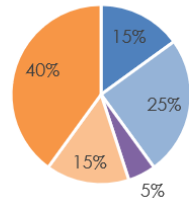


Overview of the District's Water Infrastructure, Capital Improvement Program, Flood Protection Projects, and Current/Future Water Supply Planning

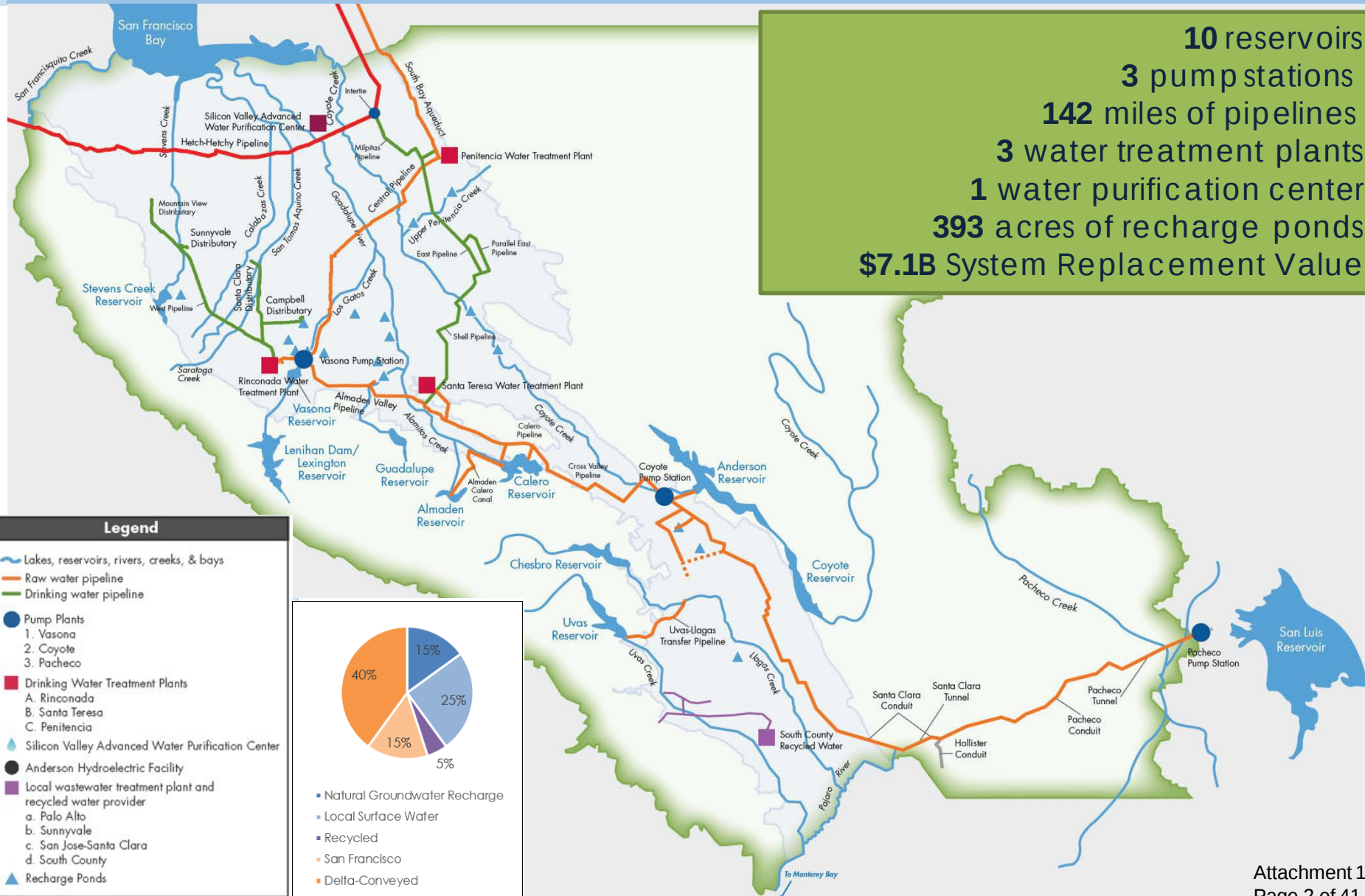
Special Meeting with City of Santa Clara – September 5, 2018

A comprehensive, flexible water system

10 reservoirs
3 pump stations
142 miles of pipelines
3 water treatment plants
1 water purification center
393 acres of recharge ponds
\$7.1B System Replacement Value



- Natural Groundwater Recharge
- Local Surface Water
- Recycled
- San Francisco
- Delta-Conveyed

