

NORTH-OF-THE-DELTA ***OFFSTREAM STORAGE*** Assembly Water, Parks and Wildlife Committee

December 4, 2013



Sites Reservoir

NODOS as a case study in public and non-public benefits

Outline

- Background
- Measuring Benefits
- Allocation of Costs
- Financing



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Caveats:

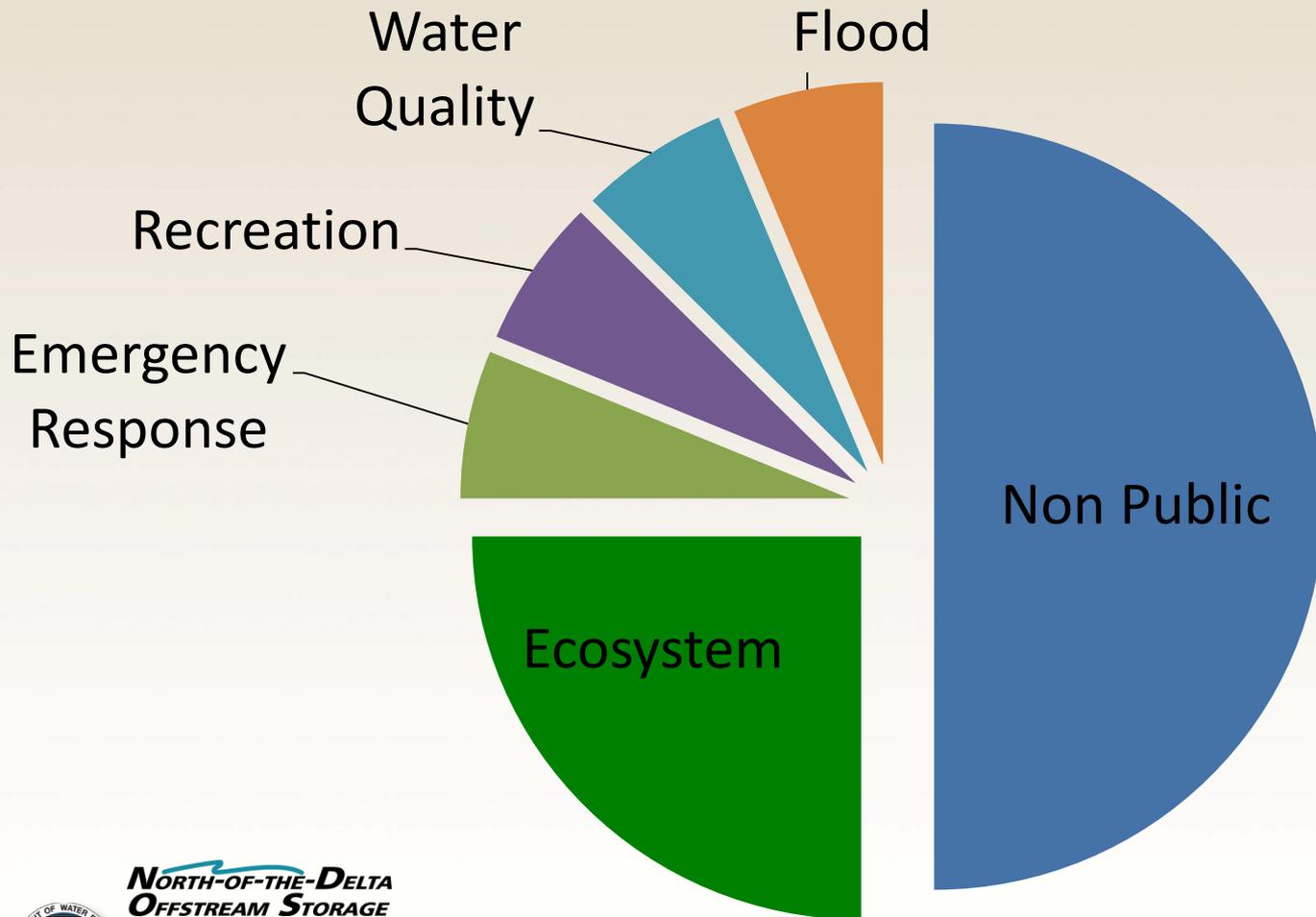
- Preliminary
- Subject to revision



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Proposed Water Bond - Requirements



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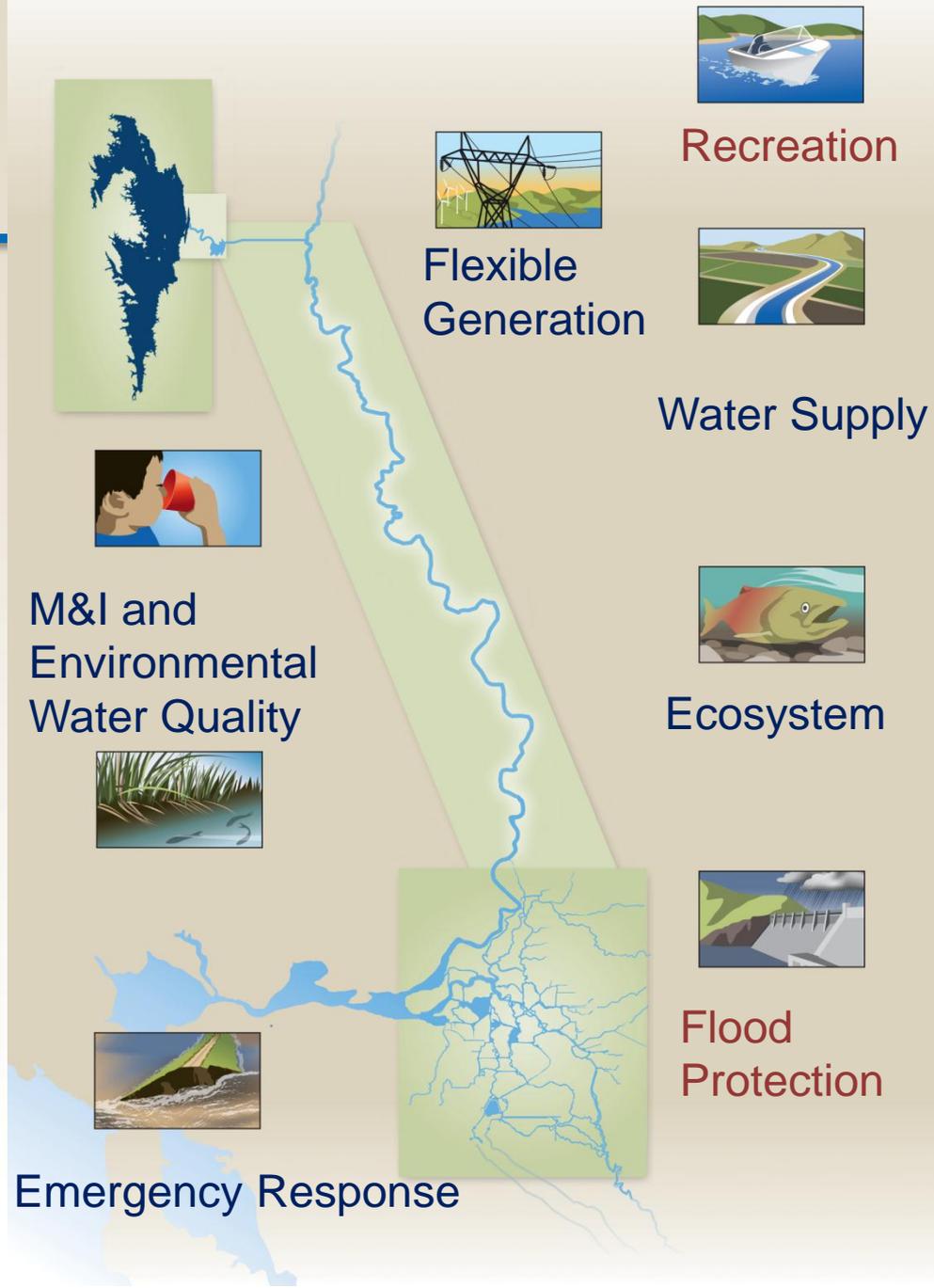


