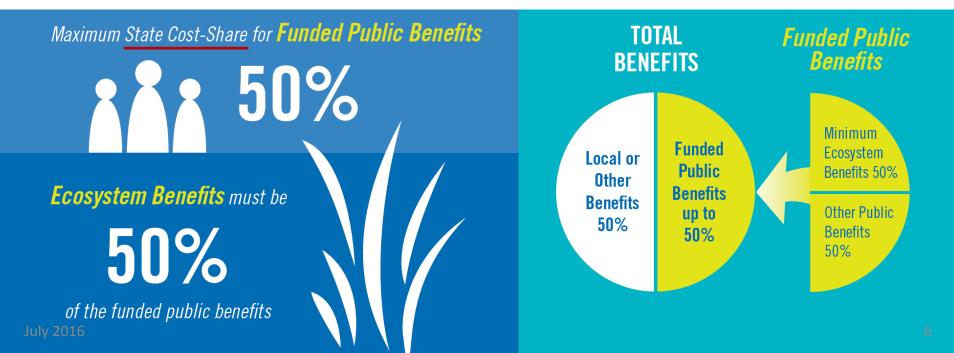
Proposition 1, Chapter 8:

Eligible Projects

- CALFED & Groundwater Storage
- Conjunctive Use and Reservoir Reoperation
- Local and Regional Surface
 Storage

Eligible Public Benefits

Ecosystem Improvement DFW
 Water Quality Improvement SWRCB
 Emergency Response DWR
 Flood Control DWR
 Recreation DWR



Proposition 1, Chapter 8:

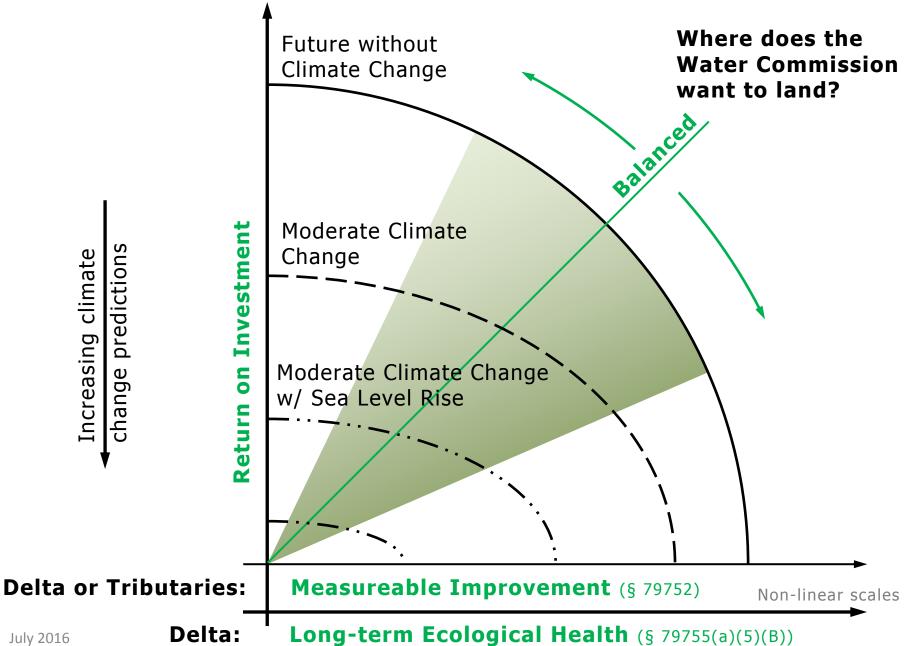
Key Performance Measures:

Priority will be given to projects that *leverage* private, federal, or local funding to produce the greatest public benefit.

§ 79707 (chapter 4)

Funds provided for "public benefits associated with wate storage projects that <i>improve the operation of the state</i>	
<u>water system</u> , are <u>cost effective</u> , and provide a <u>net</u> <u>improvement in ecosystem and water quality conditions</u>	." § 79750(b)
Projects selected "through a competitive public process [ranked by] the [magnitude of the] <i>expected return for</i>	
<u>public investment</u> ."	§ 79759(c)
The project provides " <i>measureable improvement</i> to the <i><u>Delta ecosystem</u> or</i> to <u>tributaries</u> to the Delta"	§ 79752
The project "will advance the long-term objectives of restoring <u>ecological health</u> and improving water management for beneficial uses <u>of the Delta</u> "	§ 79755(a)(5)(B)

Water Commission's Selection Criteria:



SITES Proposed Operations

Tehama-Colusa Canal

Glenn-Colusa Irrigation District Canal

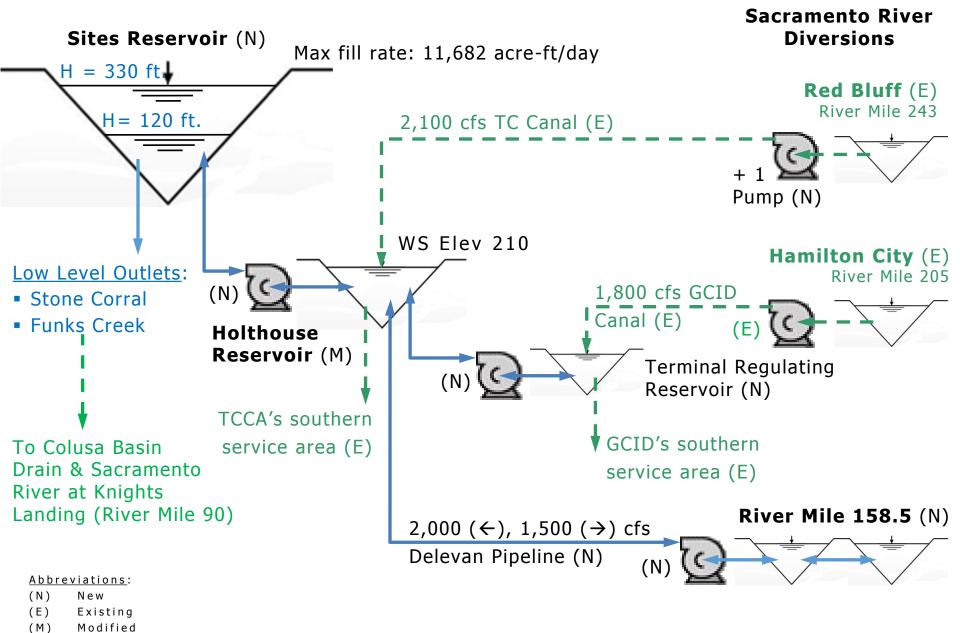
Proposed Holthouse Reservoir

> Proposed Terminal Regulating Reservoir

2016 July 20 Draft, planning phase concepts

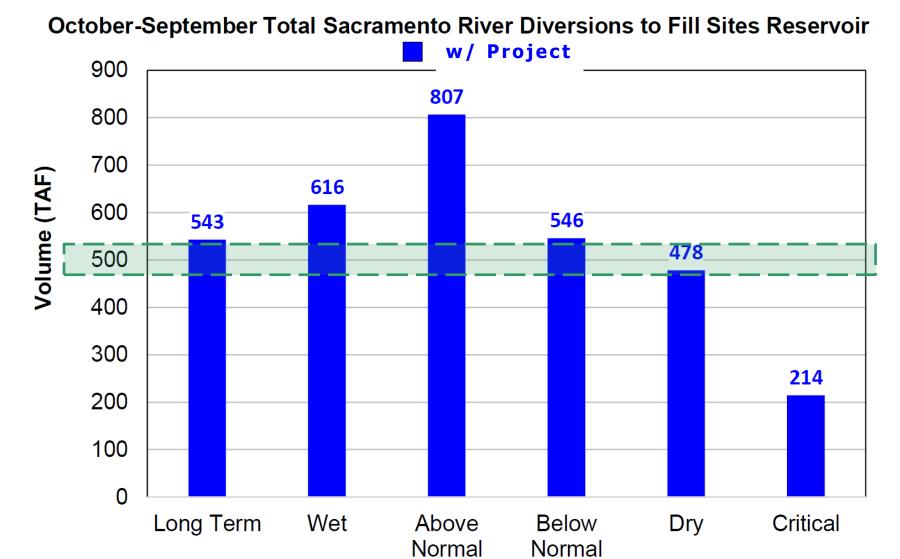
Proposed Sites Reservoir

Schematic

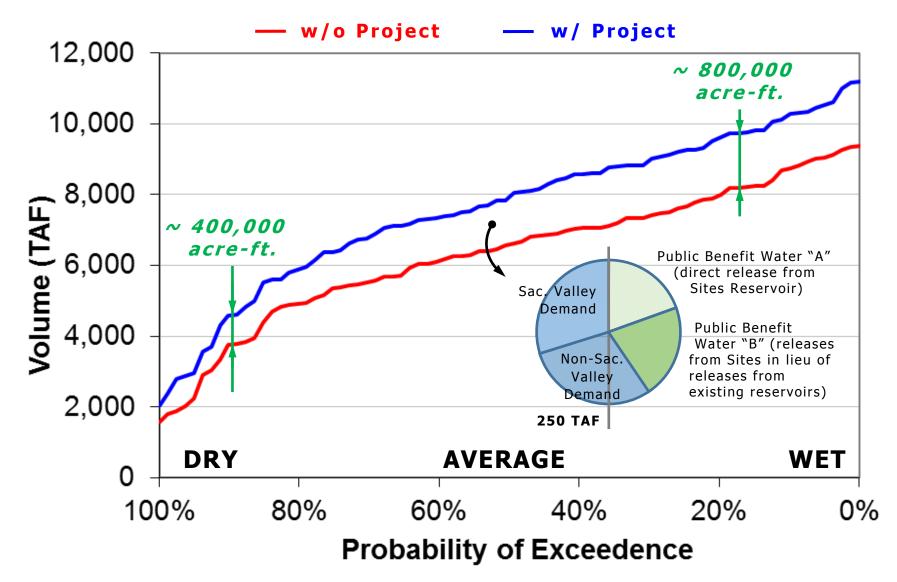


July 2016

Annualized Storage (By Water Year Type)



Water Supply Benefits September Storage (Shasta, Oroville & Sites)



Dry Year Operations:

Average using prior drought periods '28-34, '76-77, '87-92):