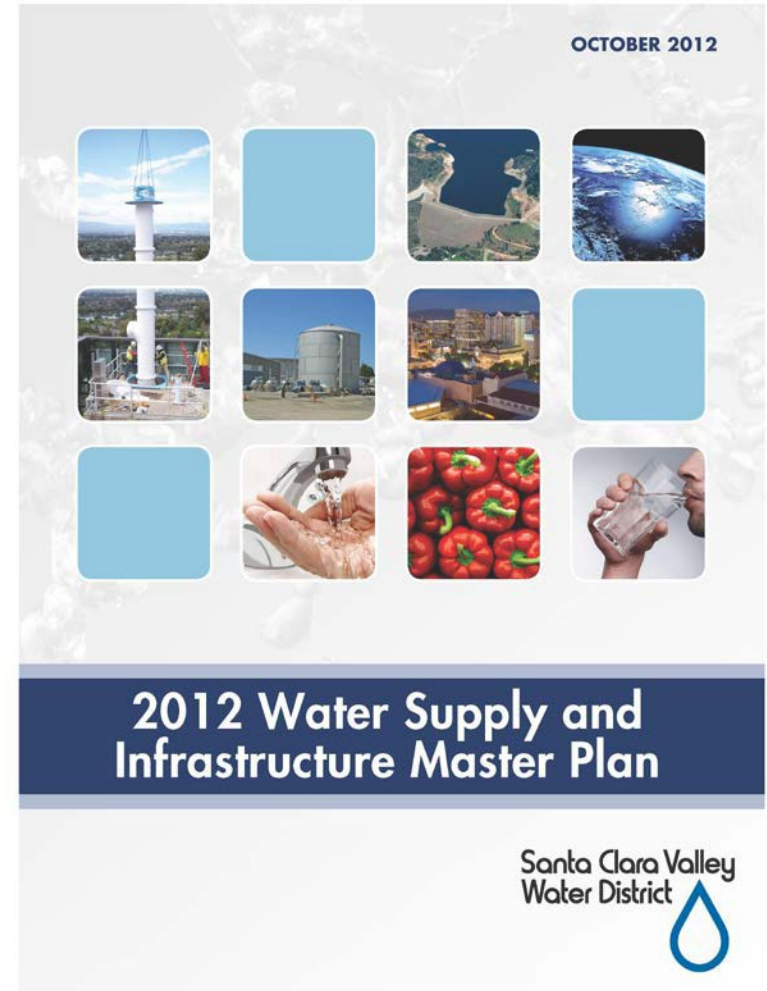


Water Supply

2012 Master Plan “Ensure Sustainability” Strategy

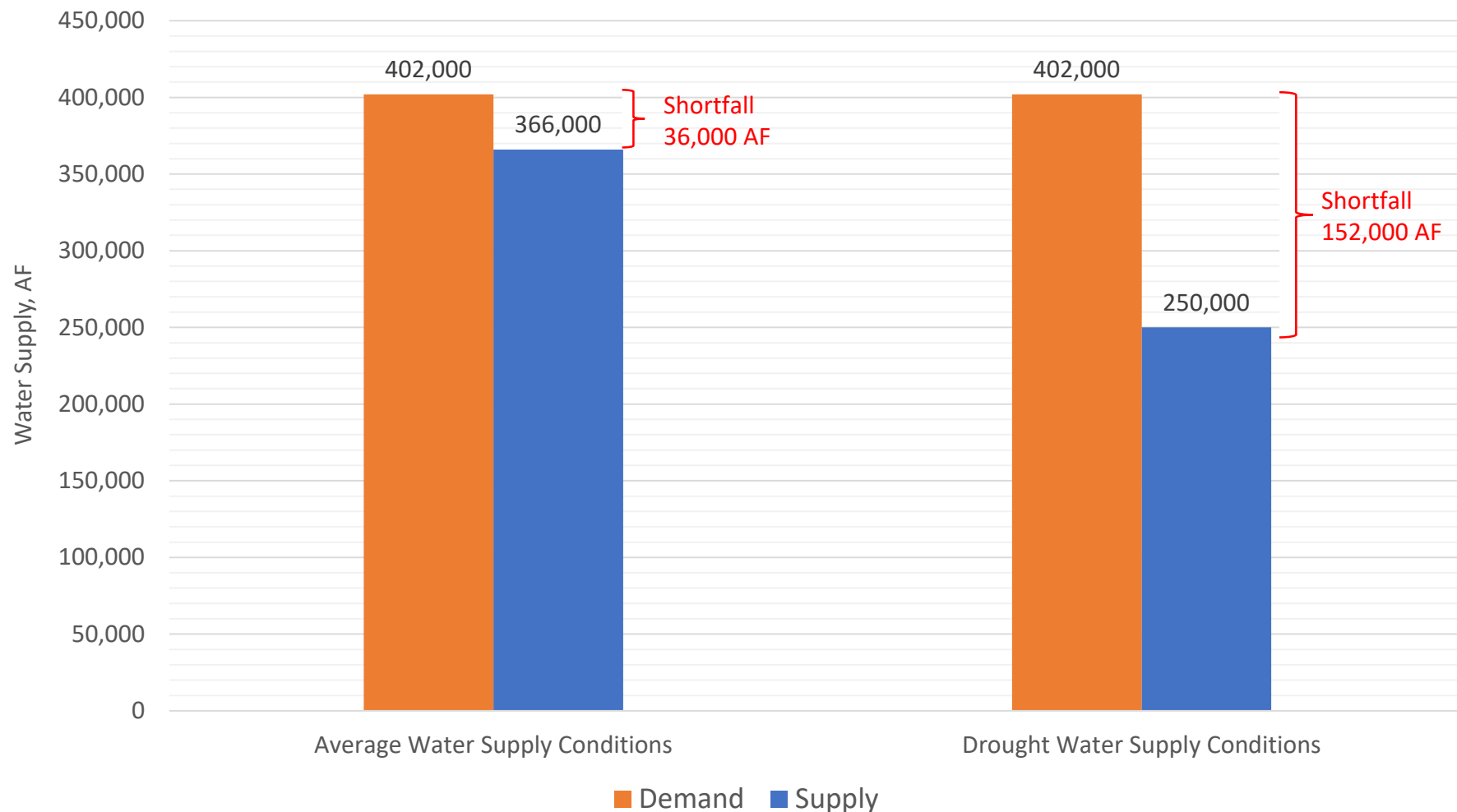
Level of service goal – Meet 90% of demands in droughts

- ▶ Secure existing system
 - ▶ Dam retrofits, asset management, pipeline repair, maintain imports
- ▶ Optimize existing system
 - ▶ New recharge, new pipelines
- ▶ Expand conservation and reuse
 - ▶ Graywater, potable reuse



Water Supply Master Plan Update

Analysis shows declining reliability in year 2040



Evaluated about 40 projects for filling gaps

- ▶ Conservation and demand management
- ▶ Stormwater capture and reuse
- ▶ Onsite reuse
- ▶ Potable reuse
- ▶ Recycled water
- ▶ Groundwater recharge ponds
- ▶ Raw water pipelines
- ▶ Ag land fallowing
- ▶ Storage, inside and outside county
- ▶ Desalination
- ▶ Dry year options/transfers
- ▶ Water contract purchase
- ▶ California WaterFix

“No Regrets” package is cost-effective and broadly supported

- ▶ Advanced Metering Infrastructure
- ▶ Gray Water Program Expansion
- ▶ Leak Repair Incentive
- ▶ New Development Model Ordinance
- ▶ Stormwater Capture and Reuse
 - ▶ Ag Land Recharge
 - ▶ Rain Barrel Rebate
 - ▶ Rain Garden Rebate
 - ▶ San Jose Recharge
 - ▶ Saratoga Recharge

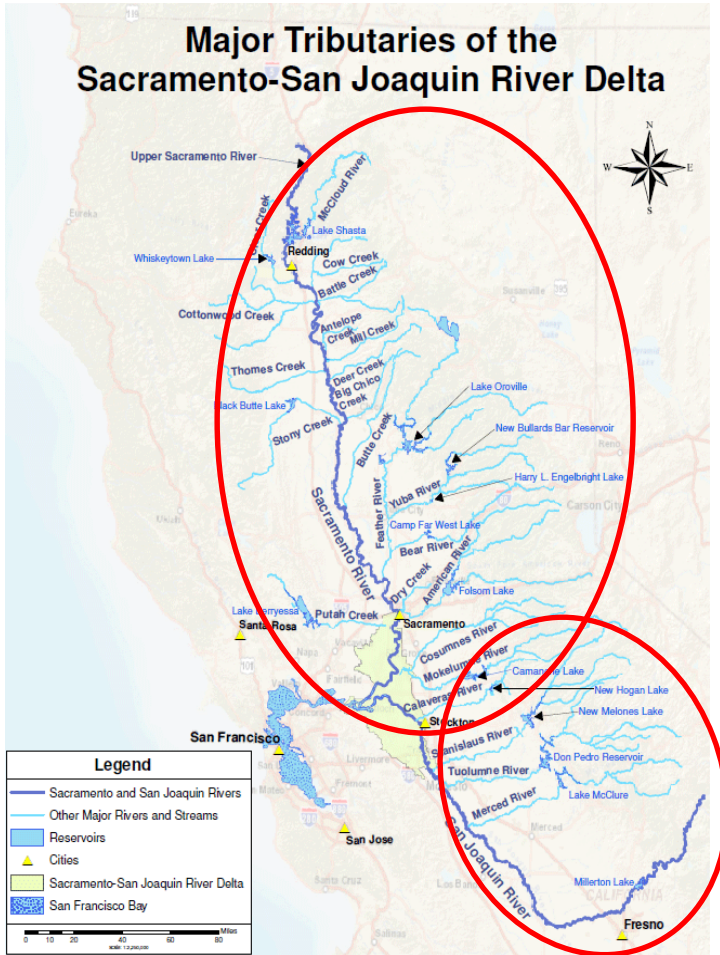
Total District Cost	\$100 million
Additional Water Conservation Savings	10,000 AF
Additional Water Supply Yield	1,000 AF
Unit Cost	\$400/AF

Next Steps

- Water Supply Master Plan Board update – September 2018
- Draft Water Supply Master Plan Report – Winter 2018
- Final Water Supply Master Plan Report – Spring/Summer 2019
- Annual Supply and Demand Review
- Annual Water Supply Master Plan Investment Strategy Review

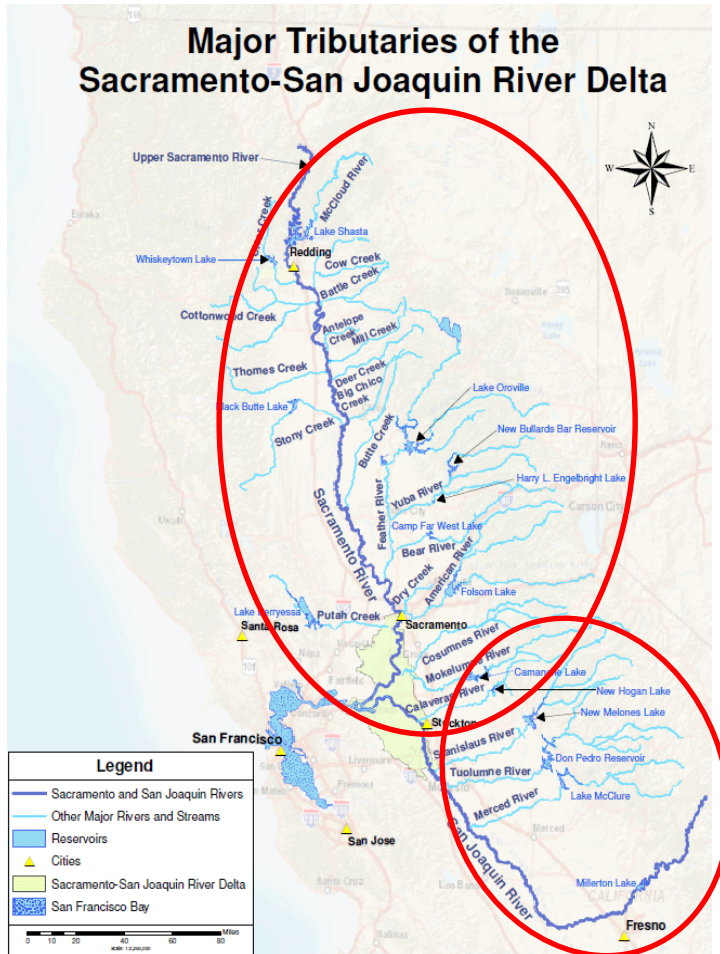
Bay Delta Water Quality Control Plan

Update is occurring in phases



- Phase 1 – San Joaquin River and tributary flows and southern Delta salinity – started in 2008
- Phase 2 – Sacramento River and tributary flows, Delta outflow and interior flows, gate operations, and cold water habitat – started in 2012
- Phase 3 – Implementation – not started

