



## **Santa Clara Valley Water District Board of Directors Meeting**

Headquarters Building Boardroom  
5700 Almaden Expressway  
San Jose, CA 95118

### **3:00 PM SPECIAL JOINT MEETING WITH CITY OF SANTA CLARA AGENDA**

**Wednesday, September 5, 2018  
3:00 PM**

**District Mission: Provide Silicon Valley safe, clean water for a healthy life, environment and economy.**

#### **DISTRICT BOARD OF DIRECTORS**

Richard P Santos, Chair, District 3  
Linda J LeZotte, Vice Chair, District 4  
John L Varela, District 1  
Barbara Keegan, District 2  
Nai Hsueh, District 5  
Tony Estremera, District 6  
Gary Kremen - District 7

All public records relating to an open session item on this agenda, which are not exempt from disclosure pursuant to the California Public Records Act, that are distributed to a majority of the legislative body will be available for public inspection at the Office of the Clerk of the Board at the Santa Clara Valley Water District Headquarters Building, 5700 Almaden Expressway, San Jose, CA 95118, at the same time that the public records are distributed or made available to the legislative body. Santa Clara Valley Water District will make reasonable efforts to accommodate persons with disabilities wishing to attend Board of Directors' meeting. Please advise the Clerk of the Board Office of any special needs by calling (408) 265-2600.

NORMA CAMACHO  
Chief Executive Officer

MICHELE L KING, CMC  
Clerk of the Board  
(408) 265-2600  
Fax (408) 266-0271  
[www.valleywater.org](http://www.valleywater.org)

**Note: The finalized Board Agenda, exception items and supplemental items will be posted prior to the meeting in accordance with the Brown**

**Santa Clara Valley Water District  
Board of Directors**

**3:00 PM SPECIAL JOINT MEETING WITH CITY OF SANTA CLARA  
AGENDA**

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Wednesday, September 5, 2018

3:00 PM

Headquarters Building Boardroom

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**1. CALL TO ORDER:**

- 1.1. Roll Call.
- 1.2. Pledge of Allegiance/National Anthem.

**2. TIME CERTAIN:**

**3:00 PM**

- 2.1. Overview of the District's Water Infrastructure, Capital Improvement Program, Flood Protection Projects, and Current/Future Water Supply Planning. [18-0710](#)

Recommendation: That the Santa Clara Valley Water District Board of Directors and Santa Clara City Council consider directing their respective staff to continue their commitment to meaningful engagement in pursuit of new and innovative partnership opportunities for the continued delivery of a safe, and reliable water supply, and flood protection, in Santa Clara County.

Manager: Nina Hawk, 408-630-2736

Attachments: [Attachment 1: PowerPoint](#)

Est. Staff Time: 30 Minutes

- 2.2. 2018 Legislative Efforts and Recommended Position on State Legislation: [18-0574](#)  
Senate Bill 1301 (Beall) Expedited Permitting for Flood Protection and  
Dam Safety.

Recommendation: A. That the Santa Clara Valley Water District Board of  
Directors and Santa Clara City Council consider  
directing staff to continue to work together on advocacy  
efforts on water supply, flood protection, and other issues  
of mutual interest, including letters of support on bills,  
rulemaking actions, and/or advocacy with federal and  
state elected officials and regulatory agency officials, and  
other actions; and

B. That the Santa Clara City Council consider taking a  
position of support on Senate Bill 1301 (Beall) -  
Expedited Permitting for Flood Protection and Dam  
Safety, and direct city staff to follow up with advocacy  
efforts as appropriate, including a letter of support.

Manager: Rachael Gibson, 408-630-3004

Attachments: [Attachment 1: SB 1301 Fact Sheet](#)  
[Attachment 2: SB 1301 Sample Letter of Support](#)

Est. Staff Time: 10 Minutes

- 2.3. Emergency Services Coordination. [18-0712](#)

Recommendation: That the Santa Clara Valley Water District Board of Directors  
and the Santa Clara City Council consider directing their  
respective staff to commit to ongoing and strengthened  
coordination and partnership on emergency activities and  
service.

Manager: Tina Yoke, 408-630-2385

Attachments: [Attachment 1: PowerPoint](#)

Est. Staff Time: 15 Minutes

### 3. ADJOURN:

3.1. Time Open for Public Comment on any Item not on the Agenda.

*Notice to the public: This item is reserved for persons desiring to address the Board on any matter not on this agenda. Members of the public who wish to address the Board on any item not listed on the agenda should complete a Speaker Card and present it to the Clerk of the Board. The Board Chair will call individuals to the podium in turn. Speakers comments should be limited to three minutes or as set by the Chair. The law does not permit Board action on, or extended discussion of, any item not on the agenda except under special circumstances. If Board action is requested, the matter may be placed on a future agenda. All comments that require a response will be referred to staff for a reply in writing. The Board may take action on any item of business appearing on the posted agenda.*

3.2. Clerk Review and Clarification of Board Requests.

3.3. Adjourn to 11:00 a.m. Closed Session and 1:00 p.m. Regular Meeting, on September 11, 2018, in the Santa Clara Valley Water District Headquarters Building Boardroom, 5700 Almaden Expressway, San Jose, California.



## Agenda Report

18-0710

Agenda Date: 9/5/2018

### BOARD AGENDA MEMORANDUM

#### SUBJECT:

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

#### RECOMMENDATION:

That the Santa Clara Valley Water District Board of Directors and Santa Clara City Council consider directing their respective staff to continue their commitment to meaningful engagement in pursuit of new and innovative partnership opportunities for the continued delivery of a safe, and reliable water supply, and flood protection, in Santa Clara County.

#### SUMMARY:

This item describes various programs that the Santa Clara Valley Water District (District) provides in support and partnership with the City of Santa Clara (City) as they provide a safe and reliable water supply in the City.

#### Water Supply and Infrastructure Master Plan

As the groundwater management agency and primary water resources agency for Santa Clara County (County), the District has a mission to provide safe, clean water for the County. In 2012, the Board adopted the Water Supply and Infrastructure Master Plan (Water Master Plan) which outlines the District's strategy for providing a reliable and sustainable future water supply for the County and ensuring new water supply investments are effective and efficient. The three key elements of the Water Master Plan strategy are 1) secure existing supplies and infrastructure, 2) optimize the use of existing supplies and infrastructure, and 3) expand water conservation and recycled water use to meet future increases in demands.

The District's Water Master Plan is intended to be updated every five years to adjust to changing conditions. Based on recent analyses, the County could experience shortages of more than thirty percent during extended droughts as demands increase. District staff is updating the Water Master Plan to reflect current and projected conditions and present projects and programs that meet the District's water supply reliability goal.

#### Water Supply Overview

Currently, the County's water supply portfolio includes approximately 55 percent imported water sources, 40 percent local water sources (groundwater, surface water), and 5 percent recycled water.

Long-term water use averages about 350,000 acre-feet per year (AFY), though use is currently down following the drought. Water use in the County would be more than 70,000 AFY higher if not for District, city, water retailers, and community commitments to water conservation. Water use efficiency programs reduce demand on existing water and energy supplies, helping to lessen the costs and environmental impacts of developing additional supplies. Conservation program elements include a variety of rebate programs for home, landscaping, and businesses as well as service calls and conservation tools. The District plans to increase water conservation contribution savings to 100,000 acre-feet per year by 2030.

To meet the future water needs and promote greater supply diversity, the District continues to explore additional water supply and water demand reduction options. Pursuing supply diversity helps minimize the potential risks of groundwater overdraft and subsidence, as well as overreliance on imported water supplies, which are used to recharge the groundwater basin and irrigate agriculture in Santa Clara County.

Projects being considered include additional water conservation, non-potable recycled water, potable reuse, surface and groundwater storage, stormwater capture, additional recharge ponds, dry year options, etc.

On September 19, 2017, as part of the Water Master Plan update, the District Board authorized staff to begin planning for implementation of the projects and programs in the Water Master Plan's "No Regrets" package. The package, which increases the conservation savings goal to 110,000 AFY by 2040, consists of the following water conservation and stormwater capture projects:

- Advanced metering infrastructure,
- Graywater rebate program expansion,
- Leak repair incentives,
- New Development Model Ordinance, and
- Stormwater capture (agricultural land recharge, stormwater recharge in the Cities of Santa Clara, San Jose and Saratoga, rain barrel rebates, and rain garden rebates).

The next steps in the Water Supply Master Plan Update include bringing a set of preferred projects to the District Board and developing a monitoring and contingency plan. Monitoring supply and demand conditions and reviewing the Water Supply Master Plan investment strategy is important for managing uncertainty, addressing changing regulations and policies, and ensuring that changes in project costs and benefits are considered.

### **Bay Delta Water Quality Control Plan**

The update of the Bay Delta Water Quality Control Plan (Bay Delta Plan) is one of the potential changes that will need to be considered in the context of the District's water supply investment

strategy. The Bay Delta Plan, which the State Water Resources Control Board is currently updating, establishes water quality objectives and an implementation program for achieving the objectives. The proposed changes include increasing flows in tributaries to the Delta as a means of improving conditions for aquatic species. The changes would reduce urban and agricultural water supplies. The first phase of proposed changes would affect the San Joaquin River, its tributaries, and the southern Delta. Most of the impacts to the Santa Clara County would be from decreases in San Francisco Public Utilities Commission supplies. The frequency of shortages could increase up to 15 percent and the magnitude of shortages could increase by up to almost 20 percent. The impacts from the second phase of changes, which would affect flows in the Sacramento River and its tributaries, as well as interior Delta flows and Delta outflows are unknown but likely more significant.