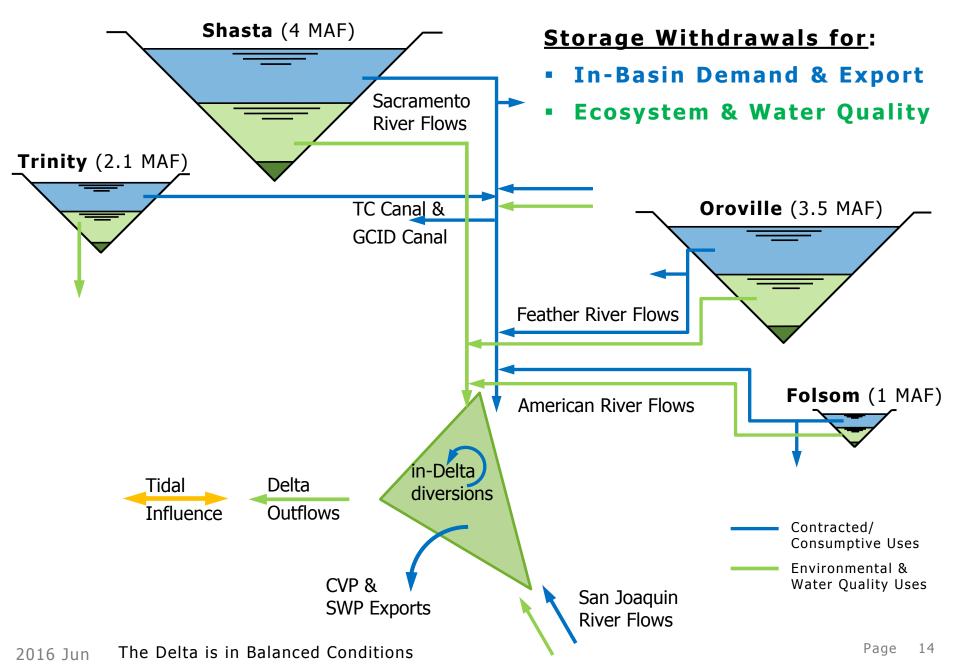
<u>Reservoir</u>	Storage <u>(acre-ft.)</u>	Percent <u>increase</u>	Ecosystem <u>Benefits</u>	
Shasta	240,000	12.1 🔪	Prop 1 Eligible	
Oroville	105,000	7.1	(cold-water pool & Delta Water	
Folsom	37,000	9.6	quality)	
Trinity	79,000	8.5 🔶	Non-Prop 1 (possible Federal)	
<u>Sites</u>	<u> 660,000</u> (*)	←	50% Prop 1 (water quality, ecosystem, & emergency response)	
Total	1,121,000	23.4		

While meeting the existing water quality and flow obligations of the CVP & SWP

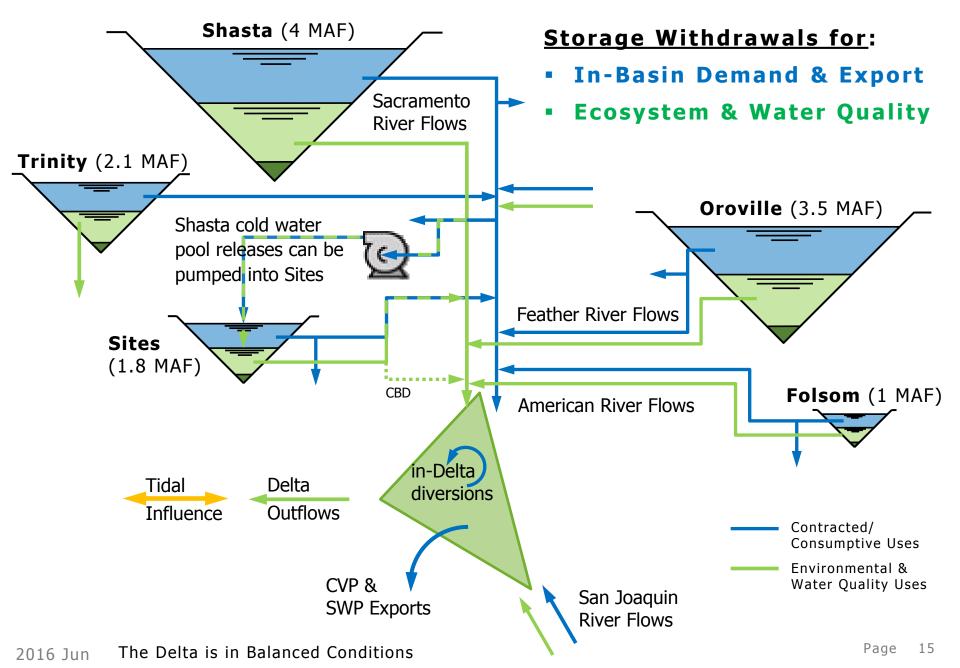
(*) This water is independent of CVP & SWP water contracts

Source: DWR, 2015 FAQ

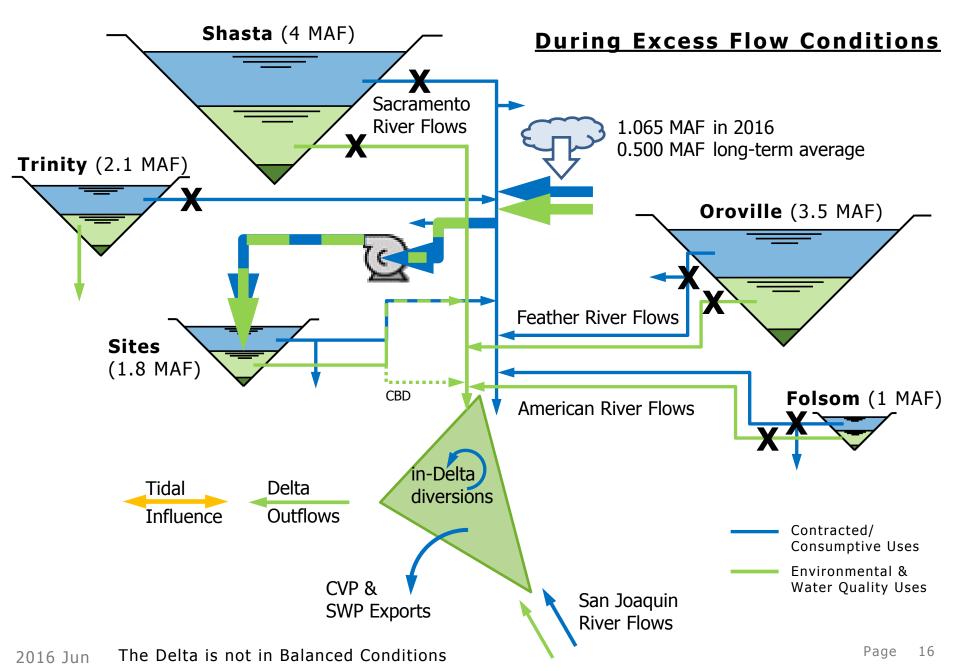
Integrated Operations (Today)