State Water Board Assessment



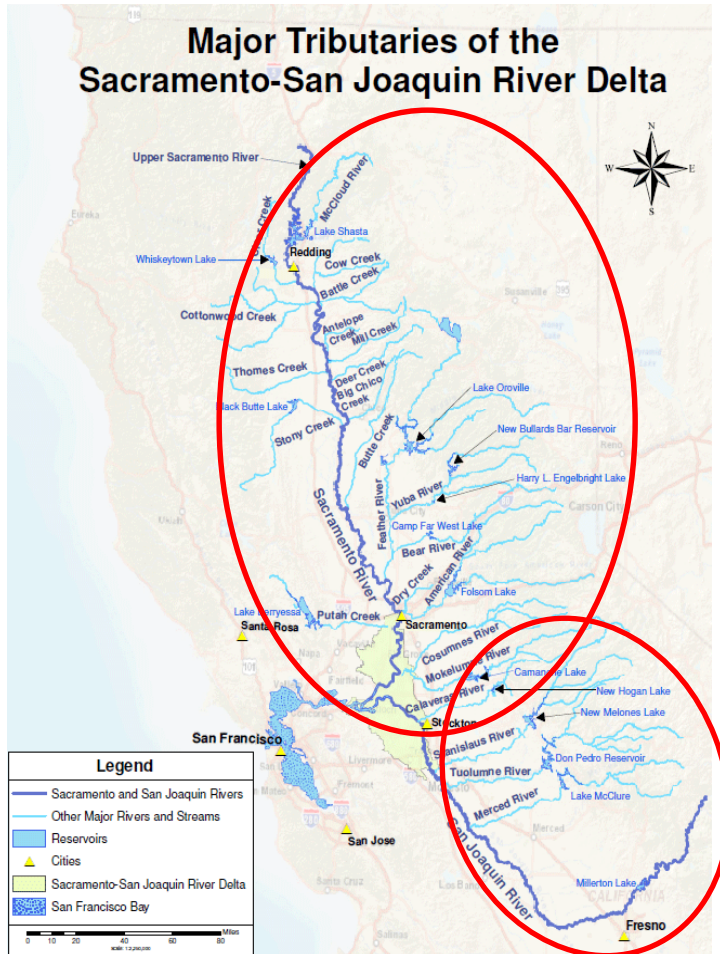
- Phase 1

- Average System-Wide Reduction: 293,000 AF
- Dry and Year Reductions: 624,000-673,000 AF

- Phase 2

- Average System-Wide Reduction: 2,000,000 AF

Santa Clara County Impacts



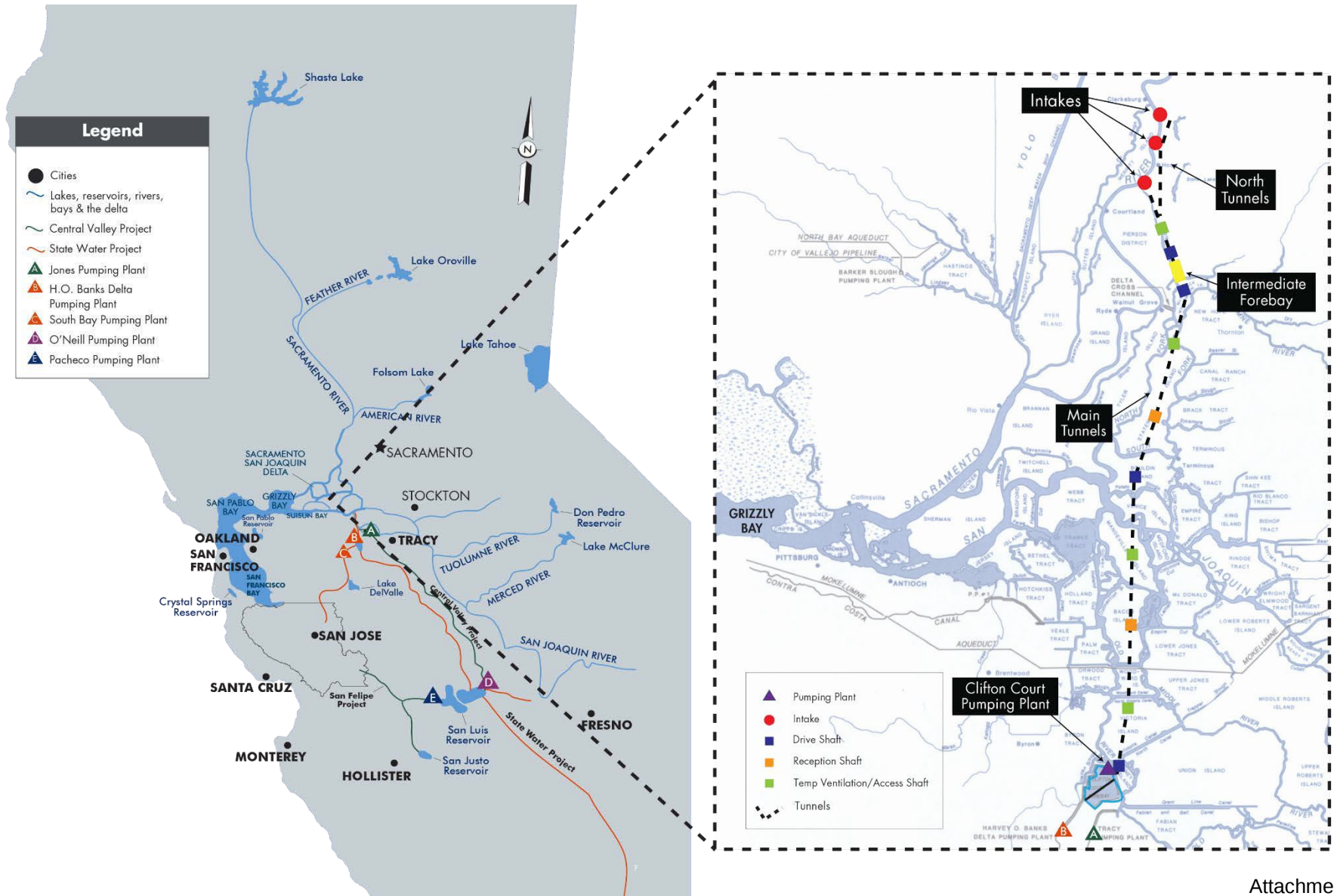
- Phase 1
 - 4 to 15 percent increase in frequency of shortages
 - 5 to 19 percent increase in magnitude of shortages
 - Reduced availability of supplemental transfer supplies
- Phase 2
 - Unknown, but likely significant

California WaterFix

Santa Clara Valley
Water District



Project Overview - California WaterFix





Benefits to Santa Clara County



Produces the most water for lowest cost



Keeps our water clean, safe, and reliable



Provides resiliency for future conditions

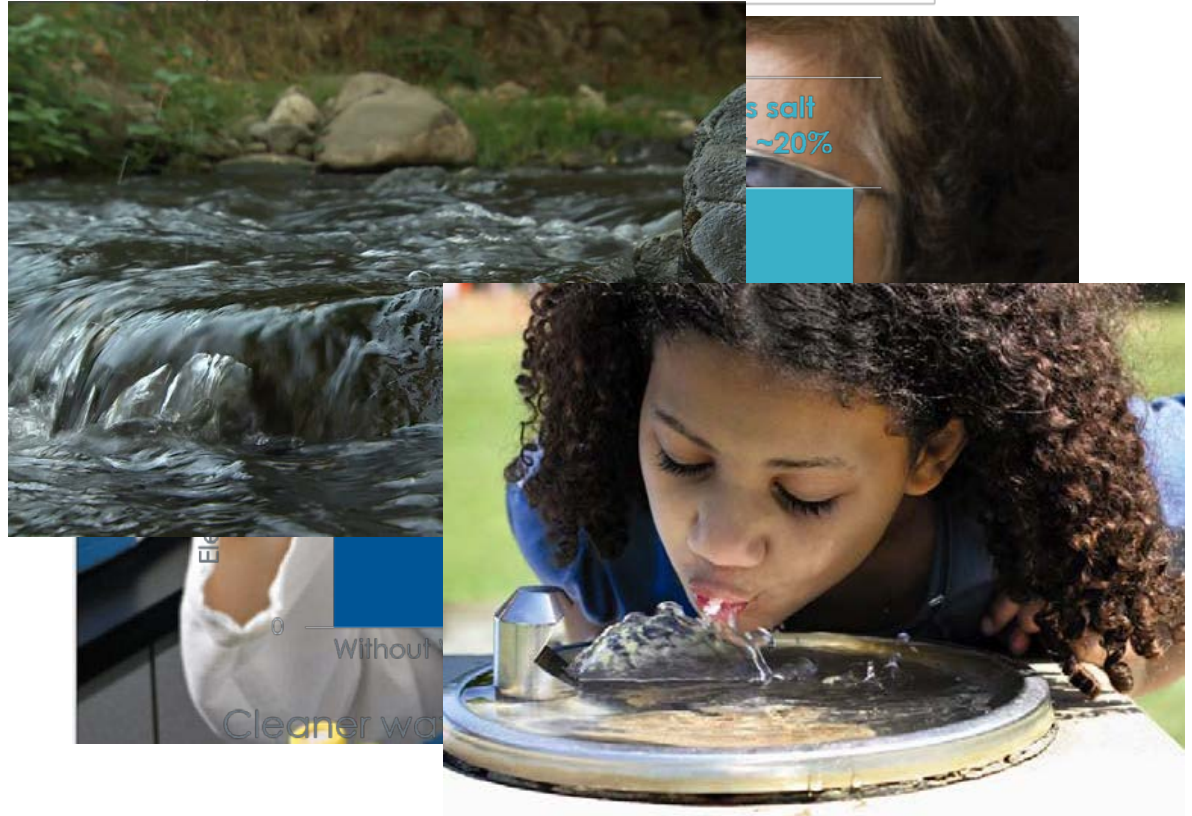


Improves environment for fish



SCVWD has prominent leadership role in WaterFix governance to ensure benefits are achieved