### **California WaterFix**

On May 8, 2018, the District Board took several actions related to the California WaterFix (WaterFix), including adopting Resolution 18-23 making Responsible Agency findings pursuant to the California Environmental Quality Act (CEQA) and Resolution 18-24, authorizing support of, and participation in, the WaterFix.

Santa Clara County relies on water imported through the Delta by the State Water Project (SWP) and Central Valley Project (CVP) for about 40% of its water supplies, on average. Imported water supplies are projected to decline over time in response to continued environmental degradation in the Delta, climate change and sea level rise, and increased regulatory constraints. Modeling indicates that if no action is taken to improve the existing Delta conveyance approach, the District's SWP and CVP deliveries to the County could drop by about 36,000 AFY. Reductions in these SWP/CVP supplies will have a significant impact on the ability of the District to provide reliable water supplies to our communities, businesses, and local streams, and make it more difficult for us to protect our local groundwater basins and prevent land surface subsidence in North County.

### ***WaterFix Benefits***

With participation in the WaterFix, modeling indicates this decline can be avoided by diversion of water during high flow periods. Total deliveries with the WaterFix would remain similar to current average levels. As reported to the Board on May 8, 2018, the primary benefits of the project are summarized in the table below.

<b>Benefit</b>	<b>Staff Analysis of WaterFix</b>
<b>Sustained water supplies</b>	Offsets supply reduction, improves groundwater storage conditions, increases reserves in the Semitropic Groundwater Bank, reduces the frequency and magnitude of water shortages.
<b>More fish-friendly diversions</b>	Equipped with state-of-the-art fish screens located away from important fish habitat; 52% of SWP/CVP exports, on average, will be through these more fish friendly diversions; diverts primarily during higher flow periods safer for fish.
<b>Reduced reverse river flows to protect fish</b>	Changes negative flow (-2,200 cfs on average) to more natural, positive flow (+50 cfs); reduces entrainment.

<b>Improved water quality</b>	20% decrease in average annual salinity of SWP/CVP exports; reduces salt loading to drinking water treatment plants and county groundwater basins.
<b>Resiliency during Delta failure events</b>	Continues water deliveries if Delta fails from earthquakes, sea level rise, and extreme flood events.
<b>Resiliency to climate change including sea level rise</b>	Diverts where salinity intrusion will be minimal under sea level rise scenarios; facilitates diversion during extreme storm events.
<b>Increased access to transfer supplies</b>	Conveys transfer water when existing system cannot; reduces water loss during transport.

### *WaterFix Costs*

SWP contractors are expected to pay 67% of project costs and receive 67% of the WaterFix incremental yield; the District would receive 2.5% of the SWP benefit share, corresponding to its share of SWP contract supply (i.e., "Table A" contract amount). Metropolitan Water District (MWD) is expected to finance the 33% share originally intended for the CVP contractors and, in return, receive an interest in 3,000 cubic feet per second (cfs) of capacity. The District may secure an interest in capacity to convey its CVP supplies through an agreement with MWD as well as a proportional share of WaterFix incremental yield through additional agreements with the U.S. Bureau of Reclamation

(Reclamation). Staff has estimated that a capacity interest of 200 cfs, or 6.7% of the 3,000 cfs to be held by MWD for CVP contractors, would provide sufficient reliability to sustain the District's CVP supplies if modeling projections are realized.

Staff's analysis of costs indicates that the WaterFix remains one of the most cost-effective options available, with the District's share of capital costs (unfinanced) in 2017 dollars ranging from \$280 million if the District participates only on the SWP side, to \$650 million if the District participates on both the SWP and CVP sides of the project. The levelized unit cost of project participation is roughly \$600/AF (2017 dollars).

**Table 4. Summary of District costs**

<b>Costs to Santa Clara County</b>	<b>SWP-Side 2.5% share</b>	<b>SWP-CVP Combined</b>
<b>Percent of Total Project Costs</b>	1.7%	3.9%
<b>Total Capital Costs (2017 dollars)</b>	\$280 million	\$650 million
<b>Present Value (PV) fully financed Capital Cost (2017 dollars)</b>	\$230 million	\$535 million
<b>Total Annual O&amp;M (2017 dollars)</b>	\$1.1 million	\$2.5 million
<b>Cost per Acre-Foot (2017 dollars)</b>	\$610	\$600
<b>Rate Impacts (assuming all CWF costs are placed on water rates)</b>		



<b>Monthly Increase per Avg. Household (FY33) N. County</b>	\$4.96	\$10.26
<b>Monthly Increase per Avg. Household (FY33) S. County</b>	\$0.00	\$4.47

District staff continues to participate in WaterFix discussions to further develop the best and most responsible agreements and contract amendments to protect the District's investment and to bring those agreements to the Board for consideration prior to execution.

### **City of Santa Clara's Participation in the District's Countywide Water Reuse Master Plan (CWRMP)**

The San José-Santa Clara Regional Wastewater Facility (RWF) is jointly owned by the cities of San José and Santa Clara. Recycled water produced at RWF is distributed by South Bay Water Recycling. Members of the District Board routinely meet with council members from San José and Santa Clara at the Joint Recycled Water Policy Advisory Committee to discuss matters of mutual interest.

Earlier this year, the District initiated the CWRMP to create a collaborative strategy to integrate and expand recycled and purified water as a local, reliable, environmentally adaptive, drought-resistant water supply and guide strategic investment of public funds over the next 20 years. This CWRMP will result in a comprehensive master plan to facilitate non-potable reuse (NPR) integration and expansion with potable reuse (PR) water development in Santa Clara County in collaboration with recycled water producers and through engagement of critical stakeholders. The Master Plan will also provide a framework to make collaborative decisions and implement integrated actions to increase water supply reliability throughout the region. City of Santa Clara is an active participant through the Stakeholder Task Force (TF). Next steps include additional meetings of the TF through 2019, and development of potential alternatives for expanding recycled and purified water in Santa Clara County.

### **Pacheco Reservoir Expansion Project**

The District is proposing to develop up to a 140,000 acre-foot surface reservoir project by expanding the existing Pacheco Reservoir (Pacheco Reservoir Expansion Project), which is located on the North Fork Pacheco Creek in south-east Santa Clara County. Partners to this project include the District, San Benito County Water District (SBCWD) and Pacheco Pass Water District (PPWD), of which the latter owns and operates the existing 6,000 acre-foot Pacheco Reservoir. On June 26, 2018, the District Board approved an option agreement with PPWD that provides the District with an option to acquire fee ownership of the existing Pacheco Reservoir should the District decide to proceed with construction of the Pacheco Reservoir Expansion Project.

#### *Pacheco Benefits*

Expansion of the existing Pacheco Reservoir will address several water supply, quality, and environmental issues. Specifically, the Pacheco Reservoir Expansion will:

- Improve the resiliency of imported CVP water supplied for recharge.

- Help alleviate taste and odor issues in treated water that typically result from the formation of algae in the San Luis Reservoir during the summer period.
- Mitigate supply interruptions that can occur in late summer/early fall due to lower San Luis Reservoir levels.
- Expand groundwater recharge for medium and high priority sub-basins which would ensure compliance with the Sustainable Groundwater Management Act
- Restore populations of the Federally threatened South Central California Coast Steelhead fish species.

### *Pacheco Funding*

On March 14, 2017, the District executed a Principles of Agreement with SBCWD and PPWD, which committed the parties to coordinate and support the District's preparation and submittal of an application for California Proposition 1 Water Storage Investment Program (WSIP) funding for the Pacheco Reservoir Expansion. This application was submitted by the District to the California Water Commission (CWC) on August 14, 2017, and requested funding for public benefits amounting to \$484.5 million, fifty percent of the estimated cost to construct the Pacheco Reservoir Expansion Project.

The CWC conditionally approved the District's full funding request of \$484.55 million on July 24, 2018, which included an Early Funding award of \$24.2 million. The Early Funding award was authorized by the CWC to reimburse the District for funds expended in the completion of the Environmental Documentation and Permitting for the Pacheco Reservoir Expansion Project. Staff is currently in discussions with the CWC regarding the structure and requirements of the agreement that must be executed to receive the Early Funding award. In addition, for the District to remain eligible to receive the full amount of WSIP funds that have been conditionally awarded (beyond the Early Funding award), a draft CEQA Environmental Impact Report must be issued for public review by December 2021.

The District is also pursuing additional project funding through the Federal Water Infrastructure Improvements for the Nation (WIIN) Act. Should the Pacheco Reservoir Expansion qualify, the WIIN Act has the potential to fund up to 25 percent of the total project costs that are not covered by state investment through WSIP. The first step in the process to apply for WIIN Act funding is for the Governor of California to designate the Pacheco Reservoir Expansion as a "State-Led-Storage Project". To this end, Chair Santos sent a letter to Governor Brown on July 2, 2018, officially requesting that the Pacheco Reservoir Expansion receive the required designation.

### **Anderson Dam Project Update**

The Anderson Dam Seismic Retrofit Project (Anderson Dam Retrofit Project) work is currently focused on design and environmental documentation. The 60% design plans were completed in April 2018 and are currently being reviewed by the state Division of Safety of Dams (DSOD) and the Federal Energy Regulatory Commission (FERC).