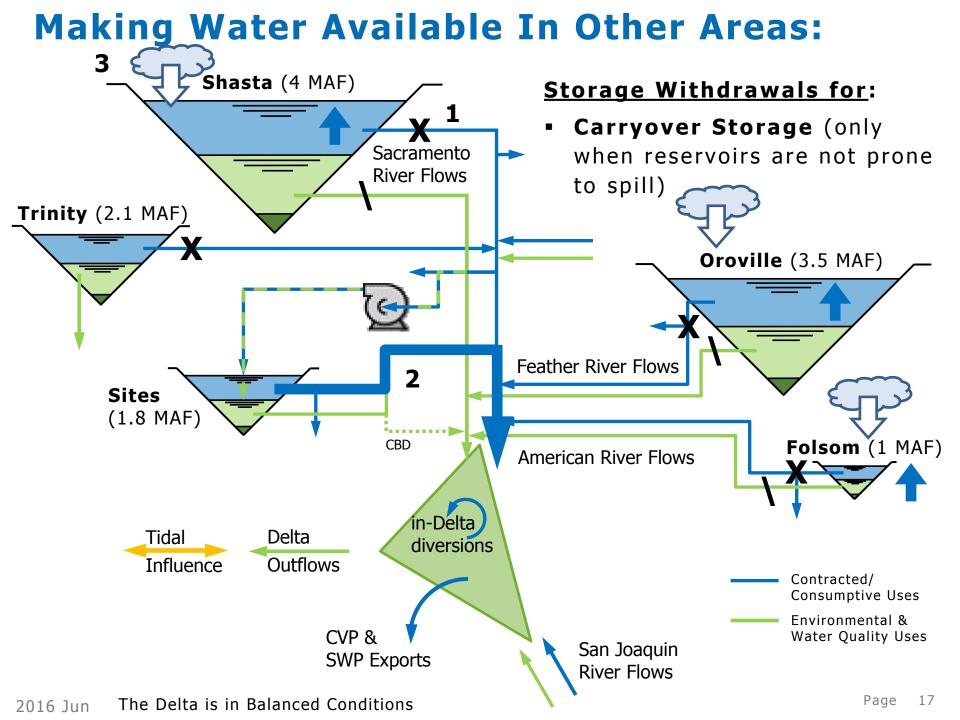


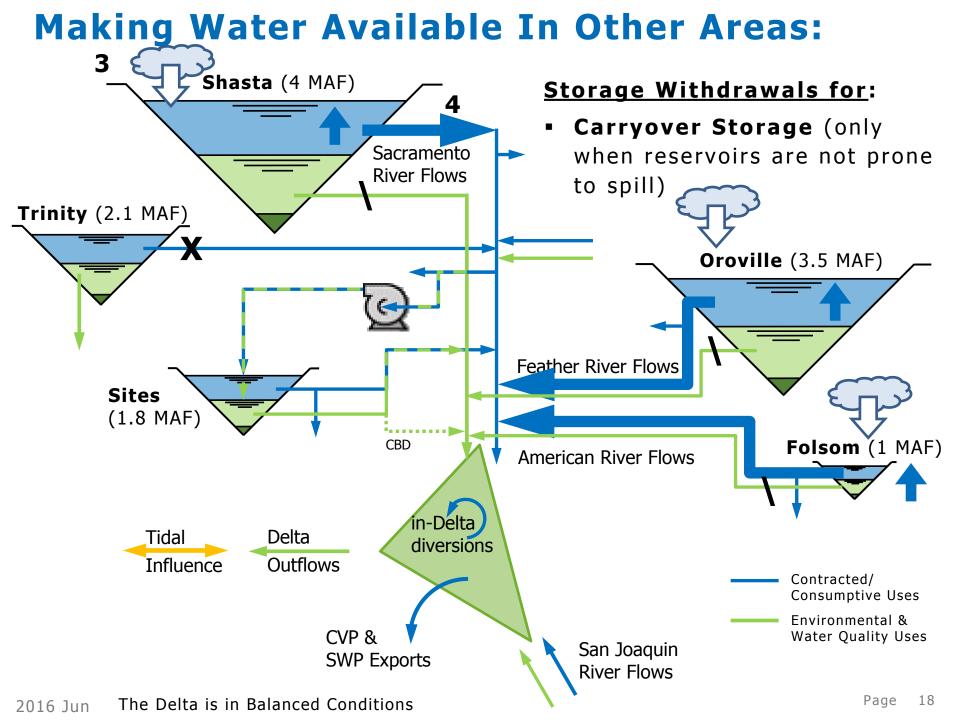
Integrated Operations (Proposed)



Integrated Operations (filling the reservoir)