NODOS Objectives

Primary Objectives

and

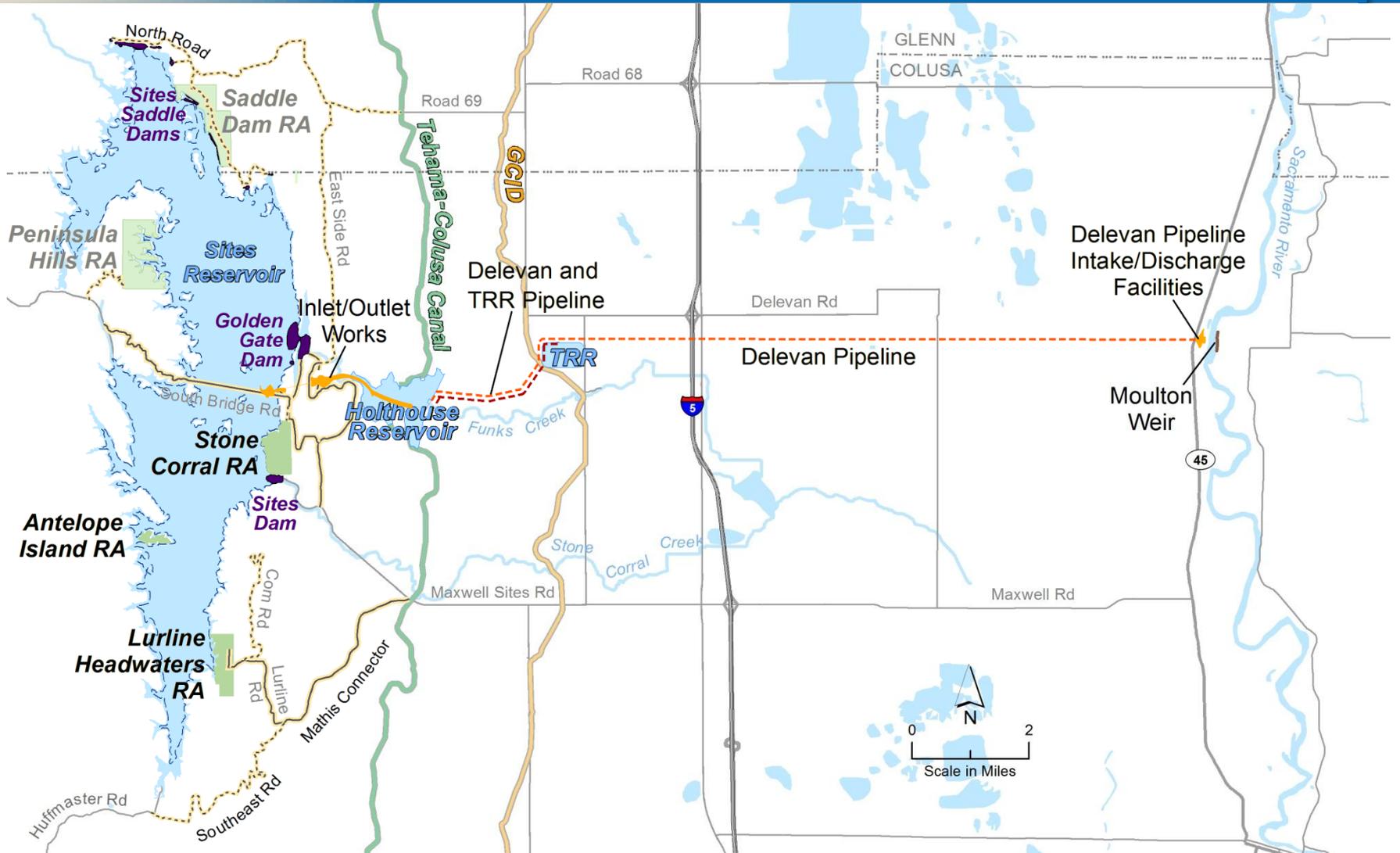
Secondary Objectives



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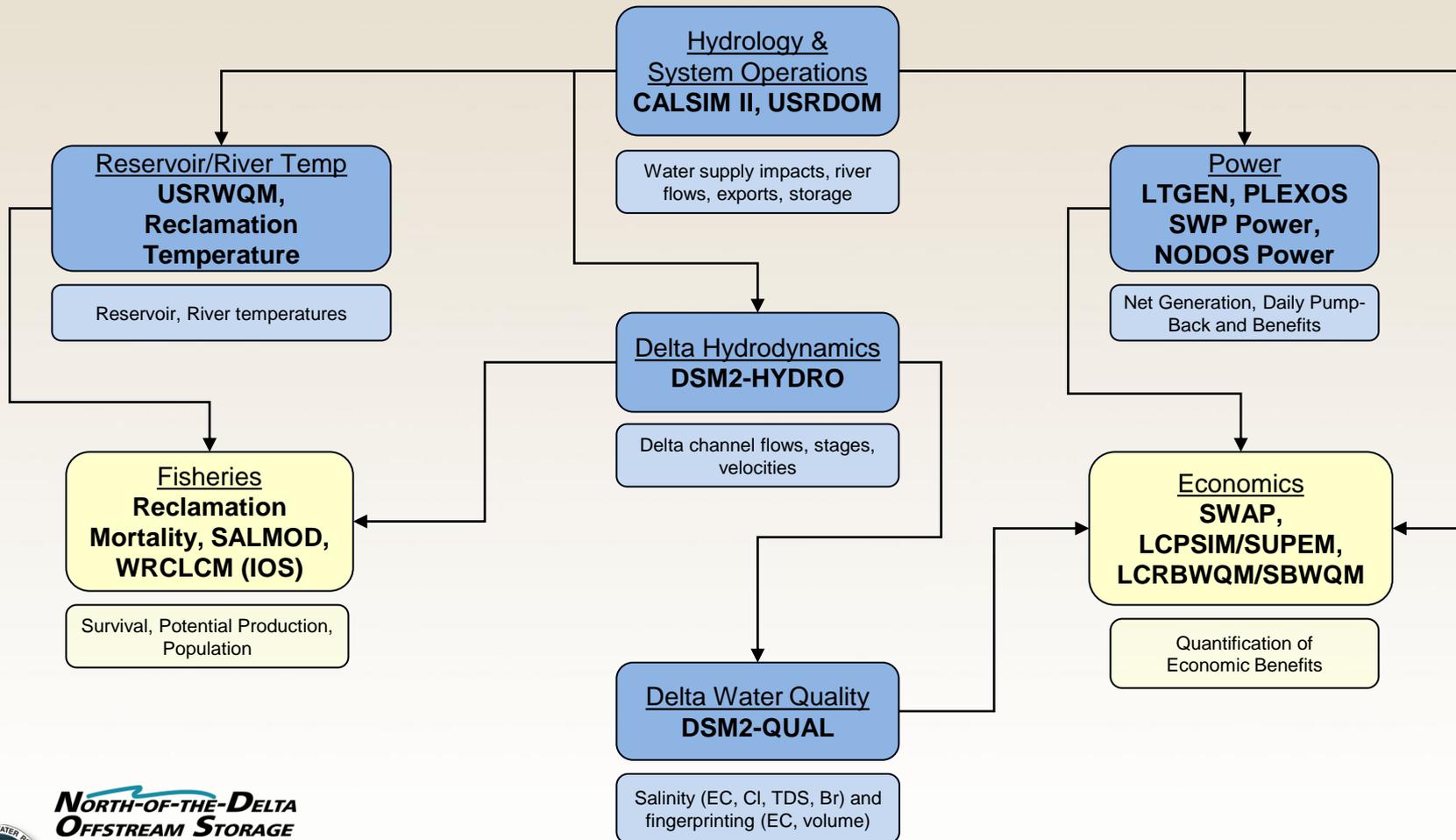
Proposed Sites Reservoir Elements