The Anderson Dam Retrofit Project's draft Environmental Impact Report (EIR) is currently being prepared. In parallel, the District has initiated meetings with various environmental regulatory agencies (California Dept. of Fish & Wildlife; Regional Water Quality Control Board; Army Corps of Engineers; U.S. Fish & Wildlife Service; National Marine Fisheries Service; and others) to discuss the

Anderson Dam Retrofit Project construction, the likely environmental impacts, and to determine what mitigation measures and permit conditions will be required by these agencies before the Anderson Dam Retrofit Project can be constructed. The draft EIR will be released for public review later this calendar year.

The Anderson Dam Retrofit Project's seismic retrofit construction is anticipated to begin in 2020 or 2021. It is estimated to take 4 to 5 years to complete all the dam improvements.

Before the Anderson Dam Retrofit Project construction begins, the District's Office of Emergency Services will establish communication protocols with appropriate personnel at the City of San Jose to share real-time flow diversion information and to provide them with warnings, as necessary, of higher-than-normal diversions in the event of heavy, back-to-back storm systems.

### **Infrastructure Overview**

The District operates a complex infrastructure and integrates natural and constructed systems to capture and convey raw and treated water. The District's system can deliver about 300 million gallons of raw water and 200 million gallons of treated drinking water every day. The District's distribution system includes 10 reservoirs, 3 pump stations, 142 miles of pipelines, 4 water treatment plants, 393 acres of recharge ponds, and 275 miles of jurisdictional streams.

The District plans to invest approximately \$2.1 Billion in its 5-year Capital Improvement Program (excluding the Pacheco Reservoir Expansion Project) to ensure the reliability of our water supply infrastructure. Some of the current/recent capital investments include:

- 10-Year Pipeline Inspection & Rehabilitation Program - This Program involves the inspection, planning, design, and renewal of the District's pipelines and tunnels to rehabilitate distressed pipe sections as required, and replace old valves, flow meters, pipeline appurtenances assemblies, and piping, as appropriate. The District recently completed rehabilitation and repair of the Almaden Valley Pipeline and the Pacheco Conduit. In the next two years, the

Program work will include the Cross Valley Pipeline, Calero Pipeline, and the Central Pipeline.

- Penitencia Force Main/Delivery Main Seismic Retrofit - This recently-completed project included the replacement of about 900 lineal feet of each of three pipelines - the 60-inch diameter Penitencia Force Main, 66-inch diameter Penitencia Delivery Main, and 72-inch diameter South Bay Aqueduct, currently conveying raw and treated water to and from the Penitencia Water Treatment Plant. This project has reduced the potential damage to and post-earthquake recovery time of the pipelines and the associated vault structures through the innovative use of earthquake-resistant ductile iron pipe.
- Anderson Dam Seismic Retrofit - The District is in the process of retrofitting four of its dams and associated infrastructure to meet current seismic design standards and other Division of Safety of Dam (DSOD) design and operational criteria. The current estimated investment for these four projects is \$780M. Anderson Dam is the largest of the District's dams, with a retrofit estimated cost of \$550M. Anderson Dam's project work will include excavation and reconstruction of its embankments; replacement of the intake structure and installation of two new outlet pipes; and replacement of the emergency spillway structure.

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**How Water Supply Services Are Funded**

The District is the groundwater management agency and primary wholesale water provider in the County. The District actively manages the groundwater basins by replenishing them with local and imported water, and by operating surface water treatment plants that provide “in-lieu” recharge. A complex system that includes 10 reservoirs, 142 miles of pipelines, 4 water treatment plants, and 3 pump stations, helps keep water flowing across the County.

The cost to operate and maintain this system is reimbursed primarily through groundwater charges and treated water charges paid by water retail customers. Groundwater charges differ depending on the “zone of benefit.” The North County (Zone W-2) is defined as the portion of the County north of the Coyote Valley. The South County (Zone W-5) is defined as the portion of the County extending from Coyote Valley to Gilroy.

District Board Resolution 99-21 guides staff in the development of the overall pricing structure based on principles established in 1971. The general approach is to charge the recipients of the various benefits for the benefits received. More specifically, pricing is structured to manage surface water, groundwater supplies and recycled water conjunctively to ensure the sustainability of the Santa Clara Valley Groundwater Basin and Llagas Groundwater Subbasin.

Each year, the Board establishes groundwater production charges as well as surface water charges, recycled water charges, treated water surcharges, and the amount of the SWP cost to be recouped through the SWP Override tax. The groundwater charge increase for North County Zone W-2 for Fiscal Year 2018-19 equates to an increase of \$3.92 per month to the average household and is driven by critical infrastructure repair and replacement needs and efforts to bolster water supply reliability (this does not include any increase from the retail provider).

**FINANCIAL IMPACT:**

There is no fiscal impact from this presentation.

**CEQA:**

The recommended action does not constitute a project under CEQA because it does not have a potential for resulting in direct or reasonably foreseeable indirect physical change in the environment.