Reliable Water





Benefits to Santa Clara County



Produces the most
water for lowest cost



Keeps our water clean, safe,
and reliable



Provides **resiliency**
for future
conditions



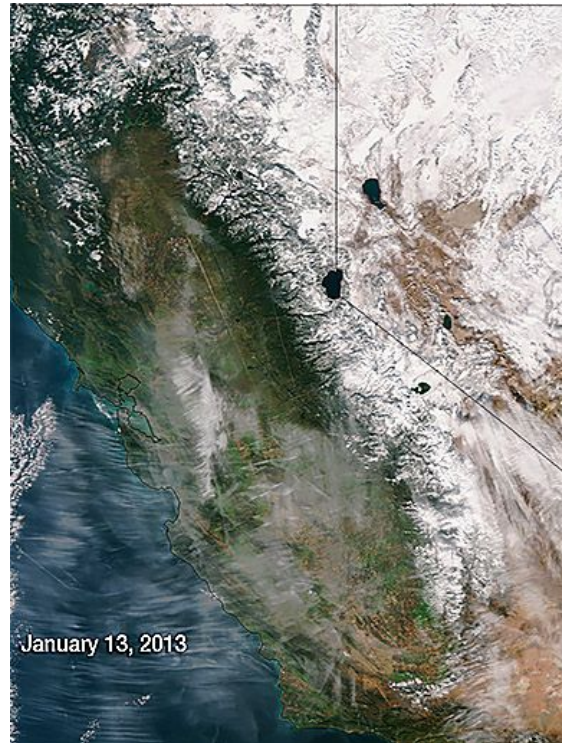
Improves environment
for fish



SCVWD has prominent
leadership role in WaterFix
governance to ensure benefits
are achieved



Resiliency to climate change



Benefits to Santa Clara County



Produces the most water for lowest cost



Keeps our water clean, safe, and reliable



Provides resiliency for future conditions

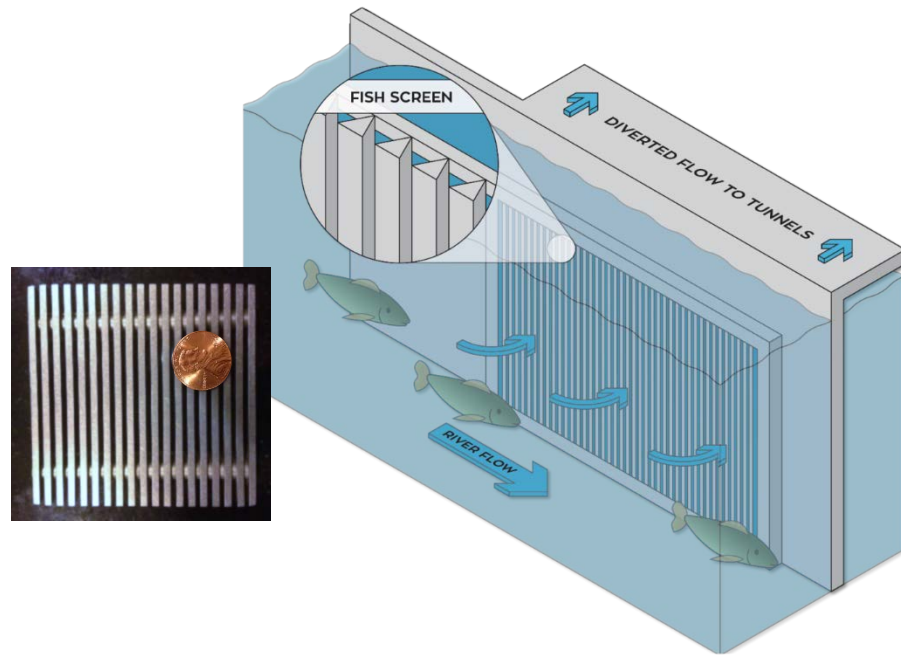


Improves environment for fish



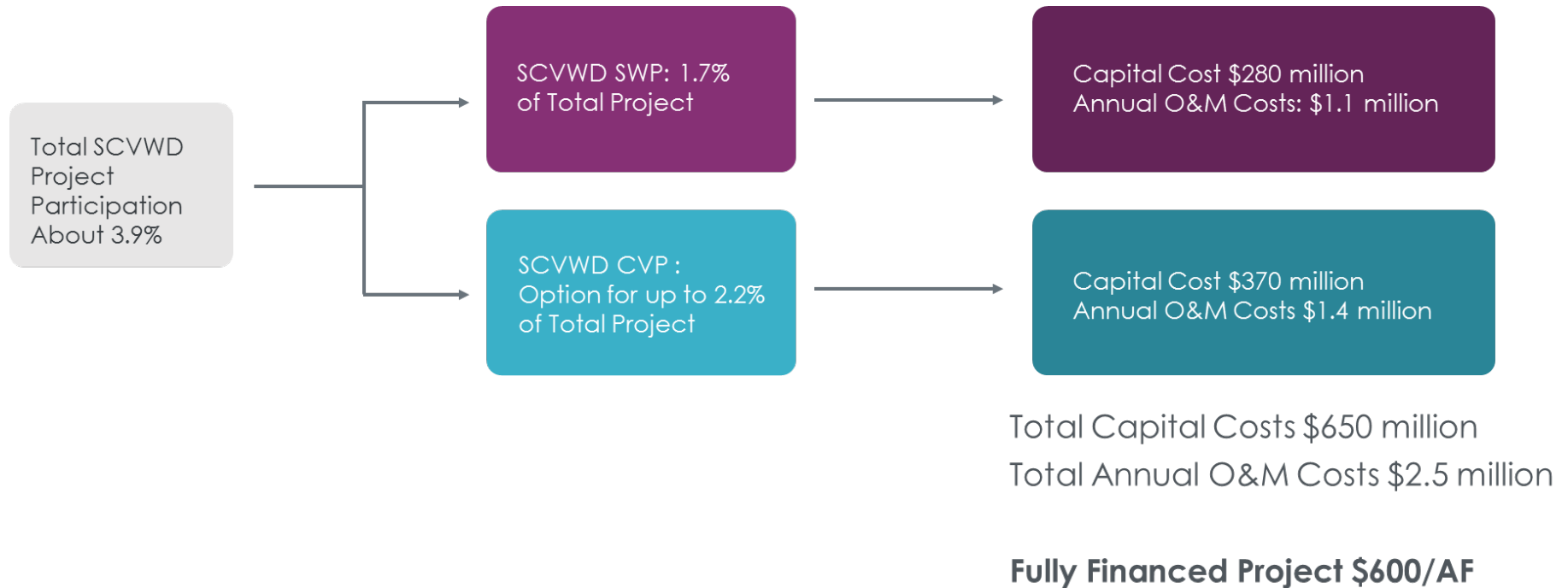
SCVWD has prominent leadership role in WaterFix governance to ensure benefits are achieved

Improved conditions for fish means fewer restrictions on Santa Clara County's water supply