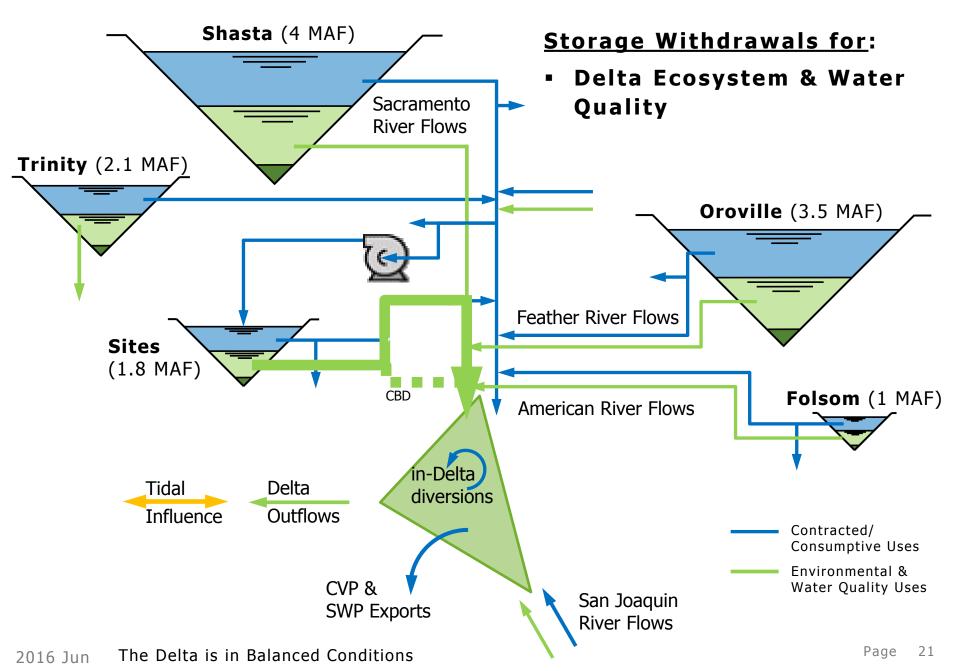
Creating Public Benefits: 3 Shasta (4 MAF) Storage Withdrawals for: Carryover Storage (only Sacramento when reservoirs are not prone **River Flows** to spill) **Trinity** (2.1 MAF) **Oroville** (3.5 MAF) **Feather River Flows** 2 Sites (1.8 MAF) CBD Folsom (1 MAF) American River Flows in-Delta Tidal Delta diversions Outflows Influence Contracted/ Consumptive Uses Environmental & CVP & Water Quality Uses San Joaquin SWP Exports **River Flows**

2016 Jun The Delta is in Balanced Conditions

Creating Public Benefits: 3 Shasta (4 MAF) Storage Withdrawals for: Carryover Storage (only Sacramento when reservoirs are not prone **River Flows** to spill) **Trinity** (2.1 MAF) 4 **Oroville** (3.5 MAF) **Feather River Flows** 2 Sites (1.8 MAF) Folsom (1 MAF) CBD American River Flows in-Delta Tidal Delta diversions Outflows Influence Contracted/ Consumptive Uses Environmental & CVP & Water Quality Uses San Joaquin SWP Exports **River Flows**

2016 Jun The Delta is in Balanced Conditions

Creating Public Benefits:



SITES Project Development

Tehama-Colusa Canal

Glenn-Colusa Irrigation District Canal

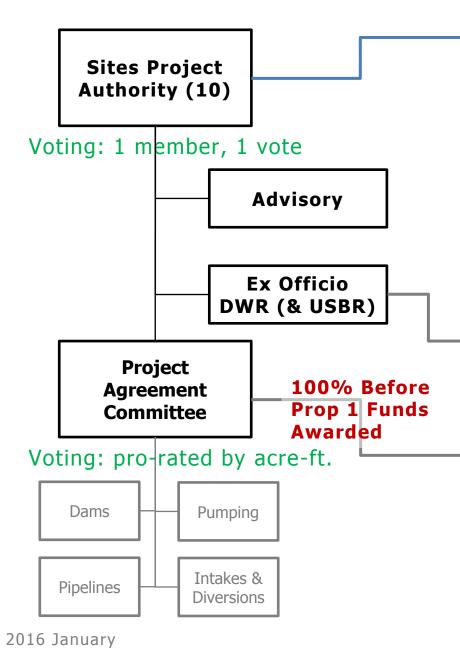
Proposed Holthouse Reservoir

> Proposed Terminal Regulating Reservoir

2016 July 20 Dra<mark>(1)yp2:016</mark>1g phase concepts

Proposed Sites Reservoir

Sites Project Authority & Prop 1, Chapter 8



§ 79759(a): "The funds [] may be provided [] to local joint powers authorities formed by irrigation districts and other local water districts and local governments **within the applicable hydrologic region** to design, acquire, and construct those projects"

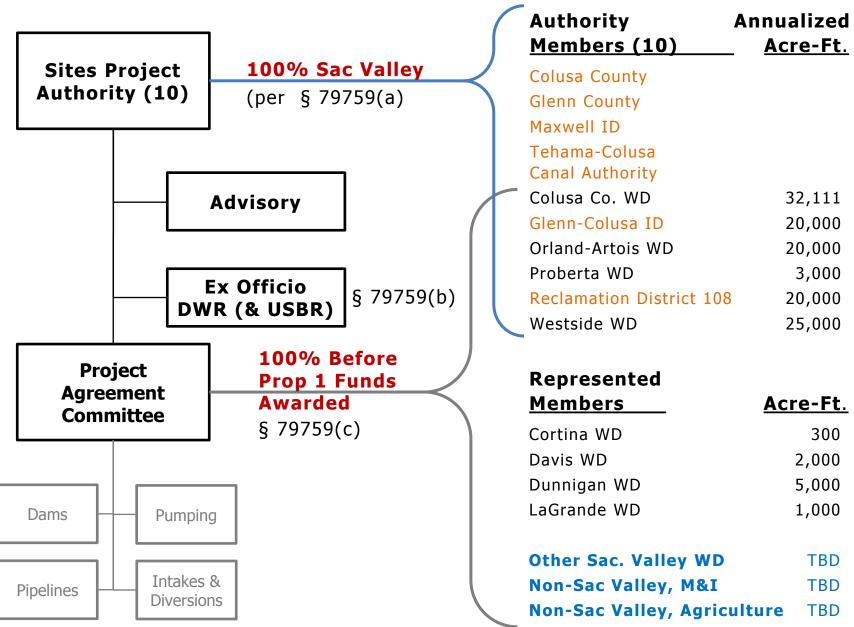
§ 79759(b): JPA "**shall not include** in their membership any **for-profit corporation** or any mutual water company whose shareholders and members include a for-profit corporation or any other private entity."