**ATTACHMENTS:**

Attachment 1: PowerPoint

**UNCLASSIFIED MANAGER:**

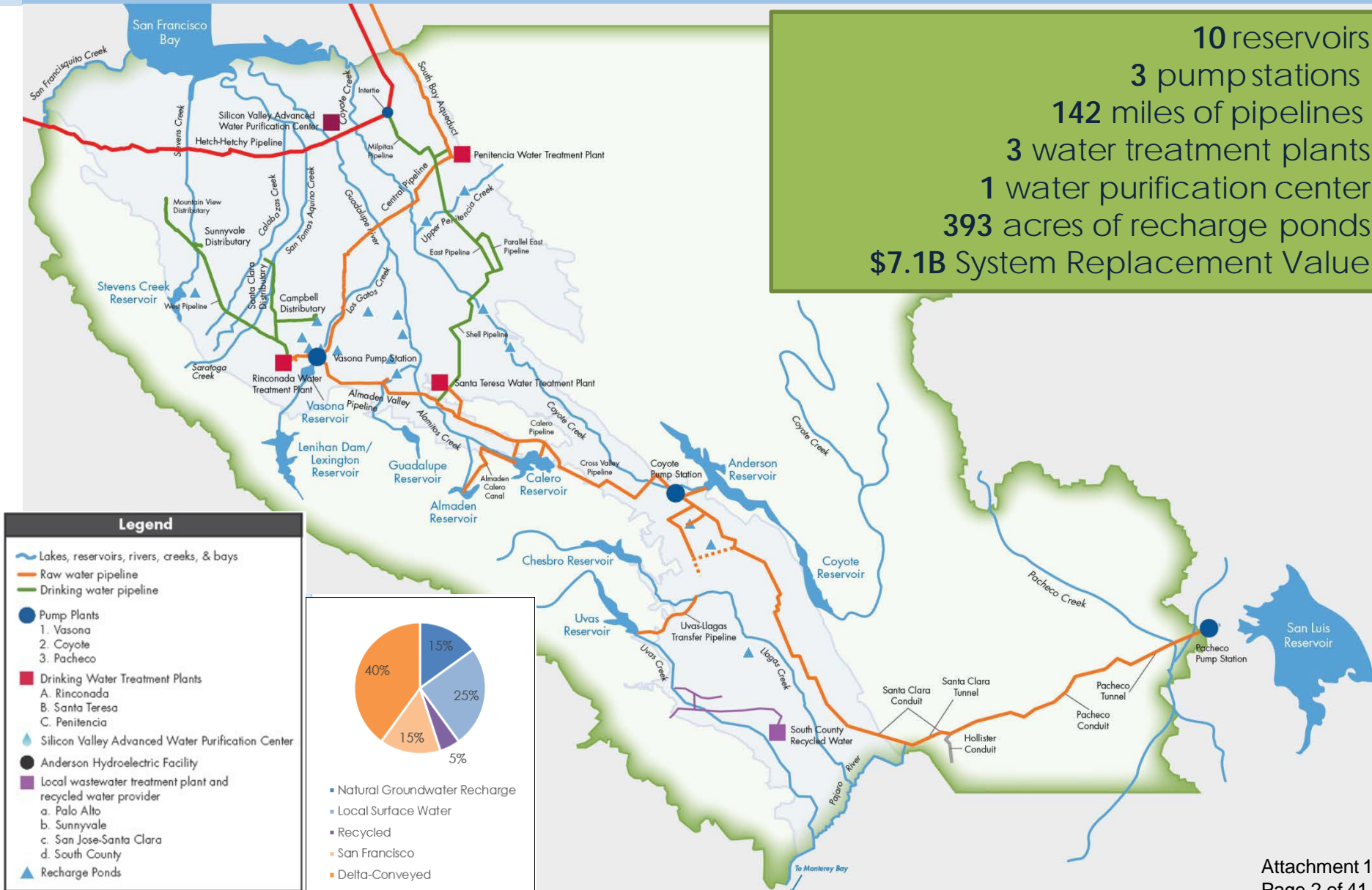
Nina Hawk, 408-630-2736

# 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

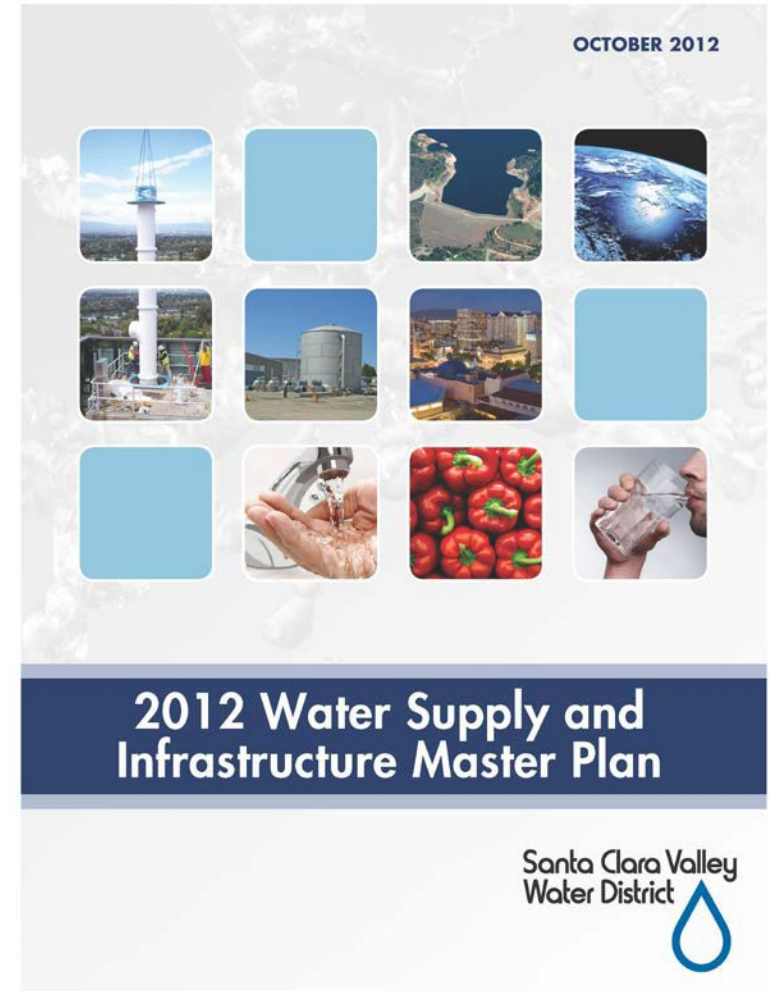


# Water Supply

# 2012 Master Plan “Ensure Sustainability” Strategy

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

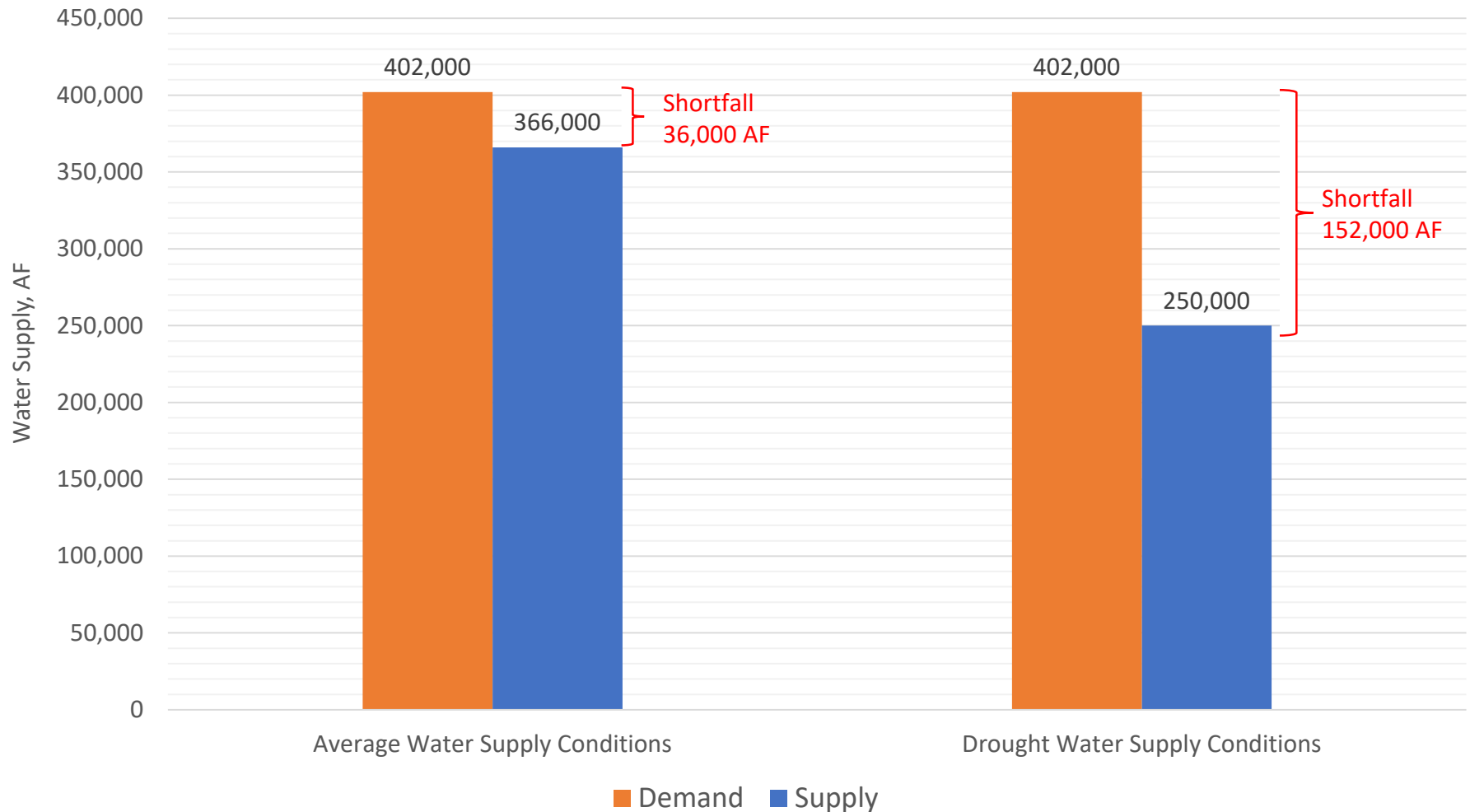
- ▶ Secure existing system
  - ▶ Dam retrofits, asset management, pipeline repair, maintain imports
- ▶ Optimize existing system
  - ▶ New recharge, new pipelines
- ▶ Expand conservation and reuse
  - ▶ Graywater, potable reuse





# 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

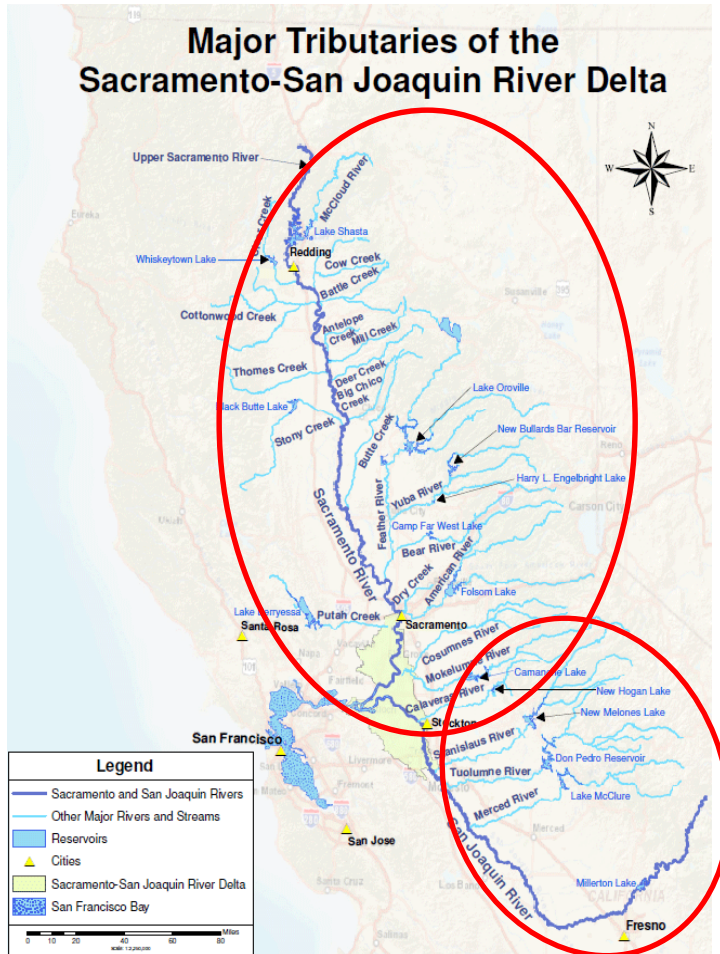
Total District Cost	\$100 million
Additional Water Conservation Savings	10,000 AF
Additional Water Supply Yield	1,000 AF
Unit Cost	\$400/AF