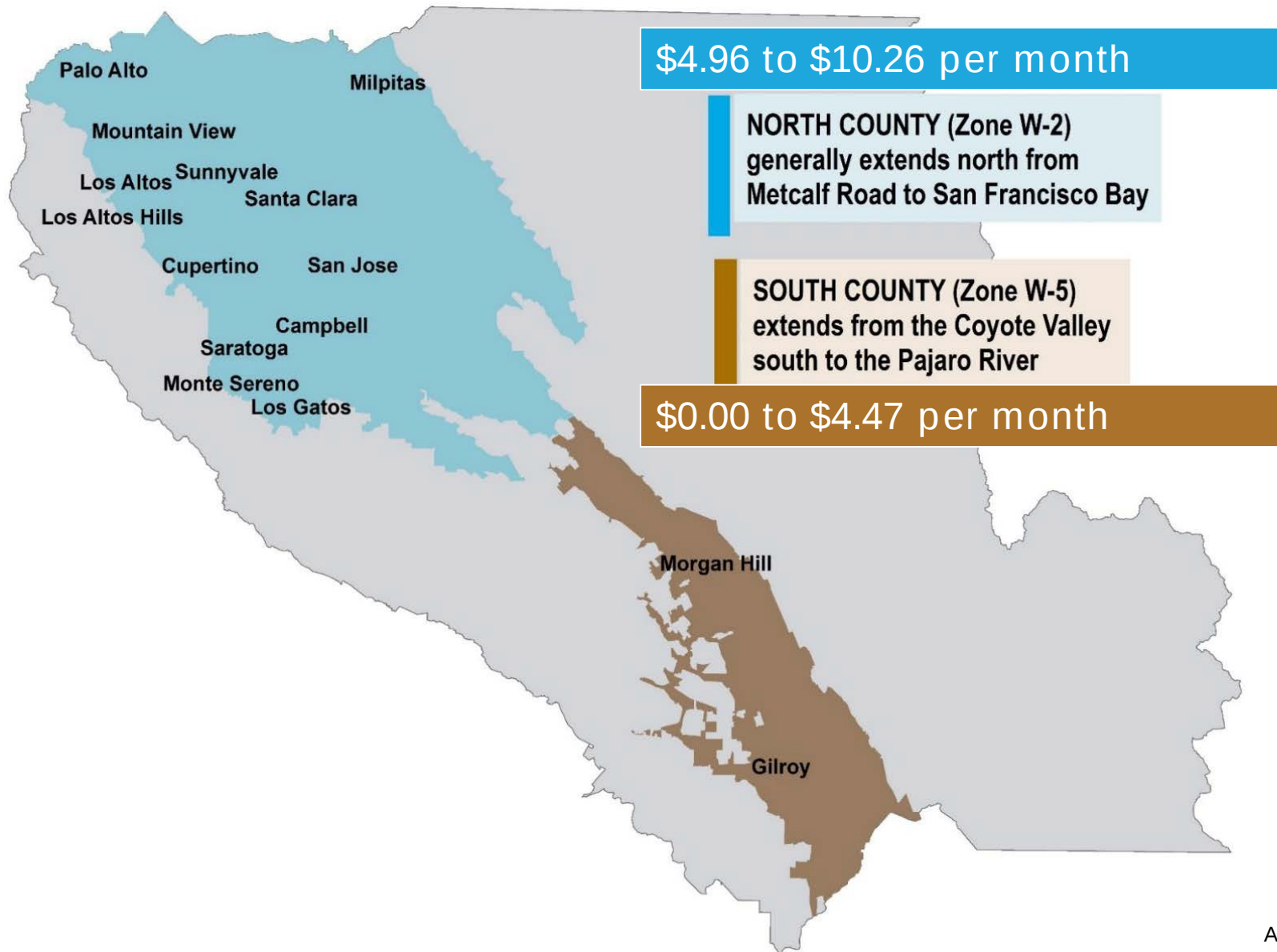


New state-of-the-art fish screens will lessen impacts on fish

WaterFix – Cost to Santa Clara County



Average monthly household cost of WaterFix (FY33)



Recycled Water Master Planning and Future Water Partnerships

Countywide Water Reuse Master Plan

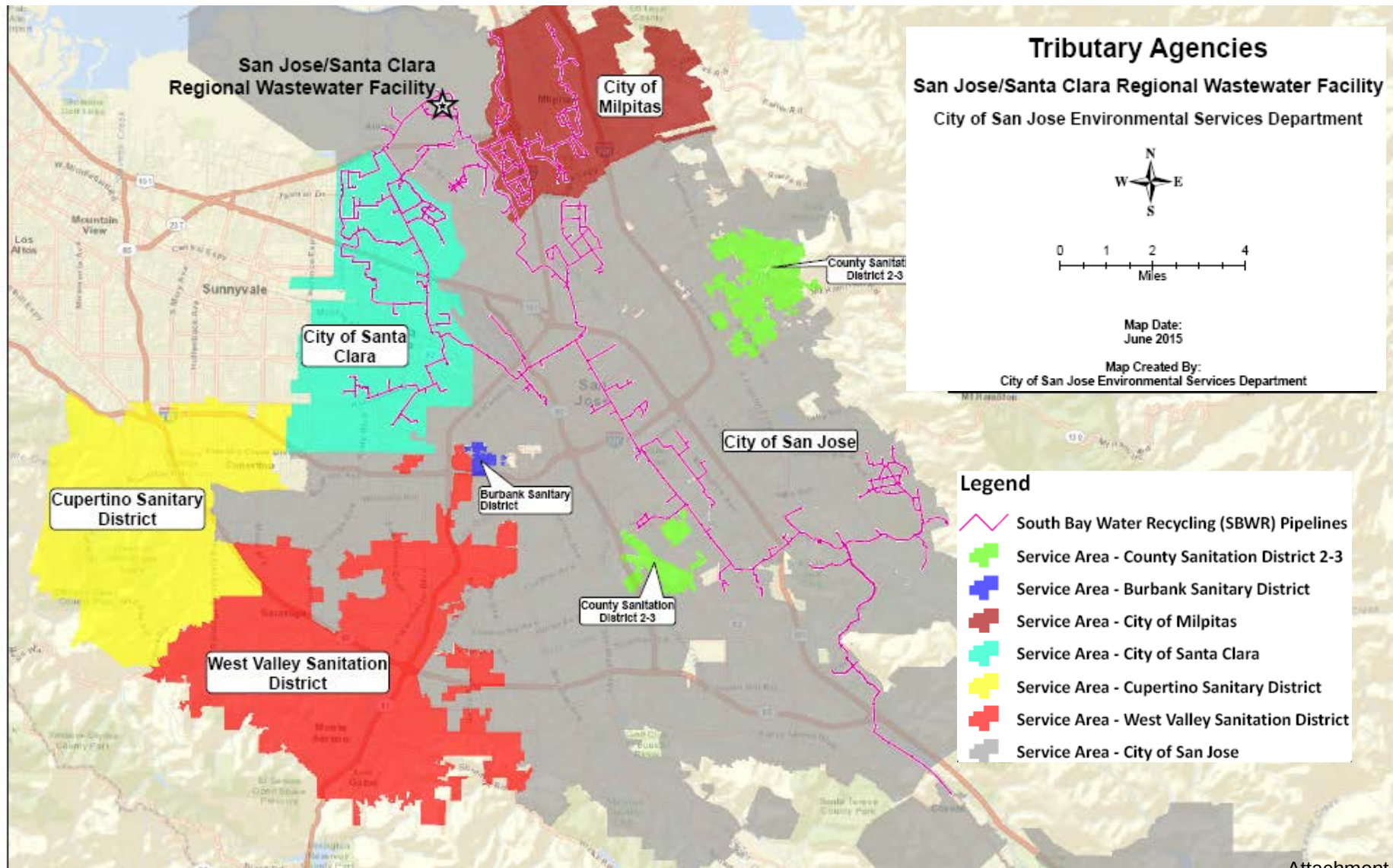
Objectives

- Identify sources and amounts of water available for reuse
- Determine NPR & PR split
- Evaluate governance roles & responsibilities, provide recommendations
- Evaluate potential regional integration
- Conduct stakeholder engagement