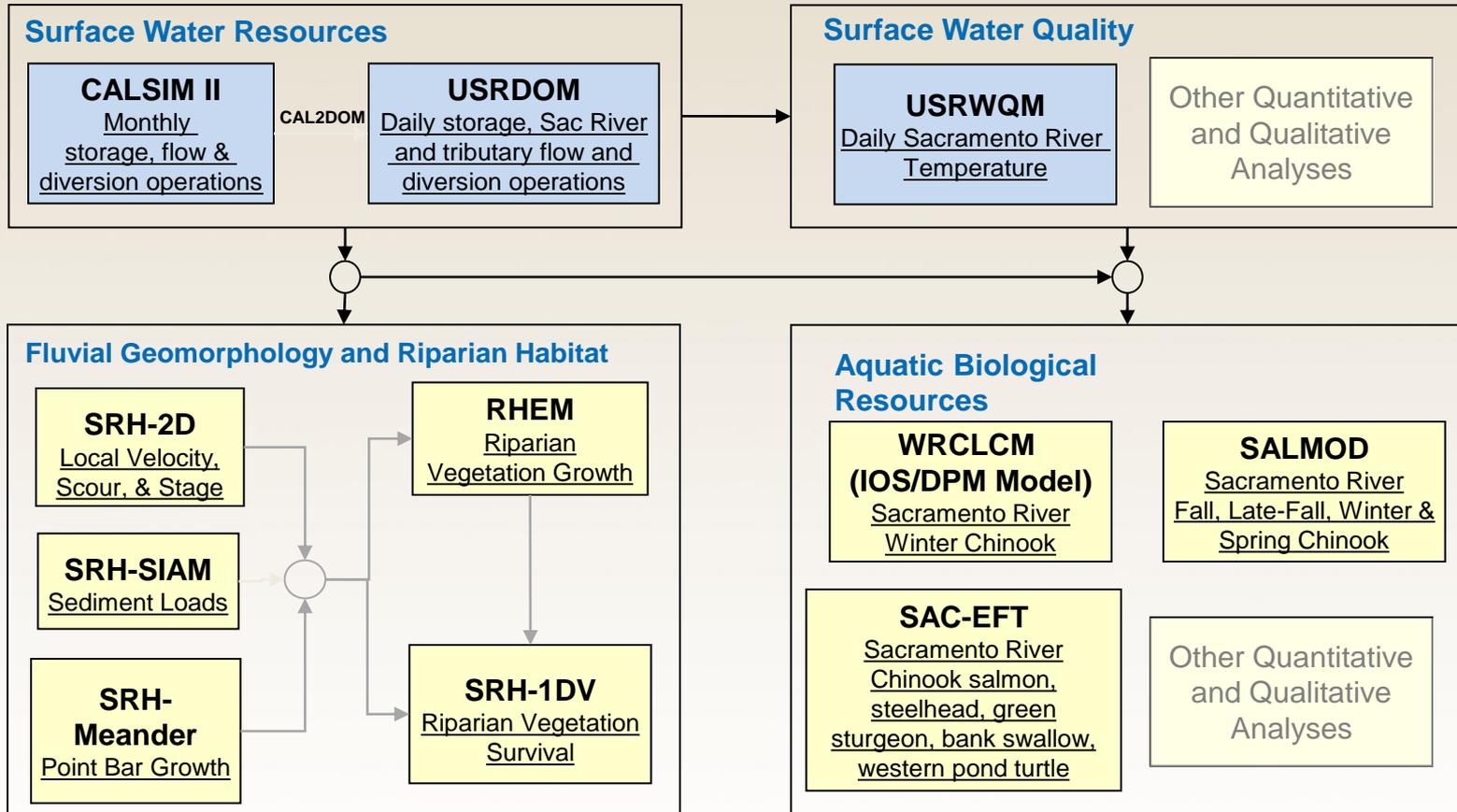
How: Proposed Reservoir Operations

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Fill Reservoir	Orange	Orange	Orange	Light Orange	Light Orange	Light Orange				Light Orange	Orange	Orange
Drain Reservoir												
SWP						Light Purple	Dark Blue	Dark Blue	Light Purple	Light Purple		
Wildlife Refuges									Dark Blue	Dark Blue	Dark Blue	
CVP					Light Purple	Dark Blue	Dark Blue	Dark Blue	Light Purple	Light Purple		
Augment Delta Water Quality							Dark Red	Dark Red	Dark Red	Dark Red	Dark Red	Light Pink
Hydropower					Light Green	Dark Green	Dark Green	Dark Green	Dark Green	Dark Green	Light Green	Light Green

Methods: System-Wide Benefits



Methods: Local Benefits

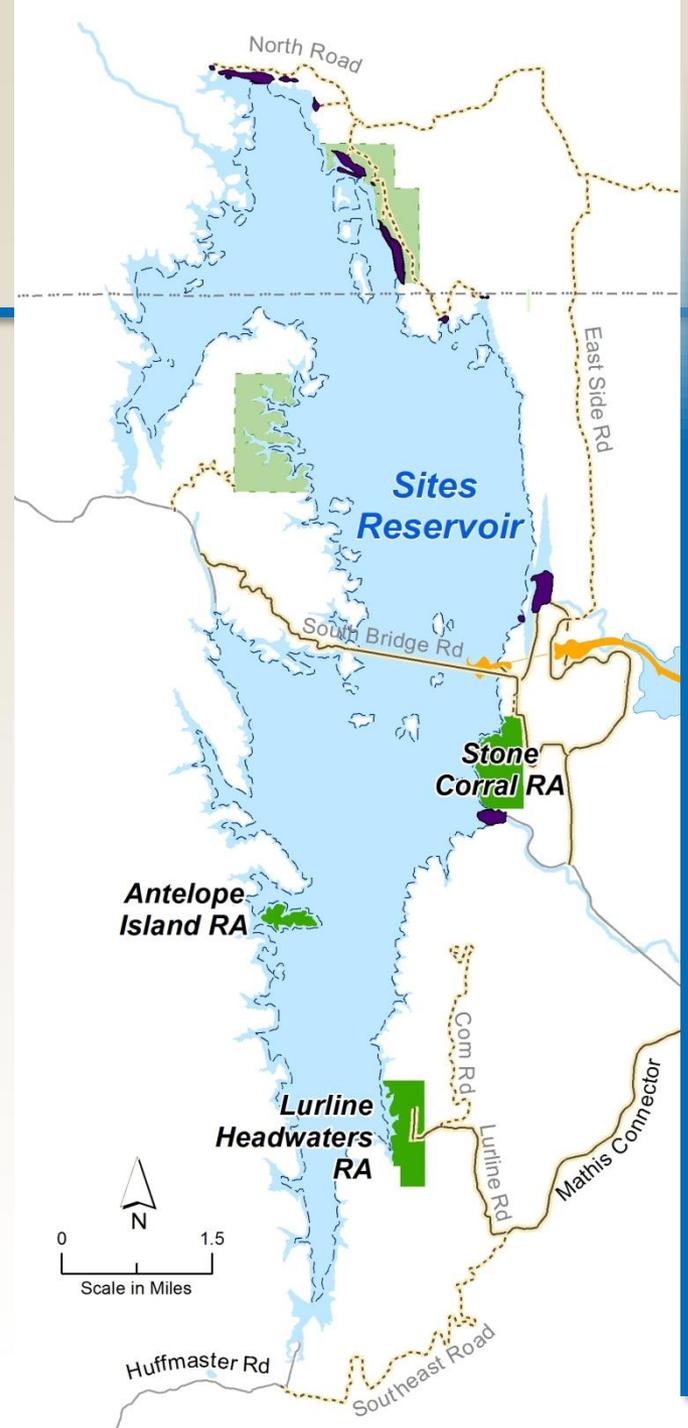


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Recreation

- Two potential recreation sites
- Potentially improves lake levels at existing reservoirs



Flood Protection

Flood damage reduction in project vicinity
(up to 8,600 acres)



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Potential Contribution to Hydropower Generation