# 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

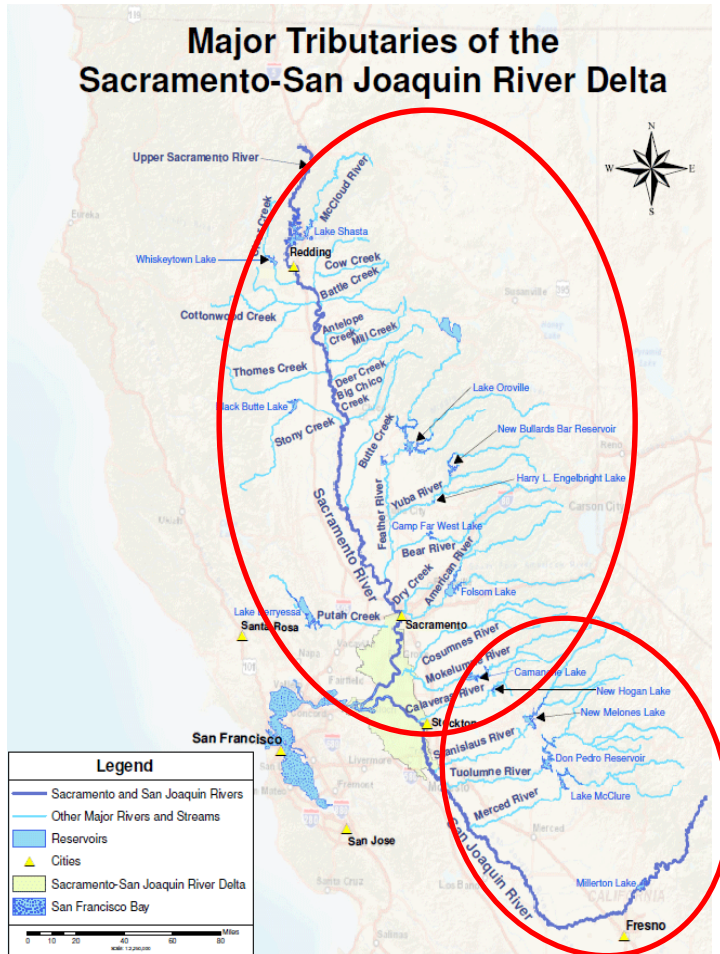
# Bay Delta Water Quality Control Plan

# 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

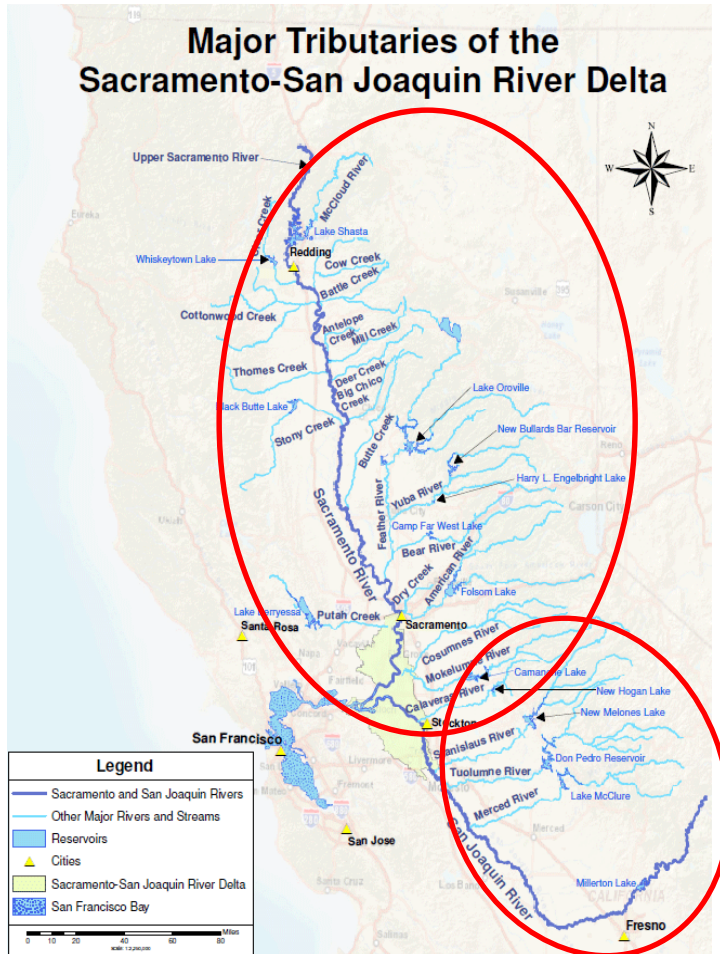
# State Water Board Assessment



- 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

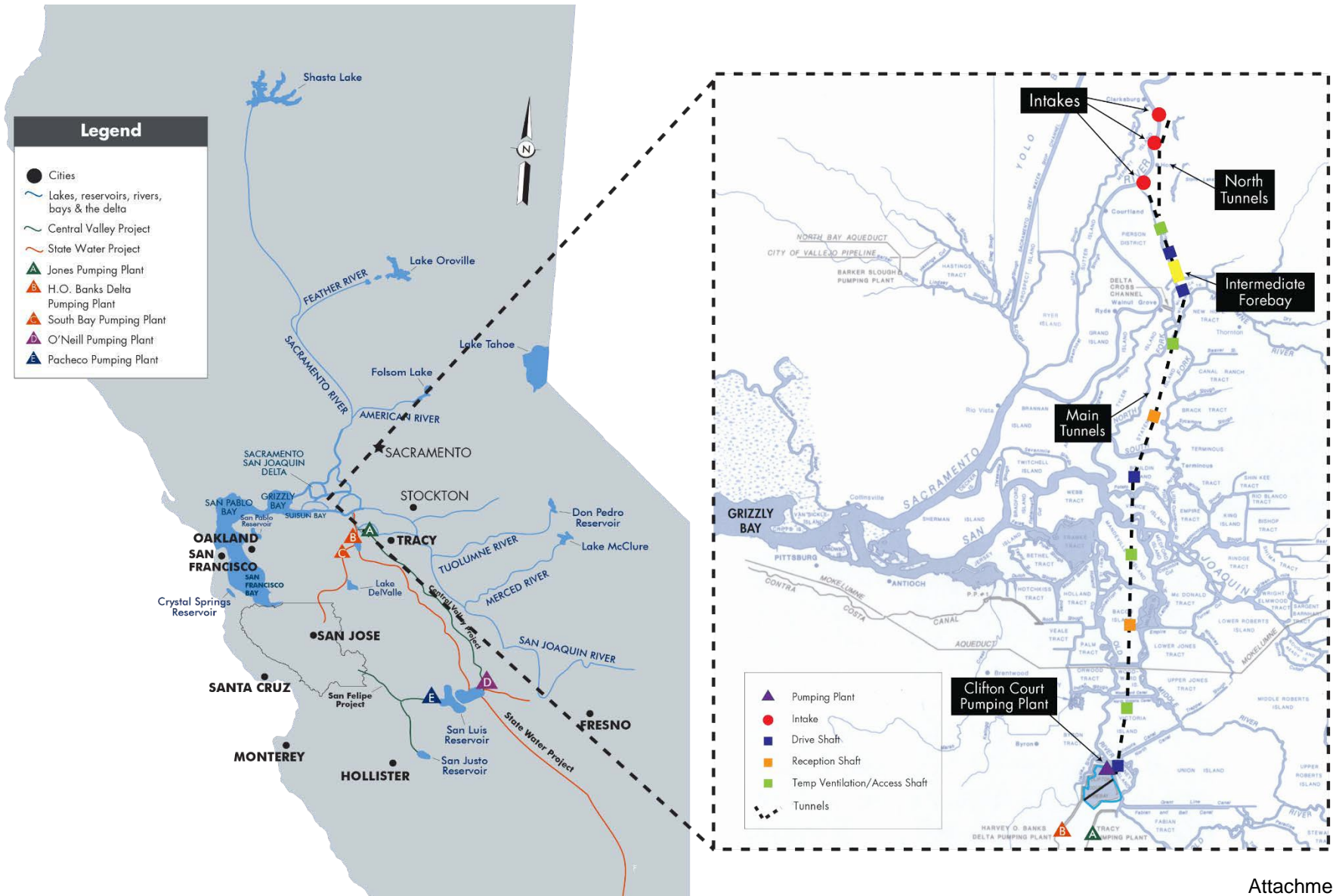


- Phase 1
  - 4 to 15 percent increase in frequency of shortages
  - 5 to 19 percent increase in magnitude of shortages
  - Reduced availability of supplemental transfer supplies
- Phase 2
  - Unknown, but likely significant