NPR = Non-Potable Reuse

PR = Potable Reuse

Map of SBWR Recycled Water Service Area



Master Plan Framework

Governance

Regional Planning
& Integration

Water Treatment &
Contributing Sewersheds

Economics
& Funding

Stakeholder
Engagement

Water Quality
& Quantity

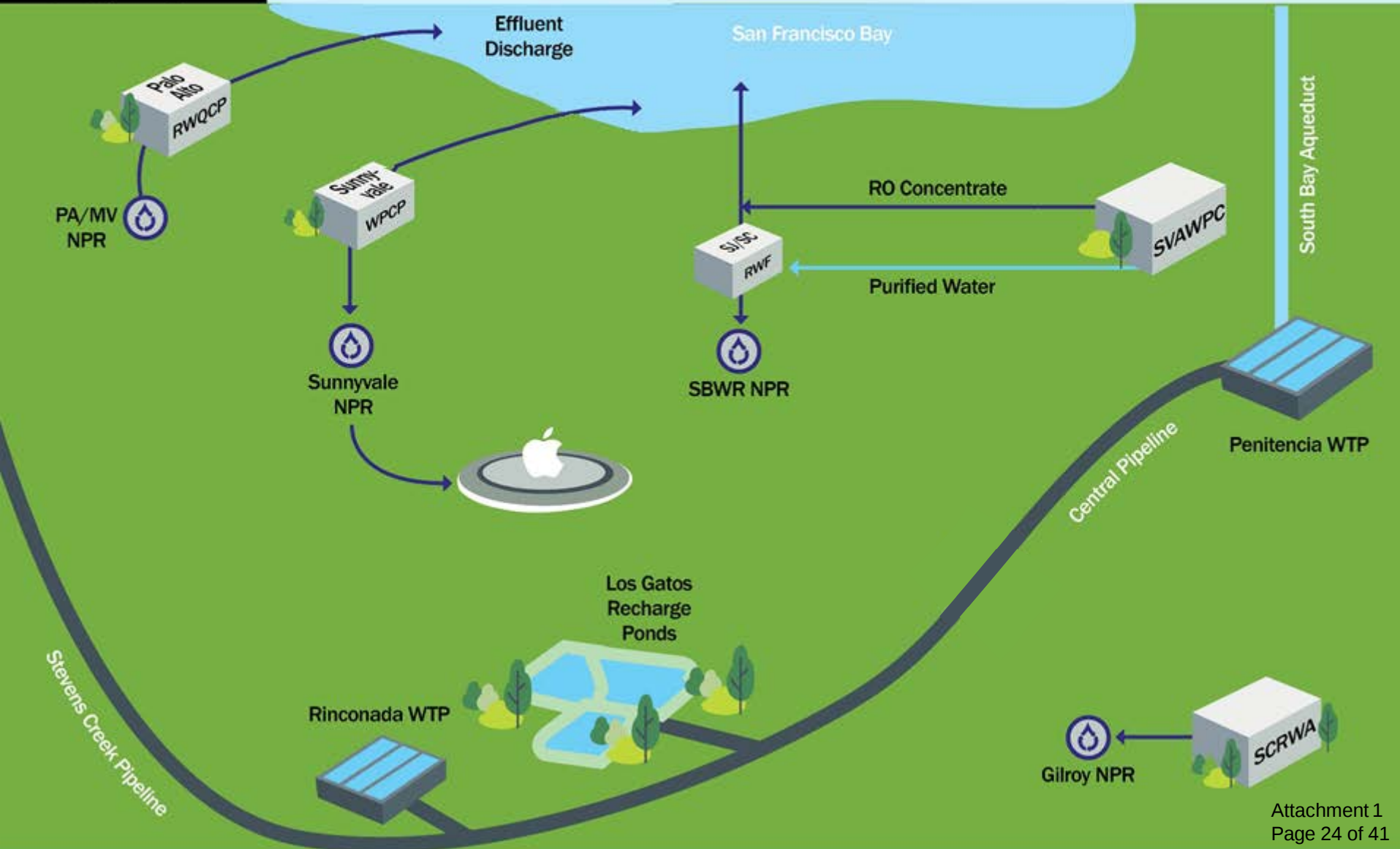
Infrastructure,
Assets, & Land

Environmental,
Permitting, Regulations, &
RO Conc. Mgmt.

Public Perception

Schedule & Coordination with other
Planning Efforts

Existing systems



Executive Leadership Group

- Provide strategic input
- City Managers and Utility Execs from Partner Agencies

Project Partner Group

- Support and inform project decisions
- SBWR
- PA / MV
- Sunnyvale
- SCRWA

One-on-One Meetings

- Meet Partner Agency Executives prior to group meetings
- Build trust and buy-in

Stakeholder Task Force

- Engage outside groups
- Solicit feedback and discuss alternatives

Including
City of Santa Clara

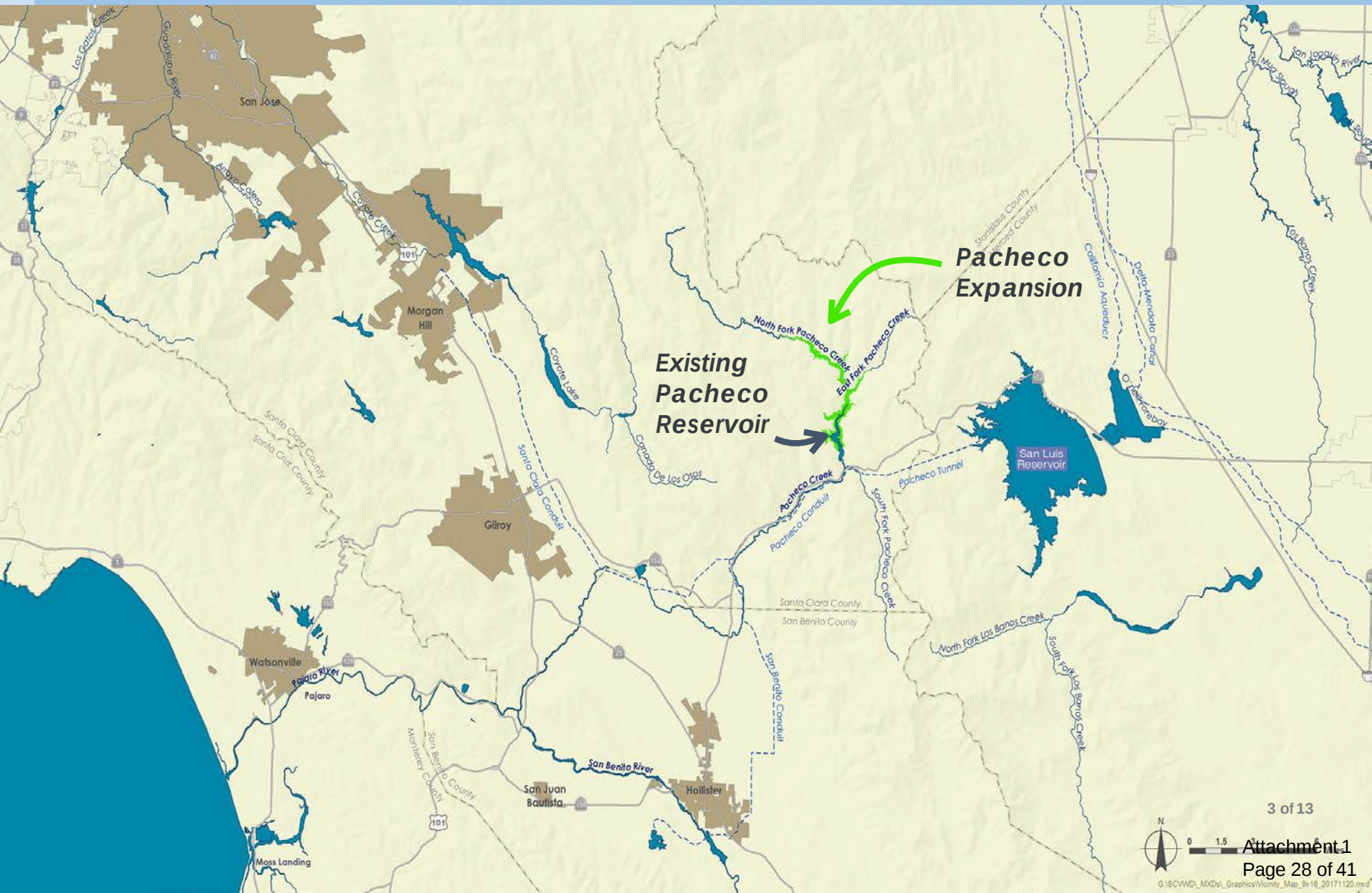
Countywide Water Reuse Master Plan Next Steps



- **Upcoming Stakeholder TF workshops**
 - Winter 2018
 - Spring 2019
 - Summer 2019
- **Continue work product development**
 - Conceptual alternatives

Pacheco Reservoir Expansion Project

Pacheco Reservoir Expansion Project Location



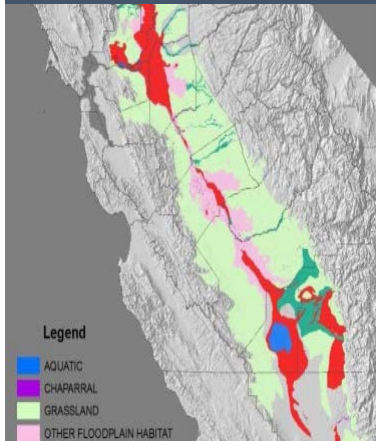
The Pacheco Reservoir Expansion Will Address Five Big Challenges