§ 79759(b): "[T]he department shall not control the governance, management, or operation of the surface water storage projects"

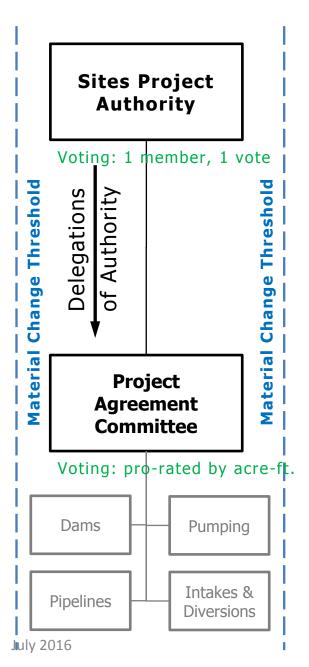
§ 79759(b): "The joint powers authorities [] may include in their membership governmental partners that are **not located within their respective hydrologic regions** in financing the surface storage projects"

23

Governance:



Decision Making:



Approach:

- Sites Project Authority: Chartering Document and Bylaws
- Project Agreement Committee: Bylaws and compliance with terms and conditions of the Project Agreement (delegated by the Sites Project Authority).

Material Change Categories:

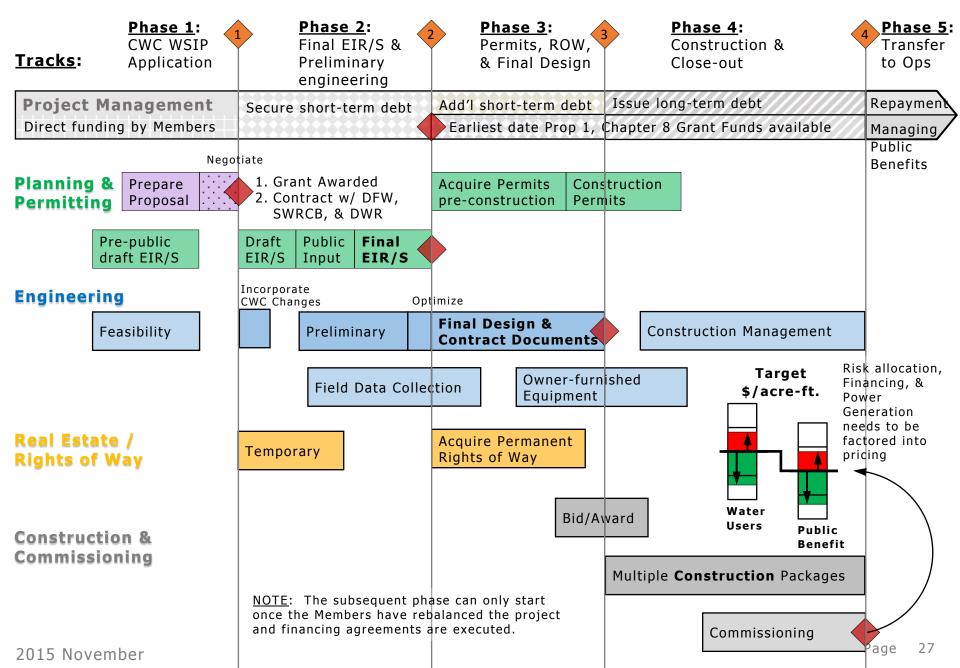
- Prop 1 eligibility
- Changes in scope, schedule &/or cost
- Changes in facility performance or reliability
- Change in power or generation
- Shifting of significant risk
- Changes to water rights and/or annualized yield
- Compliance with laws & regulations (e.g. dam safety)
- Changes in environmental mitigation or compliance obligations.

Our Values:

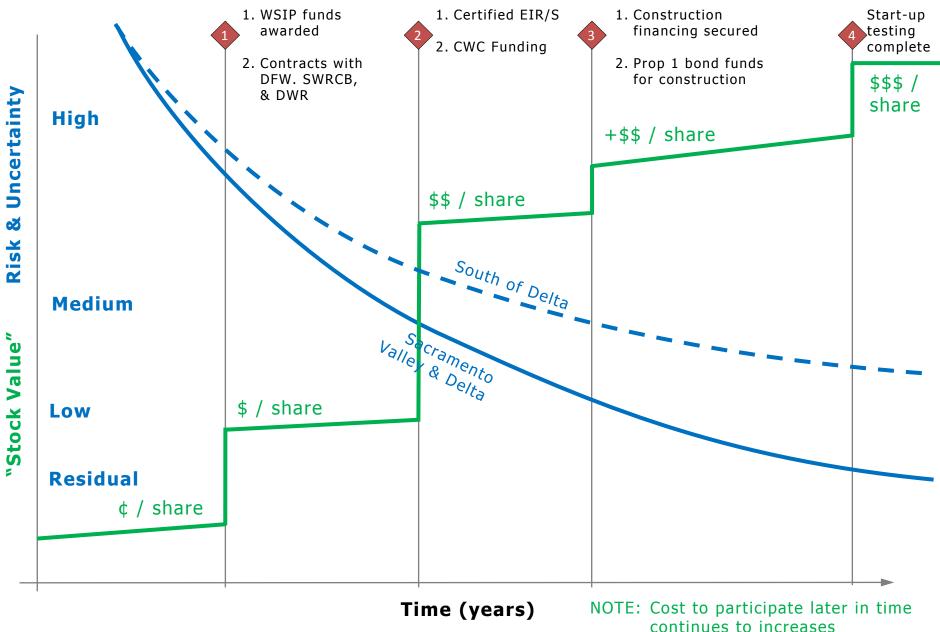
- a. Transact all business in an open and honest manner
- b. Communicate effectively
- c. Build trust and confidence both internally and externally
- d. Be a respectful community partner
- e. Make decision that are fiscally prudent with a focus on creating value
- f. Utilize best-in-class processes and procedures

Source: Executed Phase 1 Reservoir Project Agreement, page 2

Phase Schedule:



Project's Risk & Uncertainty vs. Value:

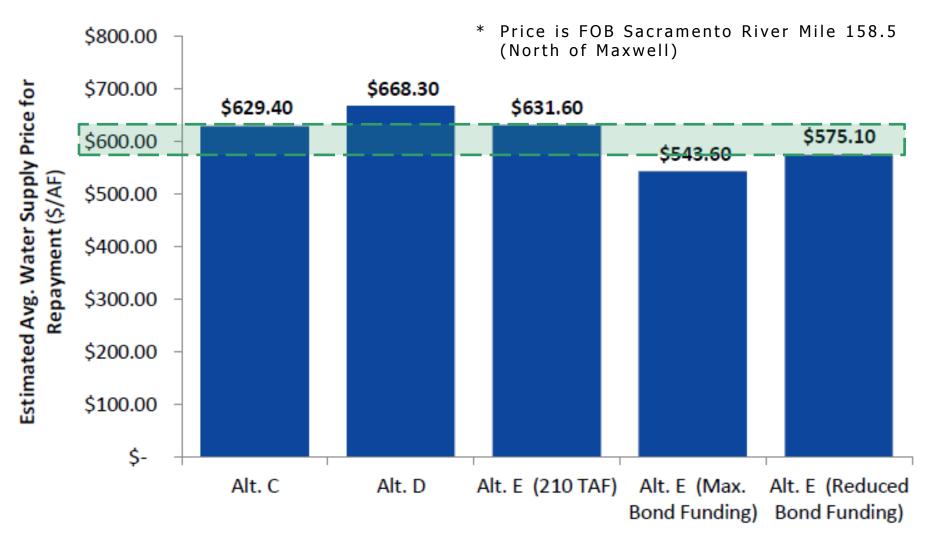


Range of Project Development Costs

Reservoirs and Dams:	\$1.B-	\$1.7B
Pumping and Generating Plants:	\$1.B-	\$1.5B
Pipelines:	\$1.B -	\$1.2 B
Total:	\$3.B-	\$4.4 B
 Escalated to 2015 dollars 		

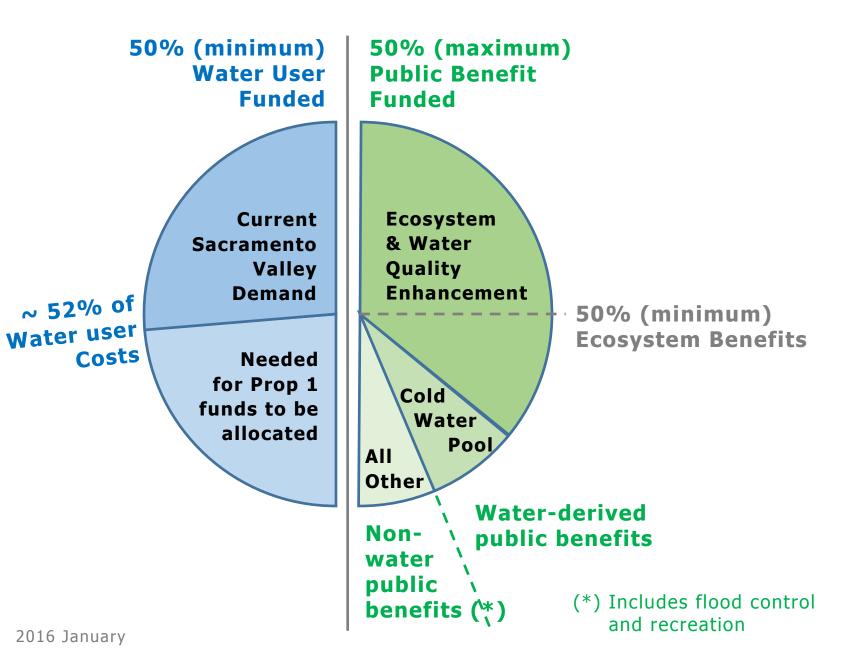
- w/o finance cost
- Includes contingency

Costs/acre-ft: (with financing)



NOTE: RIFIA could reduce finance costs over \$100/acre-ft. (requires congressional approval)

Capital Cost Allocation:



Page 31

Yield-Based Allocation (Public Benefits)



- WYT Water Year Type
- W Wet
- AN Above Normal
- BN Below Normal
- D Dry
- C Critical

Base Scenario 1

Dedicated "B": W, AN, & BN WYT

Dedicated "A": all WYT, including back-toback dry or critical WYT (highest value water)

Annual "A": W, AN, & BN WYT (based on carryover & hydrology)

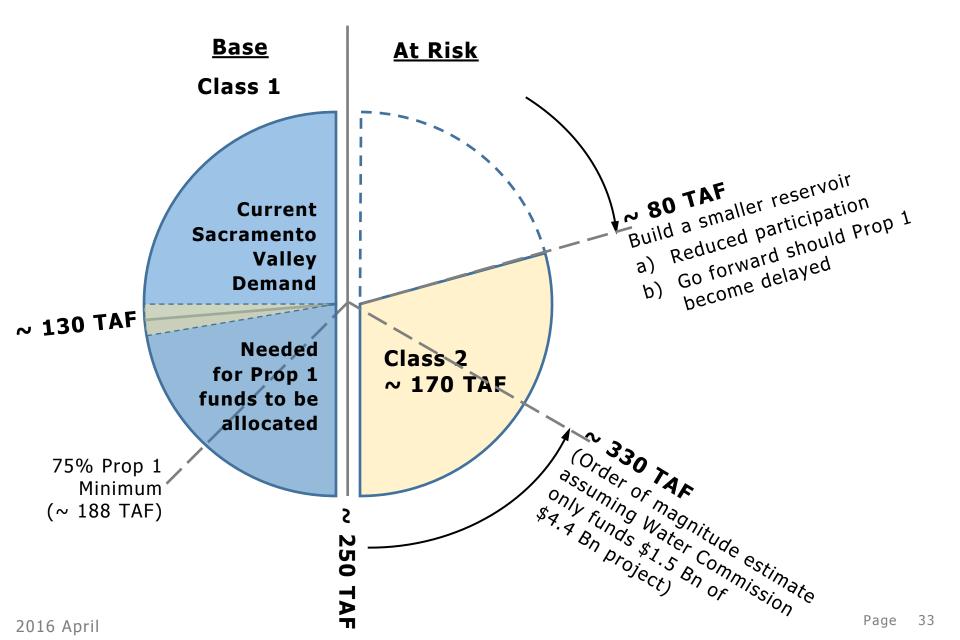
Annual "B": Generate revenue for other ecosystem benefits (e.g. habitat) *after providing a public benefit* (e.g. water quality)