# California WaterFix

# 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

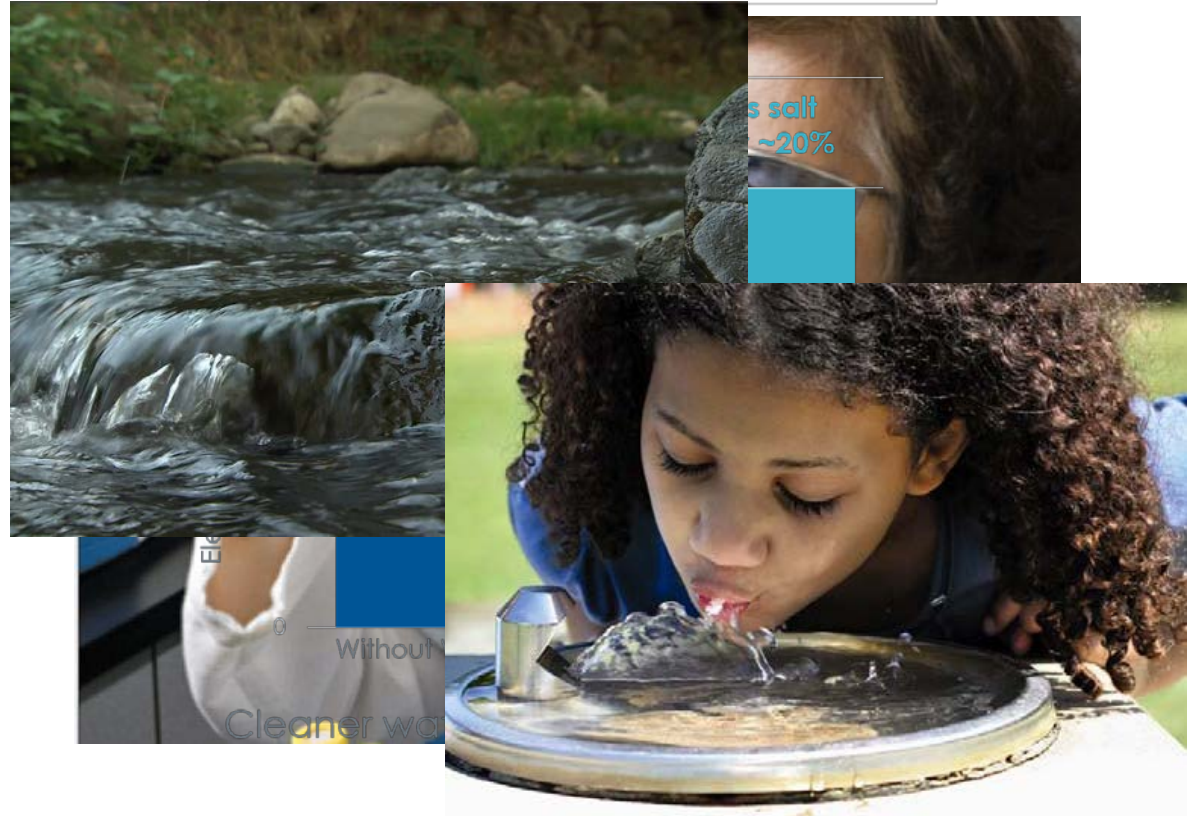


Improves environment for fish



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

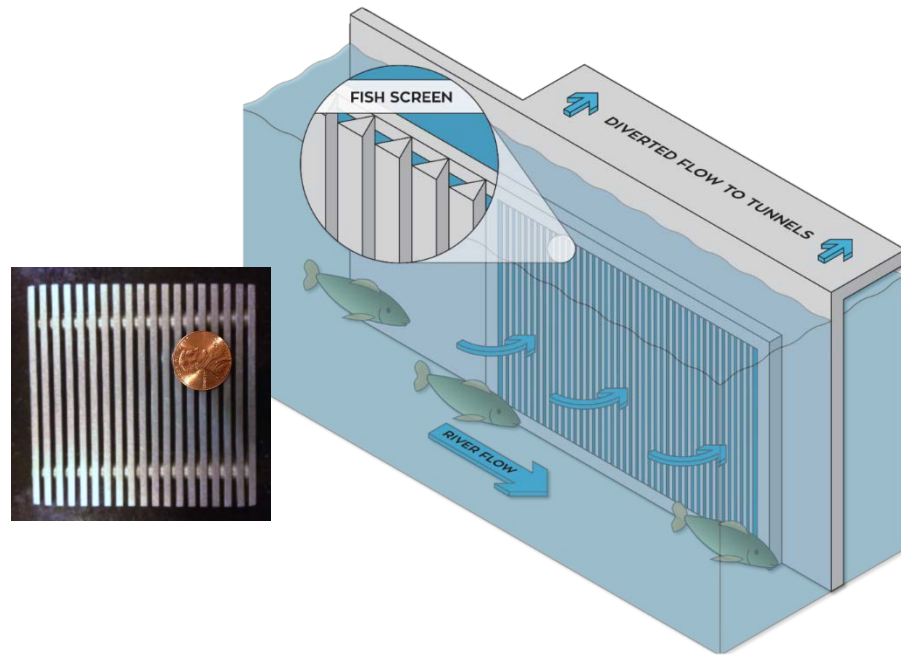


**Improves environment for fish**



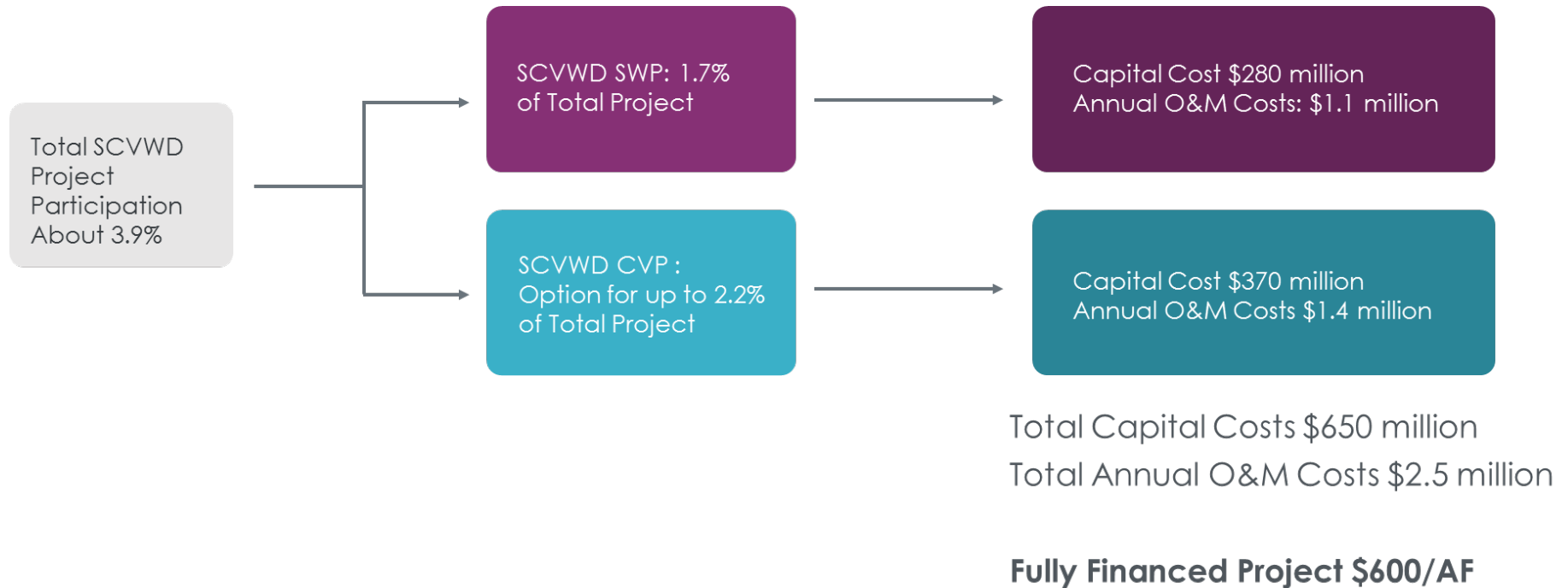
SCVWD has prominent leadership role in WaterFix governance to ensure benefits are achieved