Restore Federally Threatened Fish



90% population decline in Pajaro watershed from 1960s to 1990s

Improve the Delta



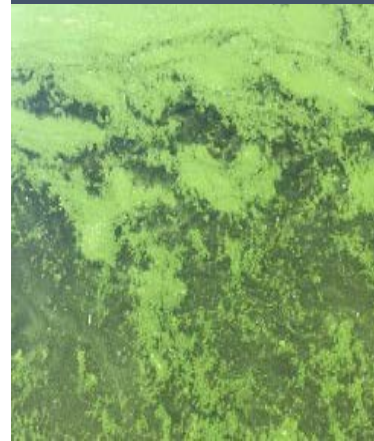
90% of Delta watershed wetlands have disappeared

Improve Resiliency and Emergency Water Supply



66% chance of Delta earthquake in next 50 years;
45% of water supply imported from Delta

Eliminate Water Quality Issues in San Luis Reservoir



Water quality issues during summer months in **57%** of years

Reduce Flooding to Disadvantaged Communities



Extensive flooding even for frequent/small events;
20-year flood in 2017 (pictured)

Anderson Dam Project Update

Key Water Supply Projects



**Dam Seismic Retrofits/Improvements
(\$780 Million)**



**RWTP Reliability Improvements
(\$290 Million)**



**Expedited Purified
Water Program
(\$1 Billion via P3
Delivery Method)**

Anderson Dam Project Update

Anderson Dam Existing Configuration

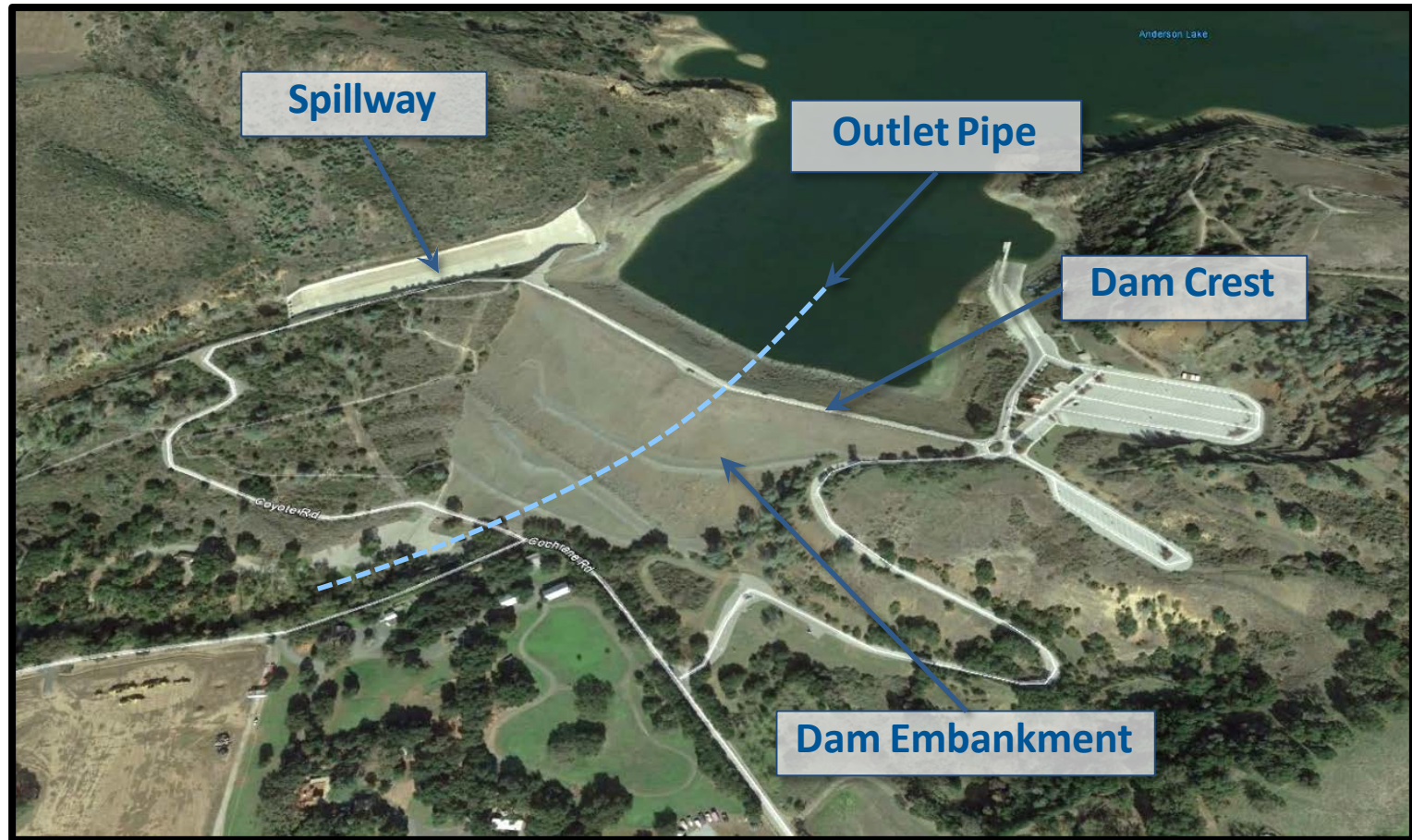


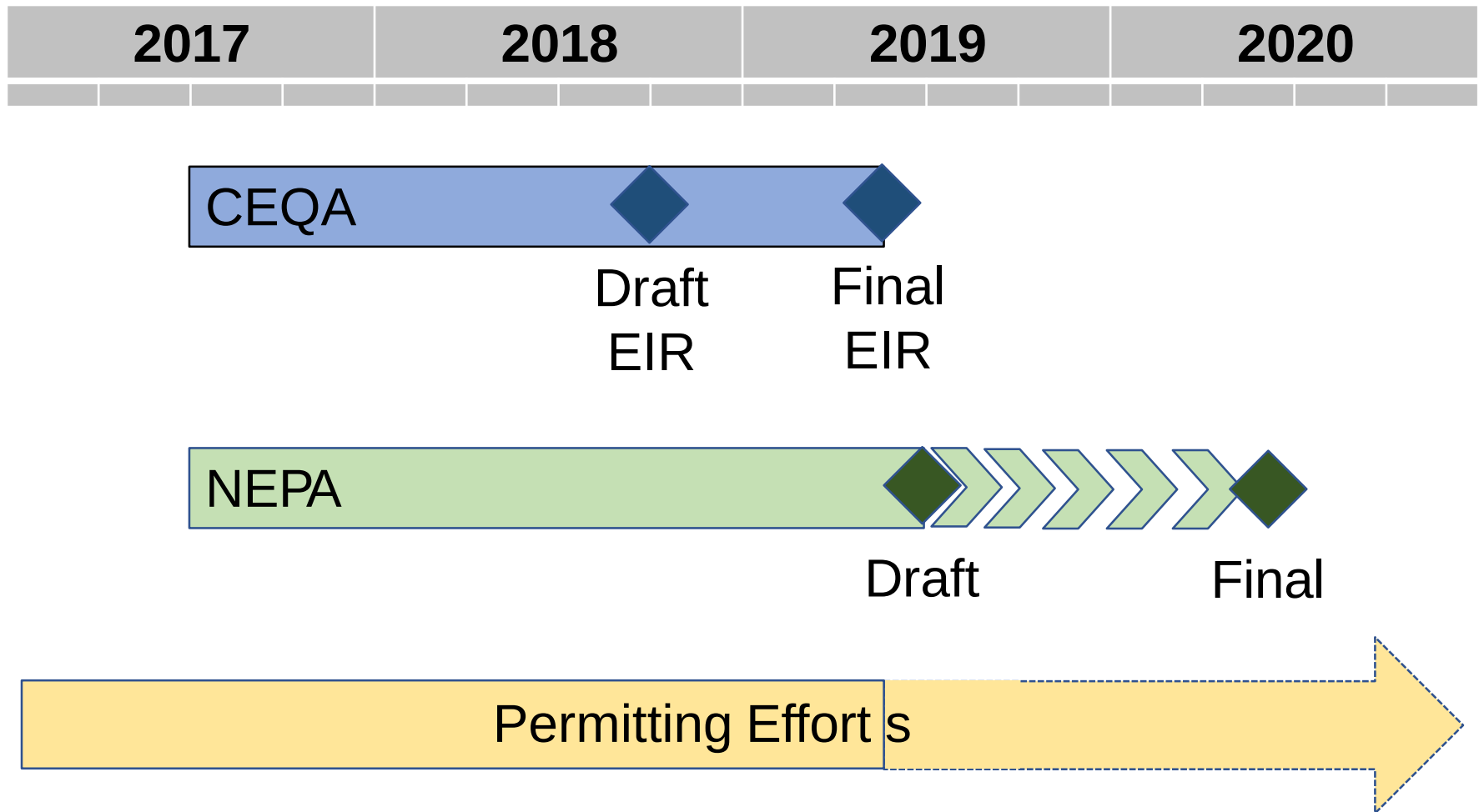
Image Source: Google Earth

Anderson Dam Project Update

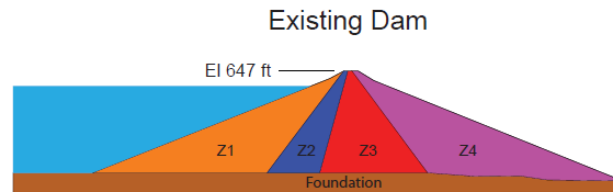
Anderson Dam – Current Project Efforts

- 60% Design completed; under review
- Geotechnical investigations for spillway replacement
- Preparation of environmental and permit documents
- Full court press on permitting process.