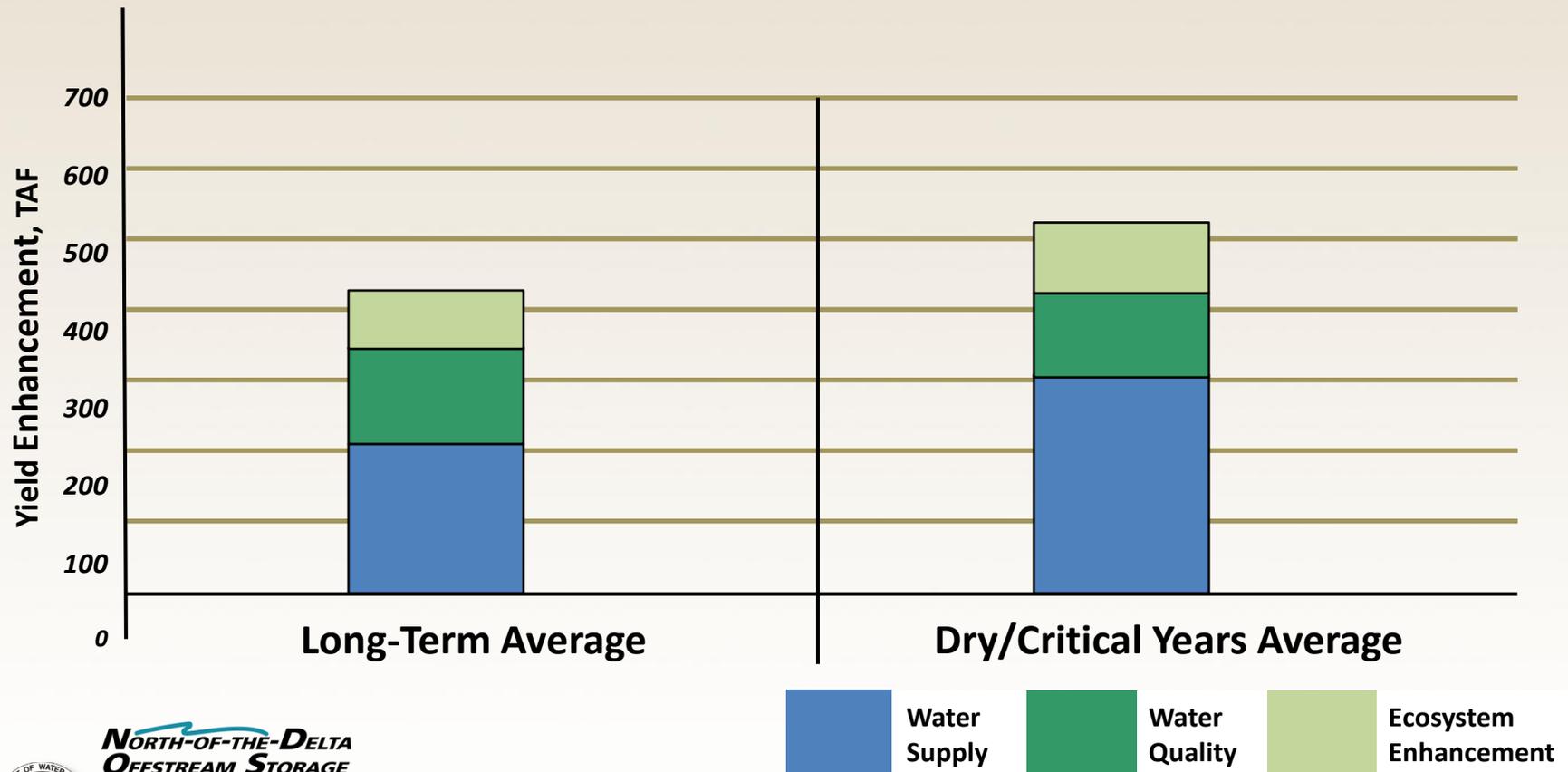
- Potentially generates up to 125 MW of new hydropower through pump-back facilities
- Could be quickly ramped up or down to complement other renewable energy sources

PHOTO: DWR. CASTAIC

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Average Annual Yield of Sites