## 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

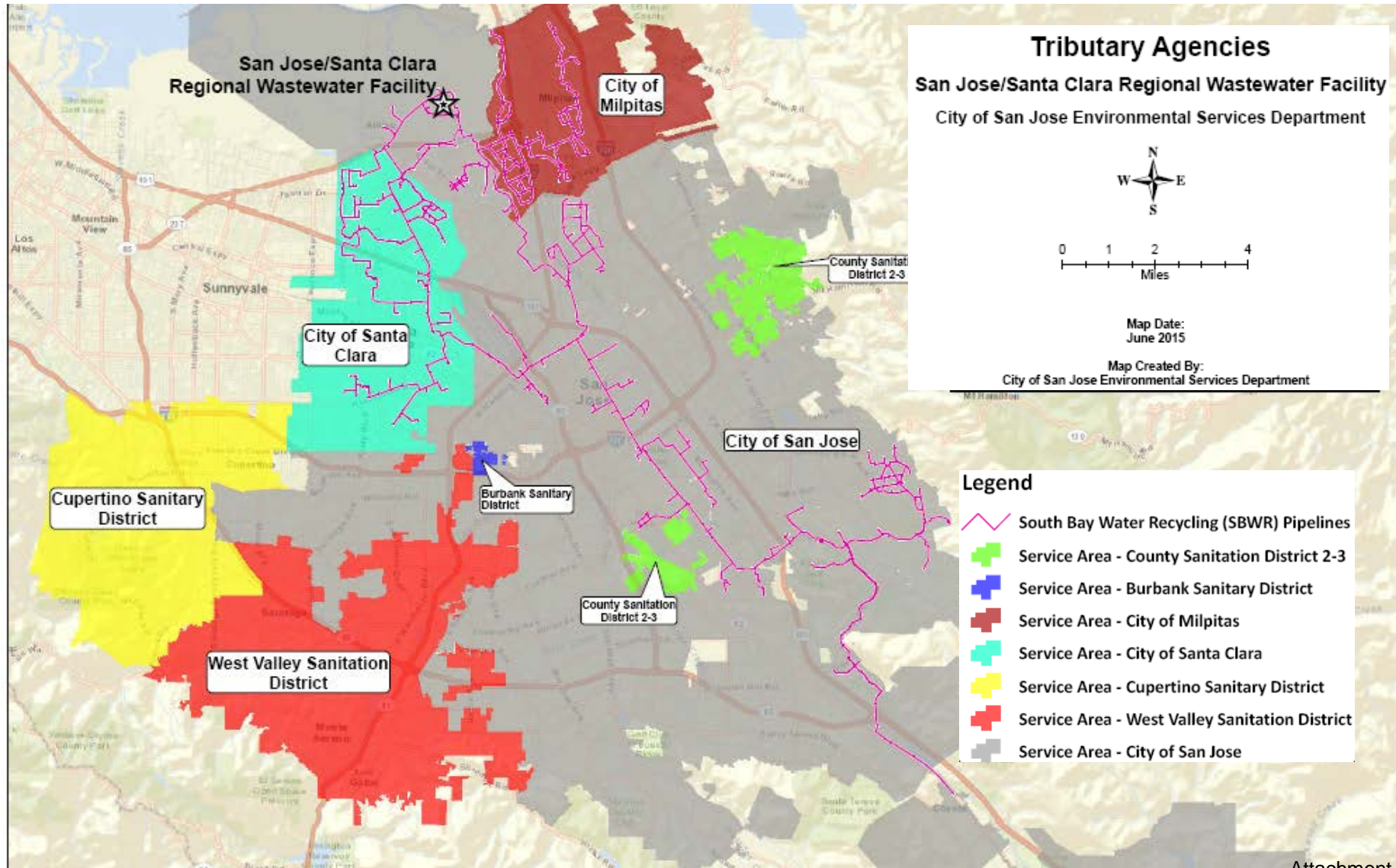
## Objectives

- 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

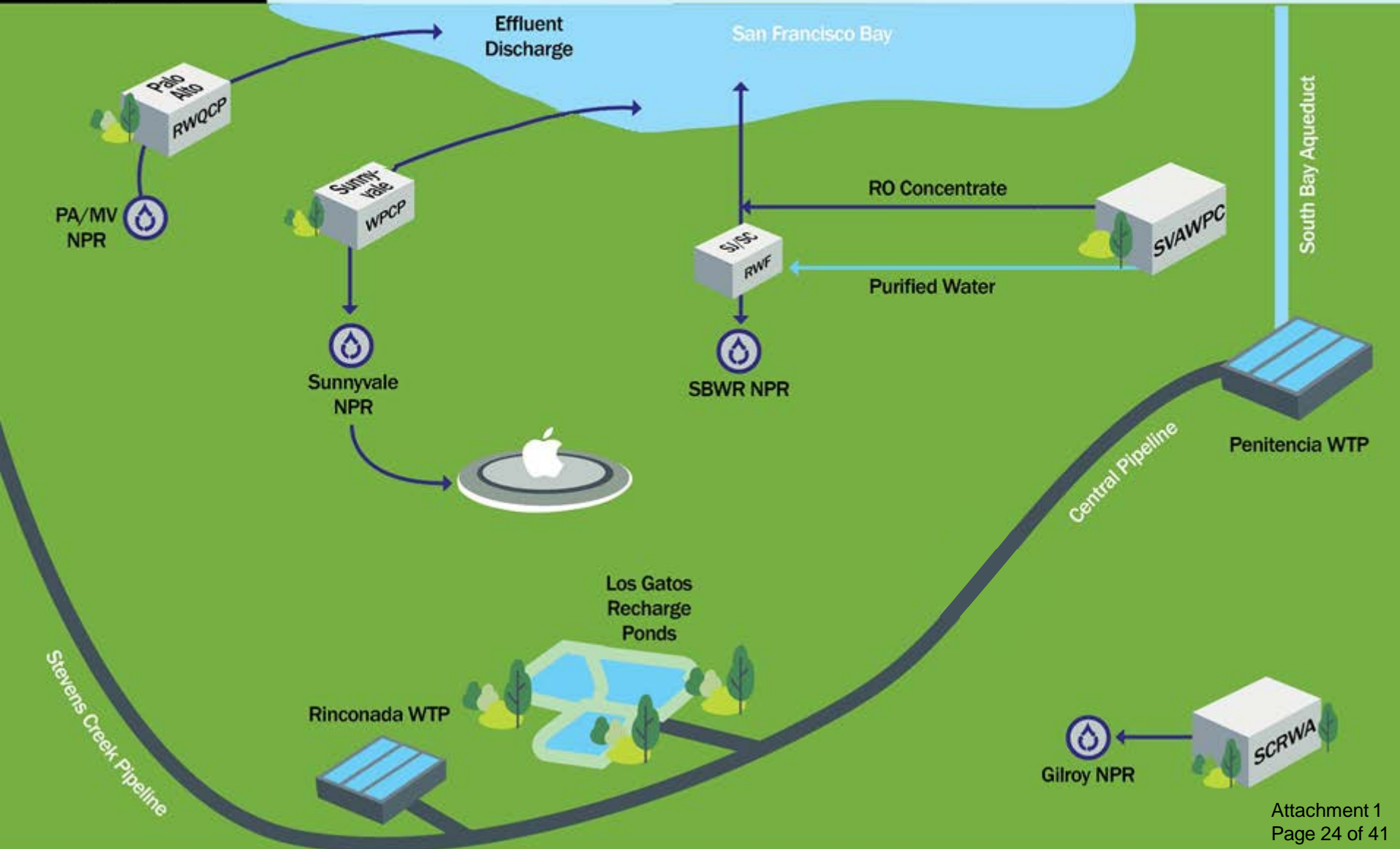
Infrastructure,  
Assets, & Land

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

Public Perception

Schedule & Coordination with other  
Planning Efforts

# Existing systems



# Countywide Water Reuse Master Plan Stakeholder Engagement

## 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



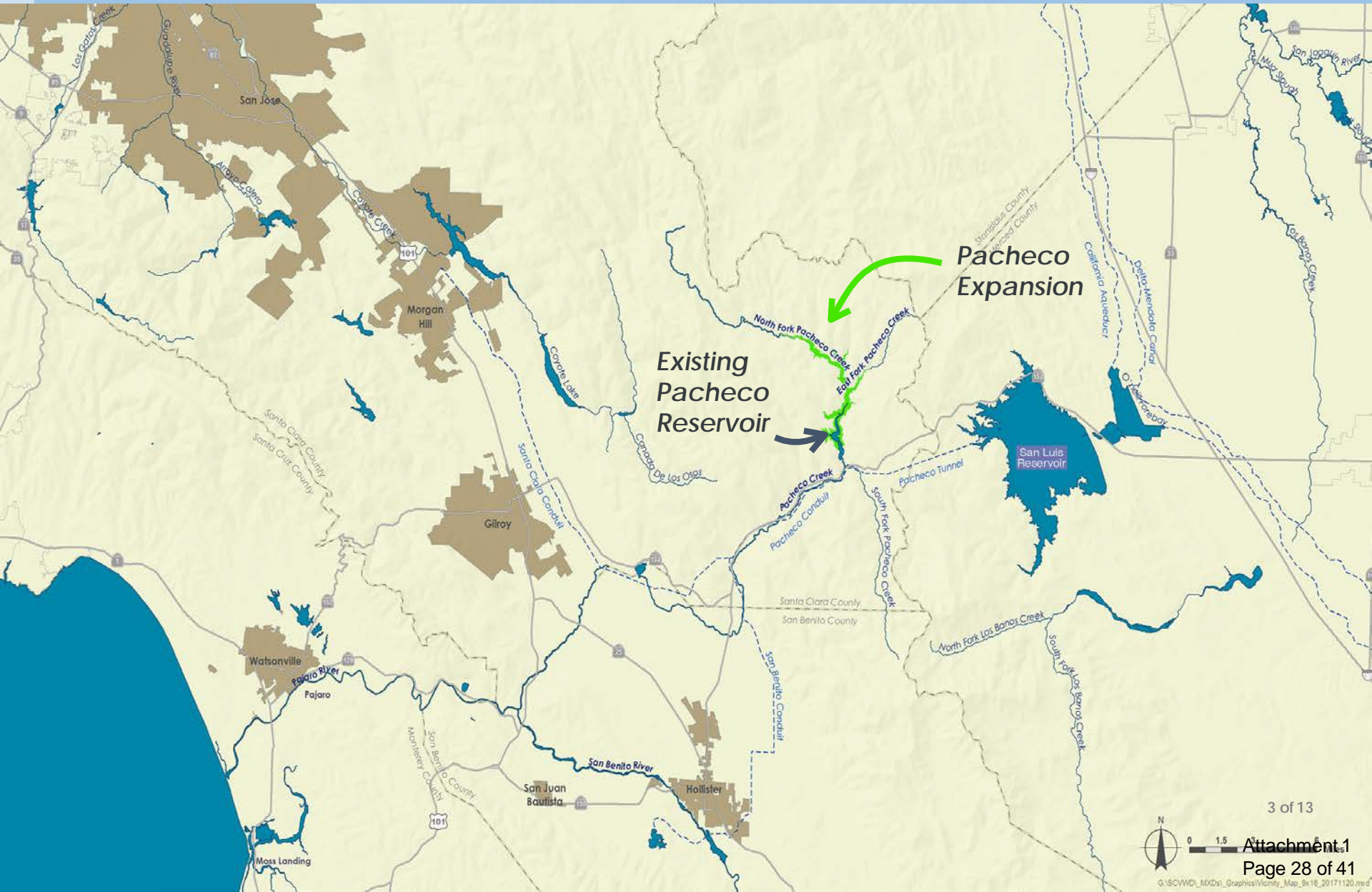
# Countywide Water Reuse Master Plan Next Steps



- **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





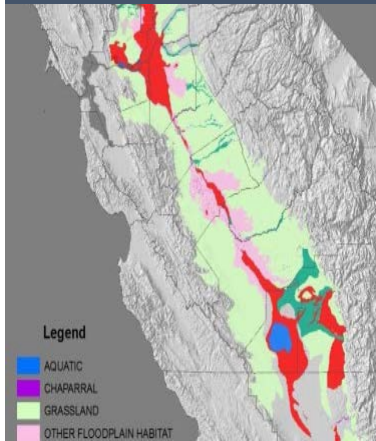
# The Pacheco Reservoir Expansion Will Address Five Big Challenges