Annual "C": To cover public benefit share of (a) annual O&M (pumping) & (b) Adaptive Management & Monitoring costs *after providing a public benefit* (e.g. cold water pool)

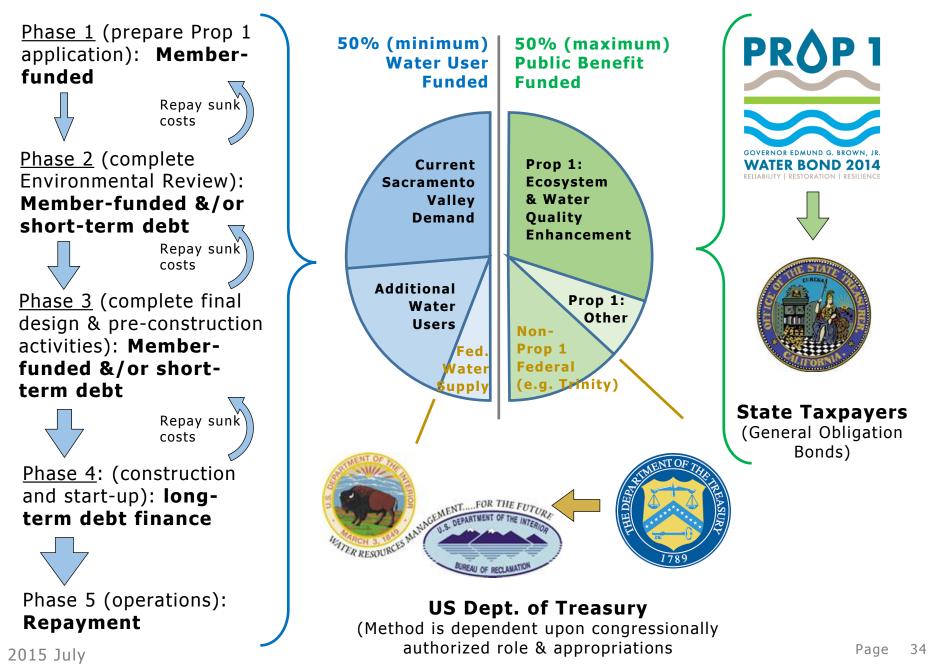
Carryover "A" & "B": Available for multiple uses, including the creation of a 'pool' available for infrequent emergency response events.

Federal Benefits which are non-Prop 1 eligible (e.g. Trinity river, refuge supplies, additional cold water pool for dry and critical years until Shasta enlargement is completed, refuges)

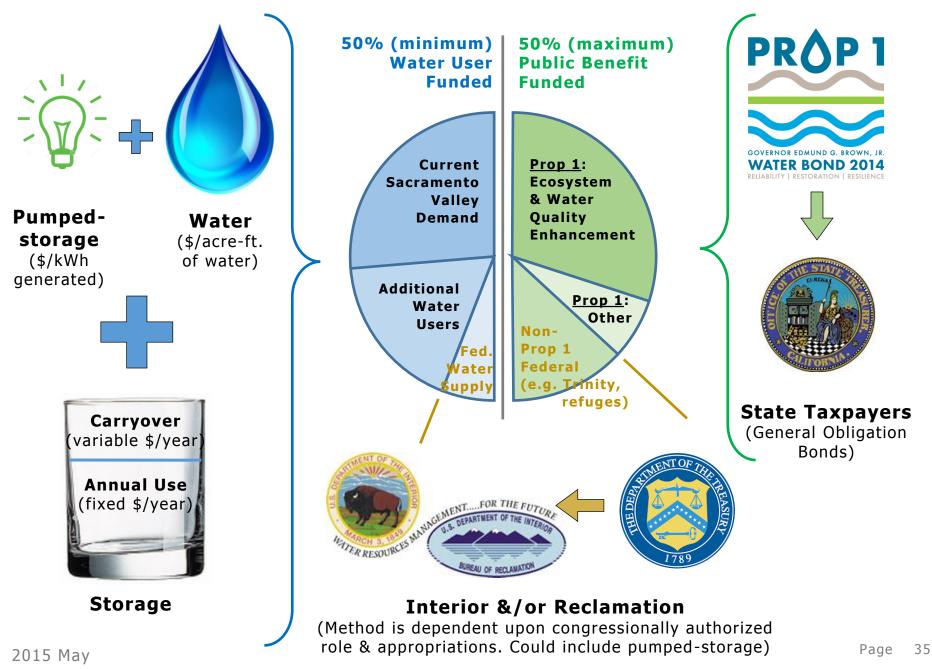
Yield-Based Allocation: (Water Users)



Financing: (with Federal Participation)



Repayment: (with Federal Participation)



What Potential New Members Need to Know

- 1. Membership information is available on: <u>www.SitesJPA.net</u>
- 2. July 29 is the closing date to become a member for Phase 1
- 3. Prop 1 limits participation
 - Authority Members are required to be within the Sacramento Valley Hydrologic Region
 - Specific Limitations apply to for-profit corporations
- 4. Additional questions, please call me: (530) 410-8250