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Water
Supply



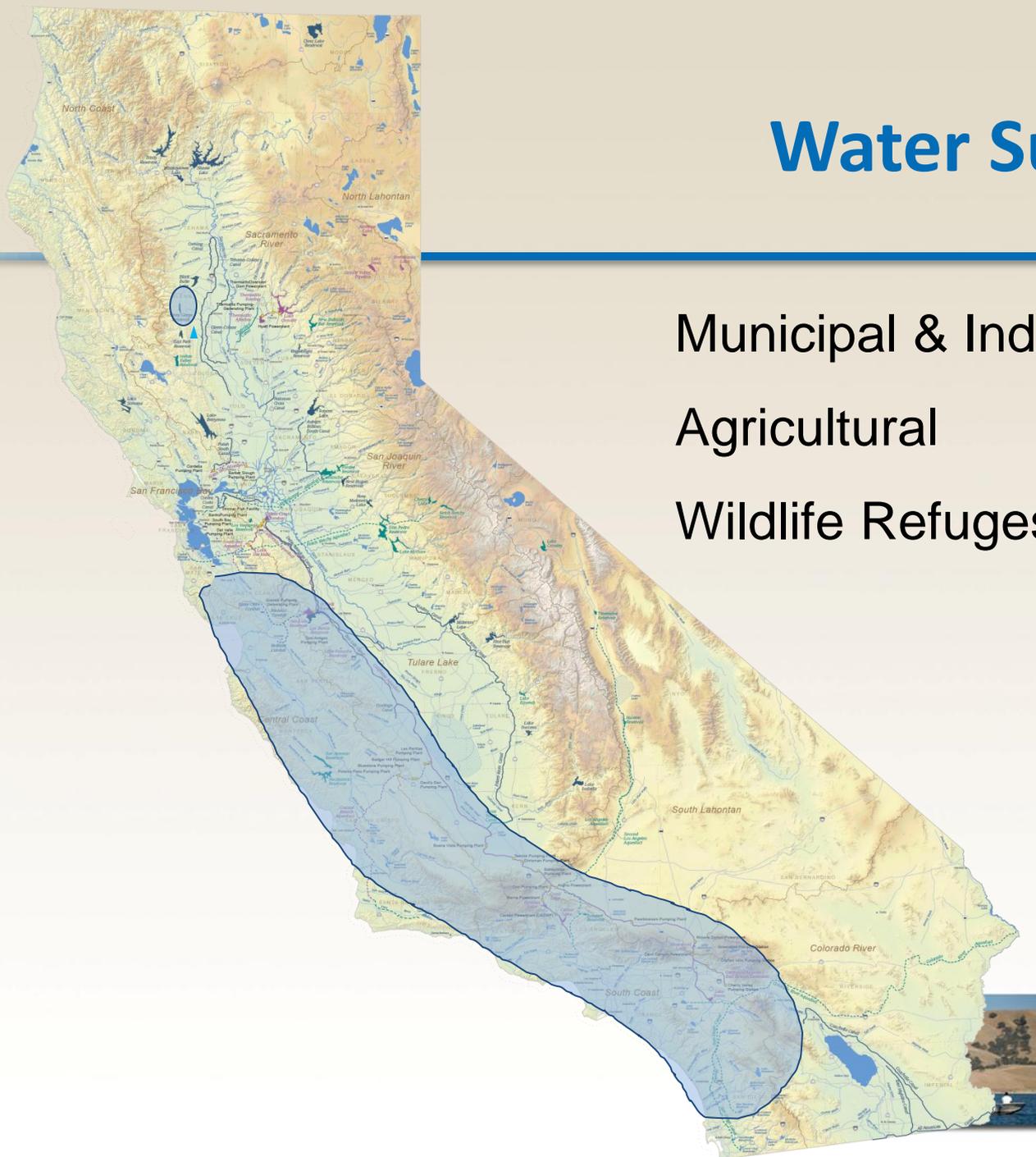
Water
Quality



Ecosystem
Enhancement