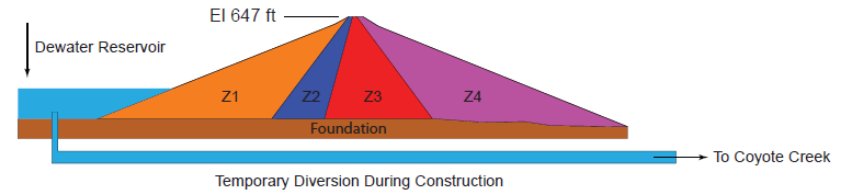
CEQA/NEPA/Permitting Timeline Overview



Anderson Dam Embankment Retrofit Sequence



Year 1 and 2
Construction of Diversion Tunnel and Dewatering



Year 3: April - October

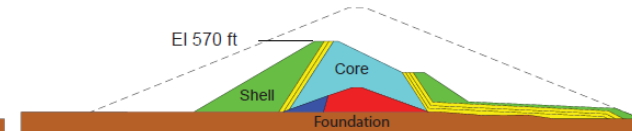
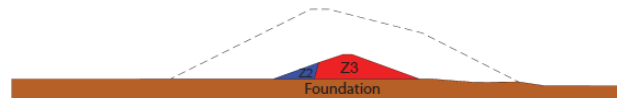
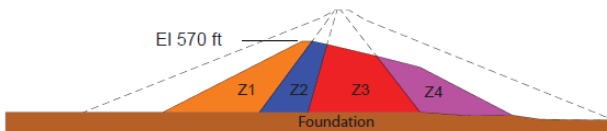
Stage 1 Excavation

Year 4: April - June

Stage 2 Excavation

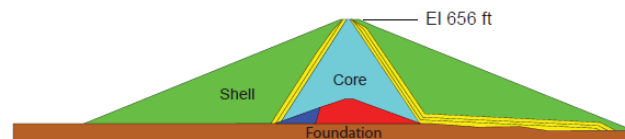
Year 4: July - October

Stage 2 Fill

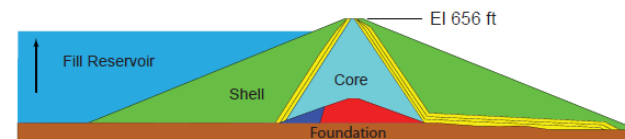


Year 5: April - October

Stage 3 Fill



Final Configuration



How Water Supply Services Are Funded

Why do well owners pay SCVWD to pump water from the ground?

Construction at Anderson Reservoir, 1951



\$550M Seismic Retrofit under way at Anderson

- ▶ **Local rainfall cannot sustain Santa Clara County water needs**
- ▶ **Planning in early 1900's called for construction of reservoirs to capture rainwater to percolate into the ground**
- ▶ **Groundwater Production Charge is a reimbursement mechanism**
 - ▶ **pays for efforts to protect and augment water supply**

Many activities ensure safe, reliable groundwater supplies

- Plan & construct improvements to infrastructure
- Purchase imported water
- Operate & maintain local reservoirs
- Operate & maintain raw & recycled water pipelines
- Monitor & protect groundwater from pollutants

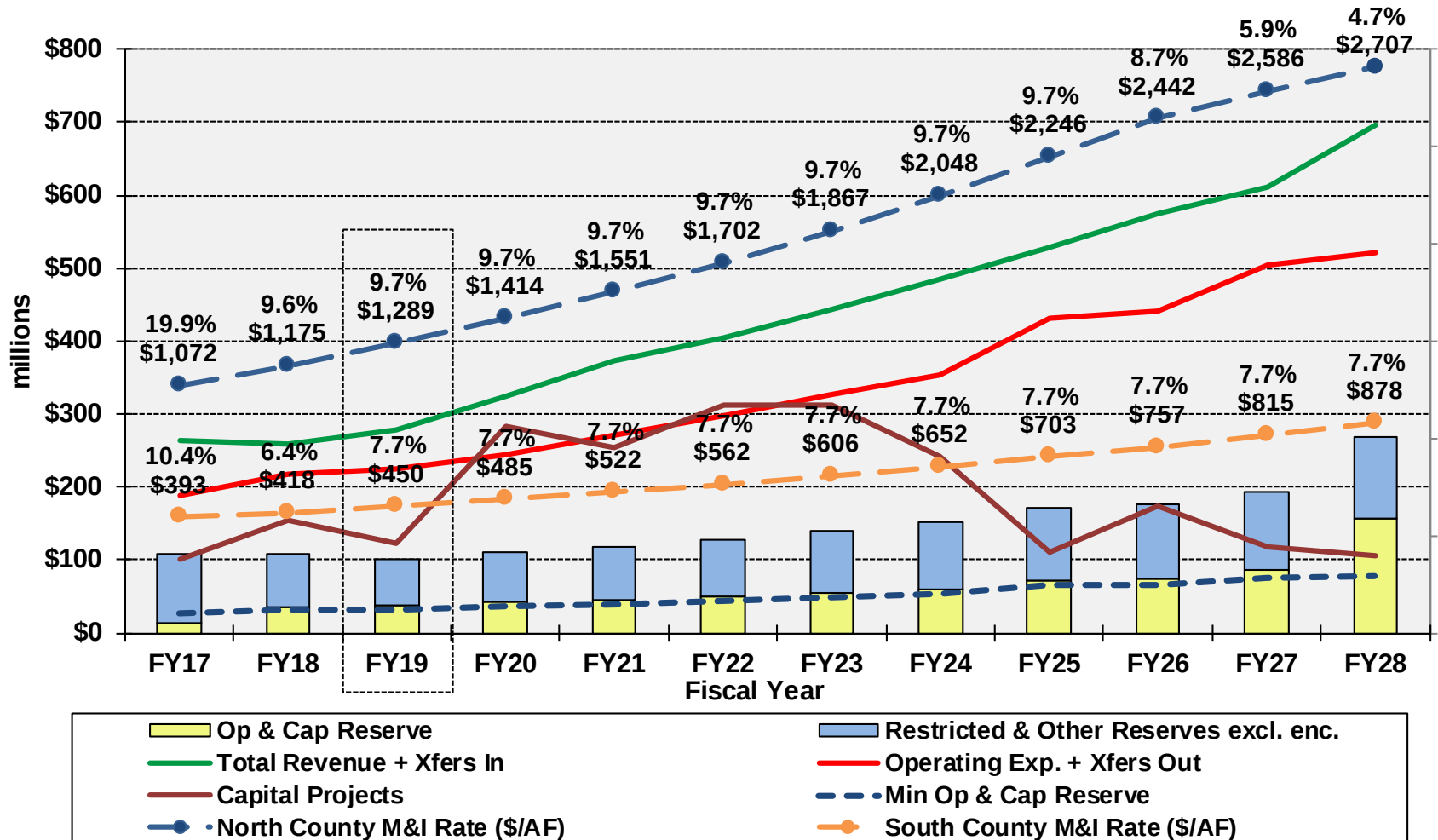


Beginning 10-Year Pipeline Rehabilitation (\$125M)

Groundwater Production Charge Projection

(\$ in millions)

Water Utility Enterprise Fund



FY 2018-2019 Schedule

Jan 9	Board Meeting: Preliminary Groundwater Charge Analysis
Jan 17	Water Retailers Meeting: Preliminary Groundwater Charge Analysis
Jan 24	Water Commission Meeting: Prelim Groundwater Charge Analysis
Feb 13	Board Meeting: Review draft CIP & Budget development update
Feb 23	Mail notice of public hearing and file PAWS report
Mar 21	Water Retailers Meeting: FY 19 Groundwater Charge Recommendation
Apr 2	Ag Water Advisory Committee
Apr 3	Landscape Committee Meeting
Apr 10	Open Public Hearing
Apr 11	Water Commission Meeting
Apr 12	Continue Public Hearing in South County
Apr 24	Conclude Public Hearing
Apr 25-27	Board Meeting: Budget work study session
May 8	Adopt budget & groundwater production and other water charges

Summary

- **Groundwater Production Charge projection driven by infrastructure repair & replacement, and water supply reliability investments**
- **FY 19 Groundwater Production Charge increase equates to an increase of \$3.92 per month in North County to average household**

THIS PAGE INTENTIONALLY LEFT BLANK