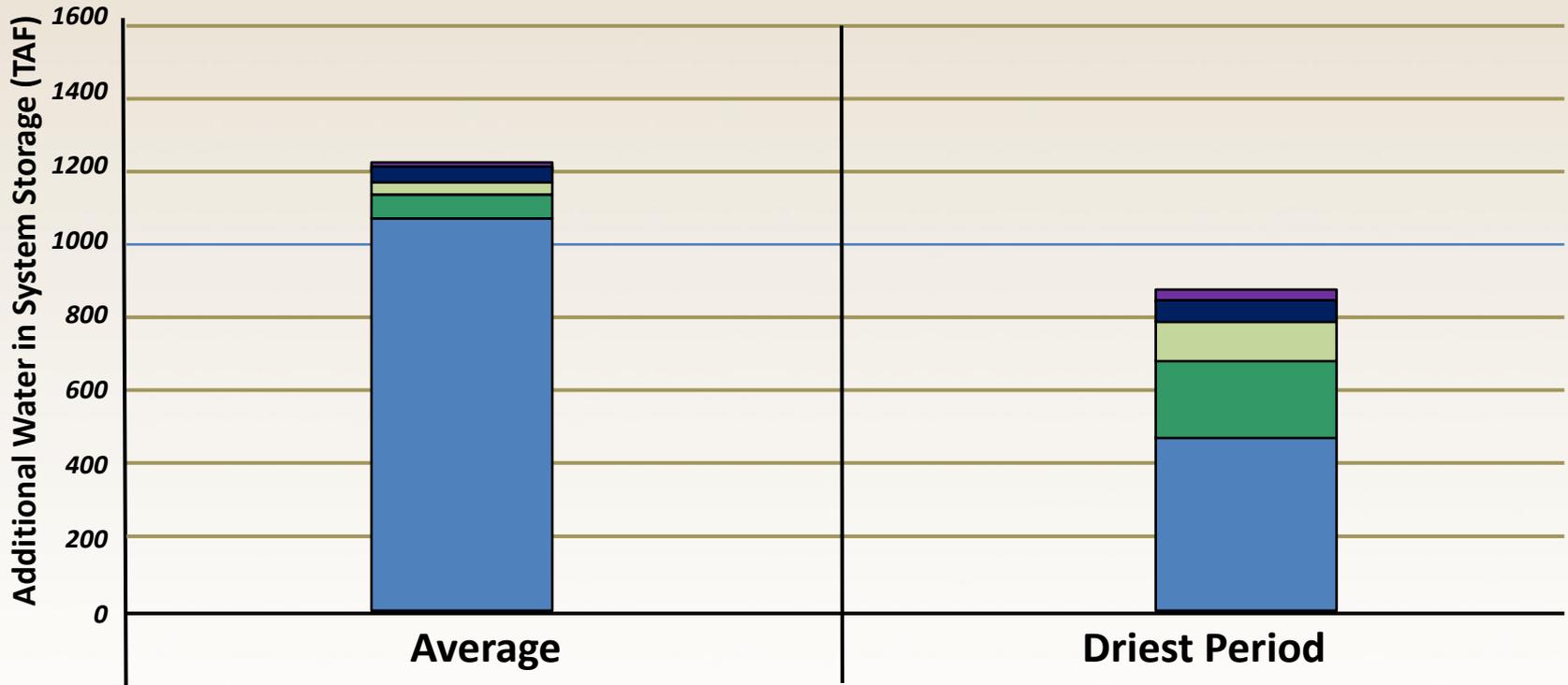
Water Supply

Municipal & Industrial
Agricultural
Wildlife Refuges



System Flexibility and Emergency Response

Additional Water in System Storage

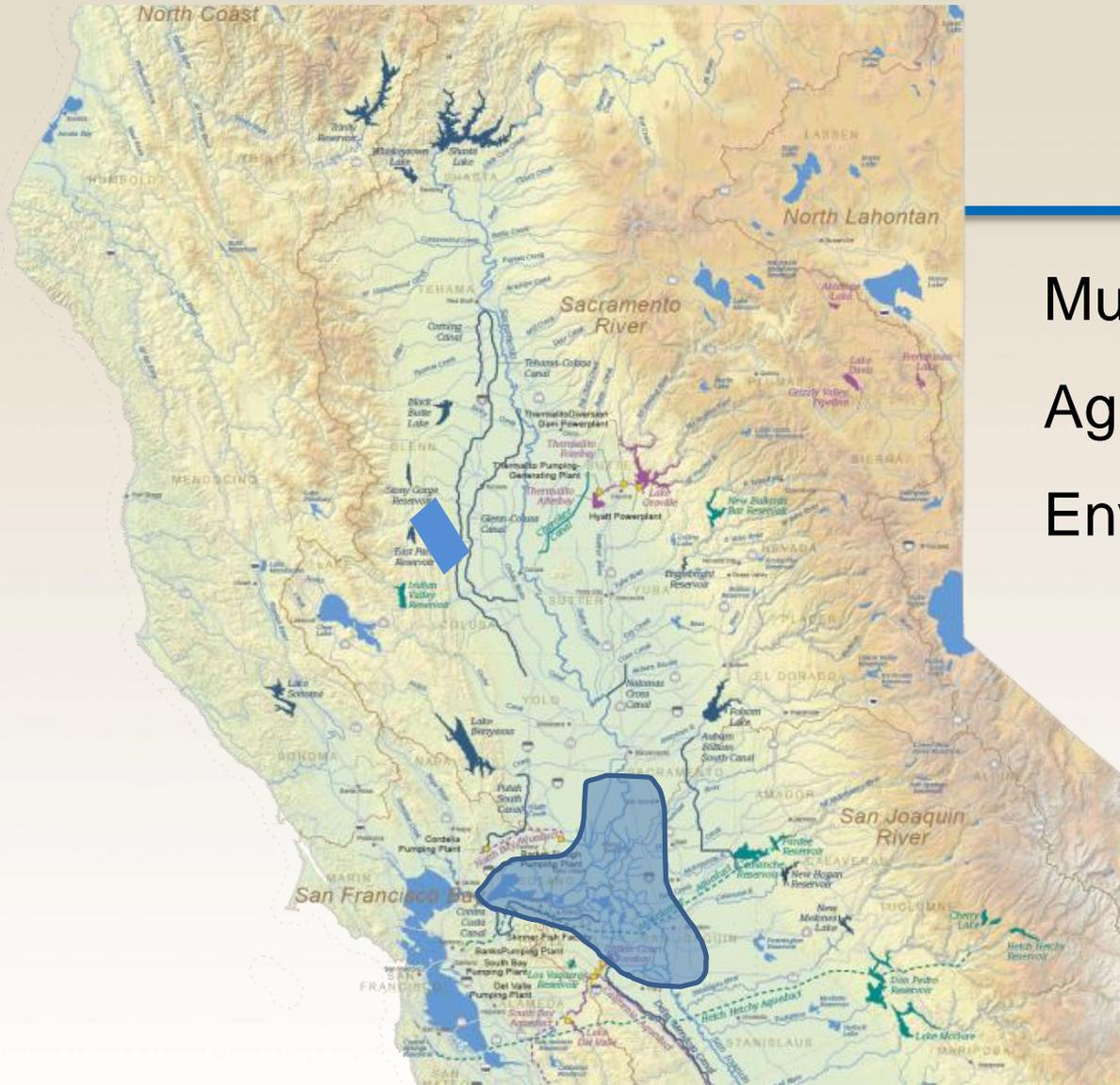


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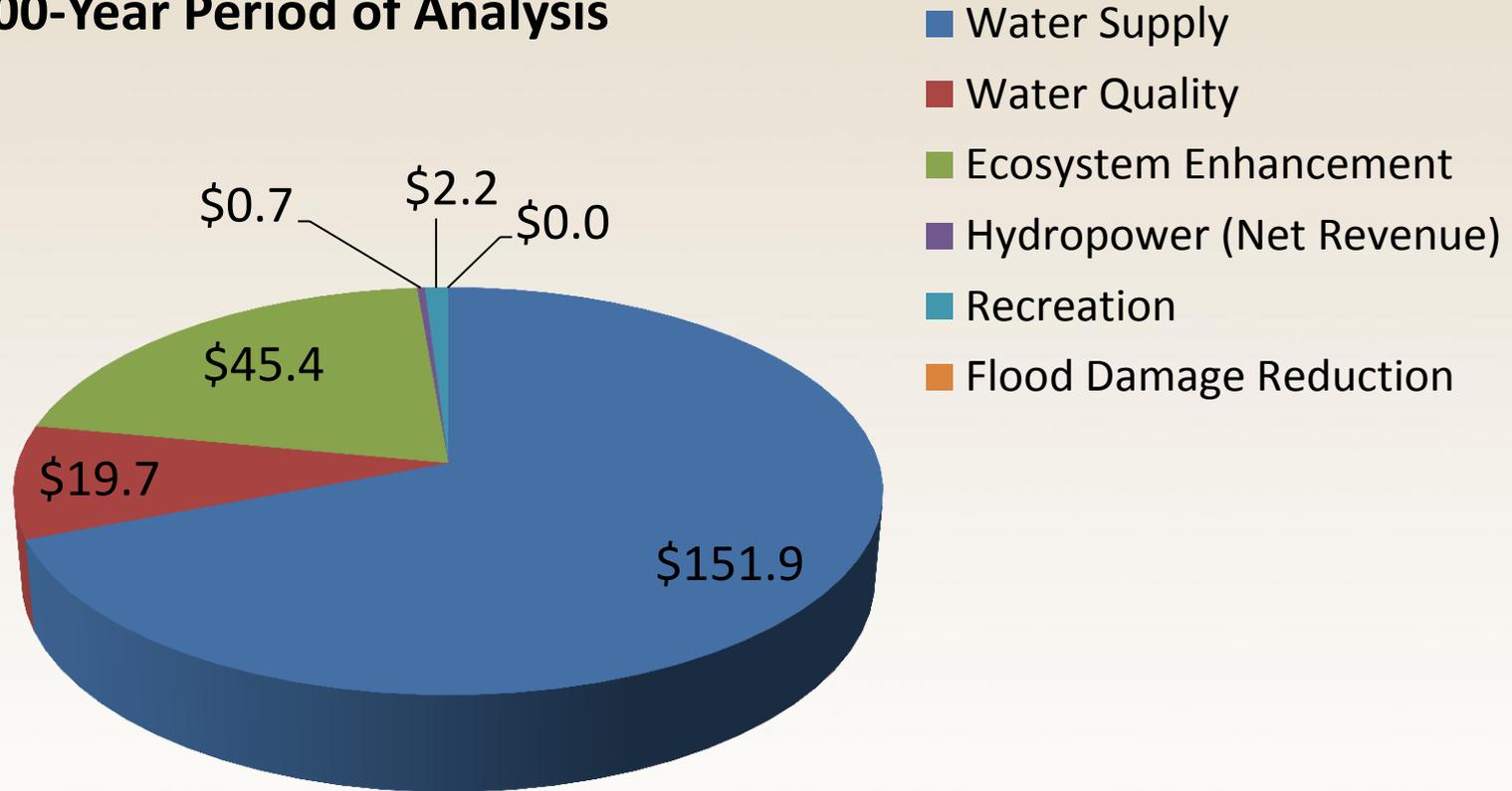
Water Quality

Municipal & Industrial
Agricultural
Environmental – X2



Estimated Federal Annual Benefits

100-Year Period of Analysis



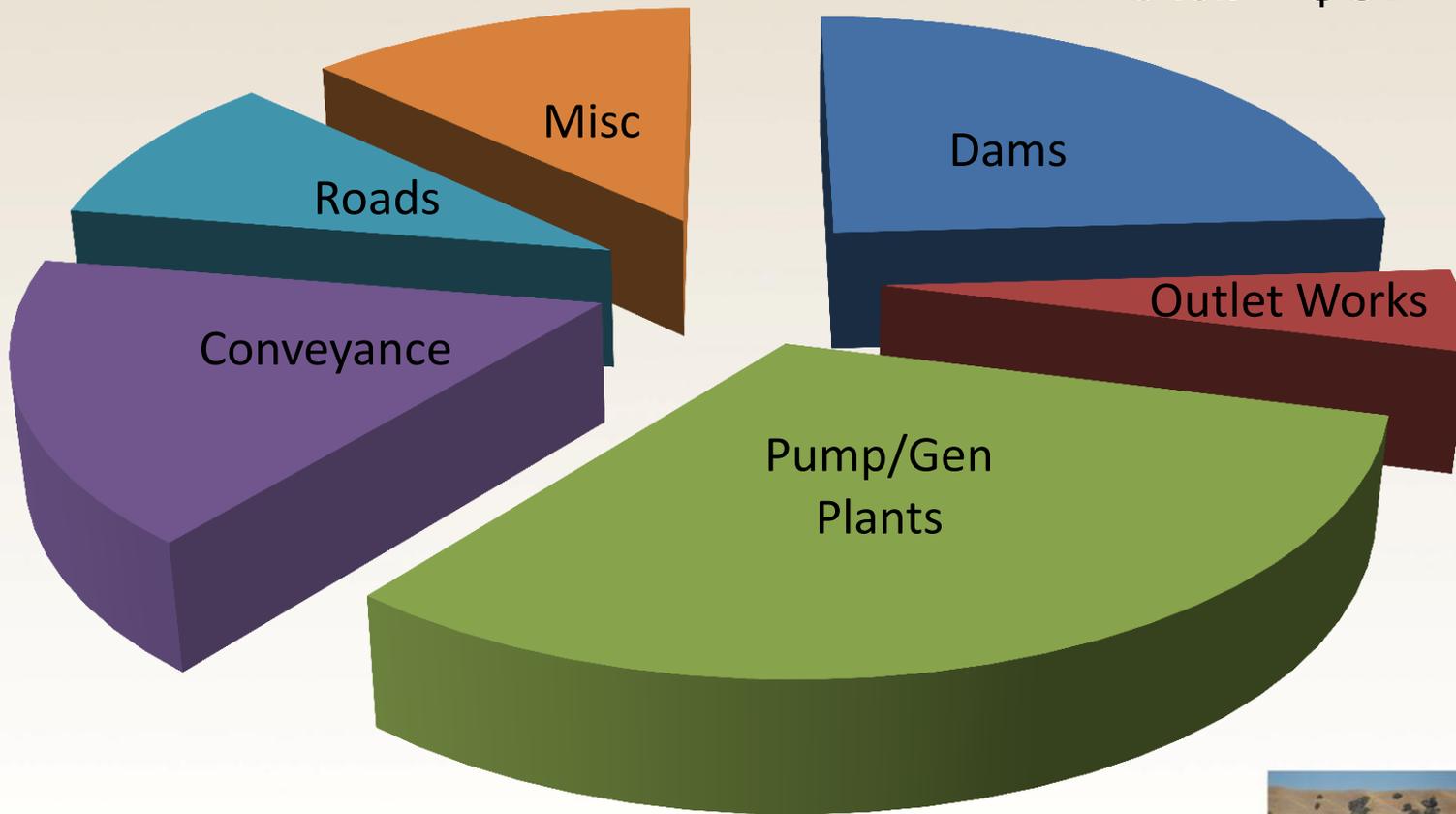
Values in \$millions

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Preliminary Proposed Project Costs

Total: \$3.4 Billion



Public and Non-Public Share

Benefit Type	Percentage Allocation	Public Allocation	Non-Public Allocation
Water Supply	53.4%		53.4%
Water Quality	11.0%	11.0%	
Ecosystem	31.9%	31.9%	
Hydropower	2.5%		2.5%
Recreation	1.2%	1.2%	
Flood Reduction	0.0%	0.0%	
TOTAL		44.1%	55.9%

Potential Bond request \$1.449 M

Note: Ecosystem is 72.3% of Public Benefits



Potential Funding Partners

	State Water Bond	Federal	CVP Contractors	SWP Contractors	Power Utility
Water Supply					
M&I SWP				Green	
Ag CVP			Green		
Ag SWP				Green	
Water Quality					
M&I SWP	Light Green			Green	
Ag CVP	Light Green		Green		
Ag SWP	Light Green			Green	
Ecosystem	Light Green	Blue			
Recreation	Light Green	Blue			
Power					Purple
Flood	Light Green	Blue			
Emergency Storage	Light Green				

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Purpose

Sites Joint Powers Authority

Established in 2010



Sites Joint Powers Authority (JPA)

- Authorized under Section Water Code 79749(a).
 - The purpose of JPA is to establish a public entity to design, acquire, manage and operate Sites Reservoir and related facilities to improve the operation of the state's water system and provide improvements in ecosystem and water quality conditions the Sacramento River system and in the Bay-Delta as well as provide flood control and other benefits for the State of California.
- Senate (Feinstein) also proposing similar language in current Appropriations Bill



JPA Members

- Glenn County
- Colusa County
- Glenn-Colusa Irrigation District
- Tehama Colusa Canal Authority
- Reclamation District 108
- Maxwell Irrigation District
- Yolo County Flood Control and Water Conservation District
- DWR – no voting member



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2013 Actions and Engagement

- Conduct Public Outreach and Information
- Address Affordability & Funding Options
- Identify Beneficiaries and Cost/Benefit Evaluation
- Project Construction Cost Evaluation



Conduct Public Outreach and Information

- Cooperating with DWR and Center for Collaborative Policy
- Focused Outreach to Stakeholders
 - Landowners - Project Footprint
 - Counties – Road relocation, bridge, Recreation Areas
 - Sac Valley Region – Districts, Counties, IWRMP's
 - NGO's – aquatic and terrestrial goals
- JPA not limited by state/federal pre-decisional concerns
- Outreach could true-up EIR/EIS to improve formal public review process and comments

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Address Affordability

- Financial Feasibility vs. Affordability
- Economics (benefits to costs) vs. Repayment (is there a customer base)
- Pooled Benefits and Repayment or value discounting?
- How will the public share be funded?
 - Water Bond, capital or annual payments?
 - Valuing Public Benefits, are or science?
- How will the non-public share be funded + terms?
 - Federal Authorization and Budget
 - WIFIA
 - Equity/Bond Market



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Identify beneficiaries and cost/benefit evaluation

- “What will I get, and what will it cost me?”
- How do I finance my share? Local bonding or Project bonding?
- How does Sites perform without and with BDCP?
 - Without BDCP, operations provide dry and critical year water supply.
 - With BDCP, could meet new outflow requirements and water supply reliability
- How do we value reoperation benefits?
- JPA developing a financial modeling tool to evaluate different funding and payment scenarios

Project Construction Cost evaluation

- Conducting a new capital cost study for Sites - current costs indexed for inflation
- Cost of Construction at \$972M and 12 years -need to expedite construction schedule, timing of capital purchases
- JPA updates due out in January 2014



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Contacts:

Thad Bettner

Glen Colusa Irrigation District

P.O. Box

Willows, CA 95988

530.934.8881 office

tbettner@gcid.net

Jeff Sutton

P.O. Box 1025

Willows, CA 95988

530.301.1030

jsutton@tccanal.com

Project Websites:

www.sitesjpa.net

www.storage.water.ca.gov/northdelta/index.cfm

www.usbr.gov/mp/nodos/index.html

Fritz Durst

530.304.5111

Fritz.durst@gmail.com



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