## 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

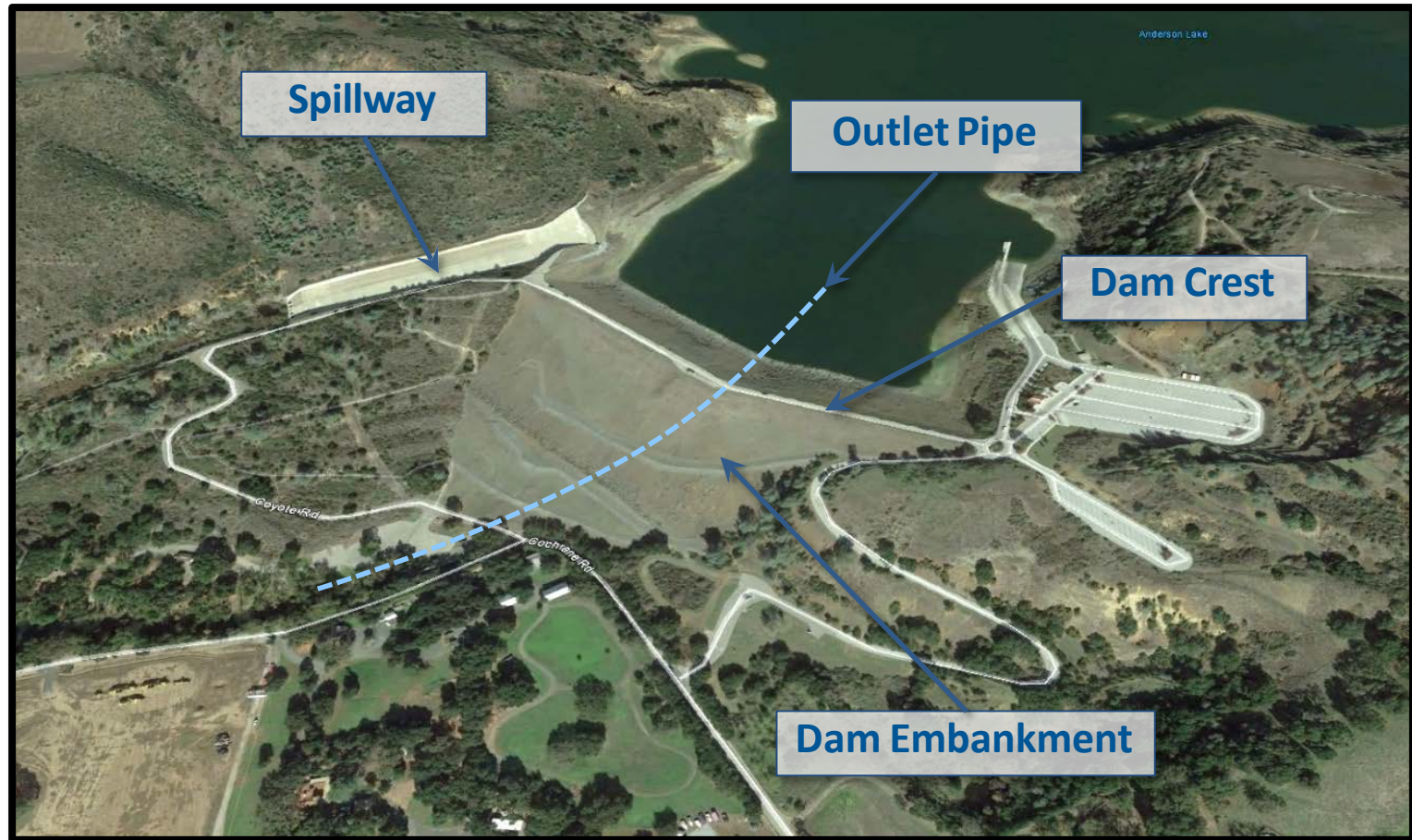


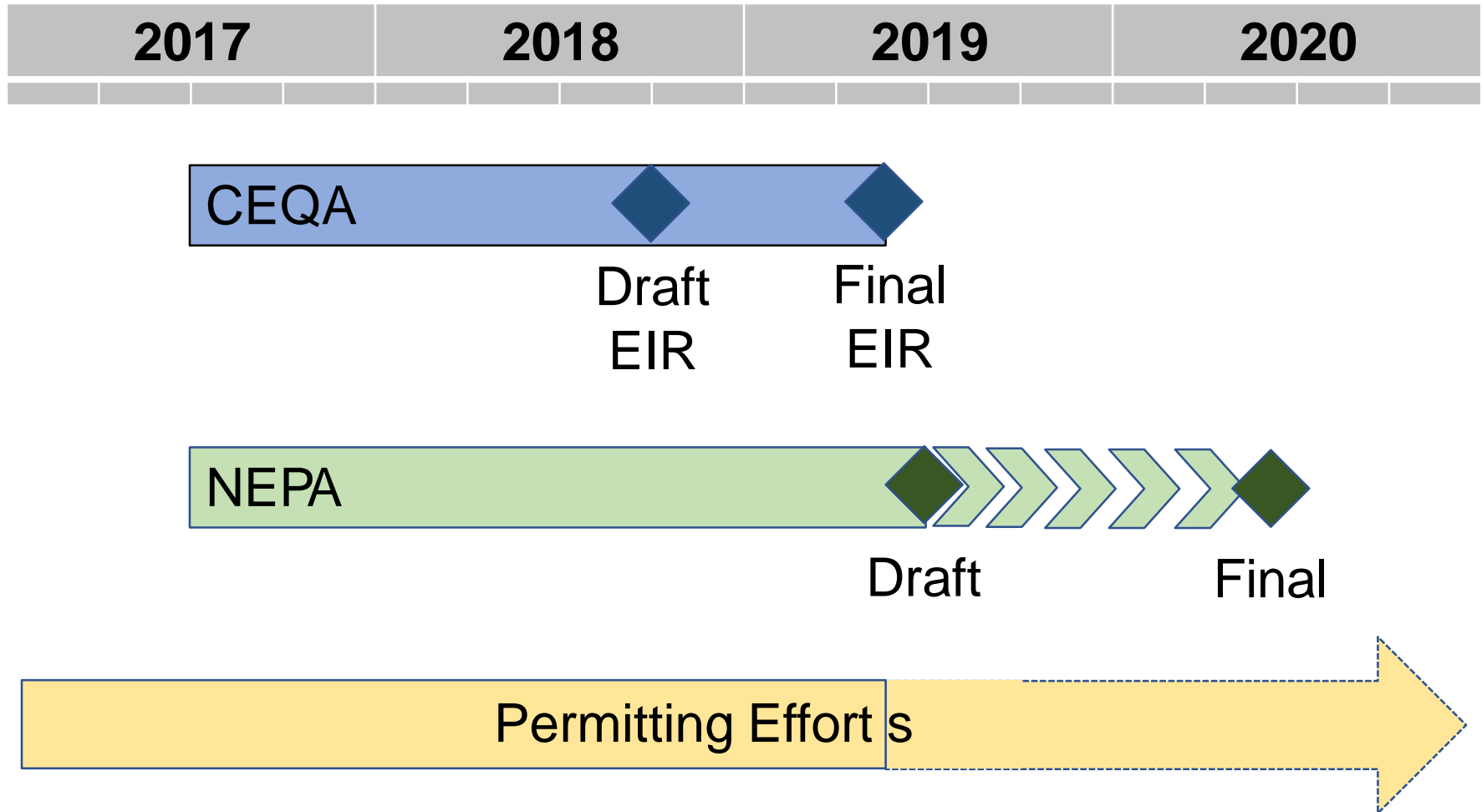
Image Source: Google Earth

# Anderson Dam Project Update

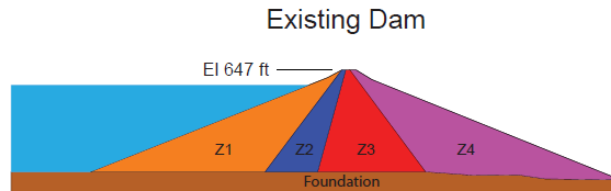
## Anderson Dam – Current Project Efforts

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

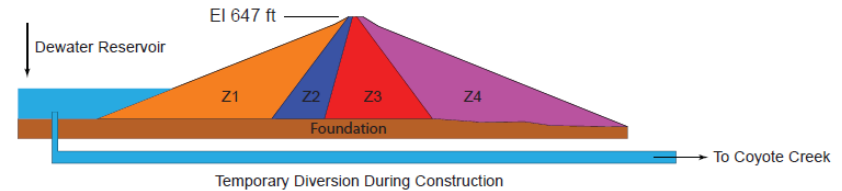
# CEQA/NEPA/Permitting Timeline Overview



# Anderson Dam Embankment Retrofit Sequence



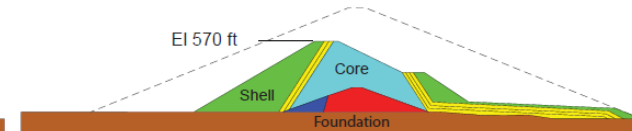
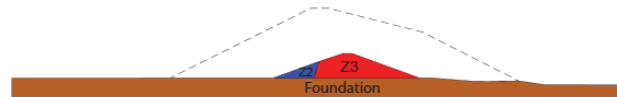
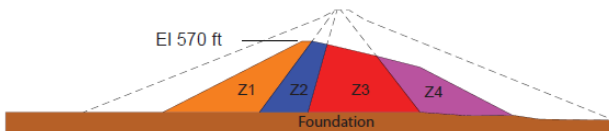
Year 1 and 2  
Construction of Diversion Tunnel and Dewatering



Year 3: April - October  
Stage 1 Excavation

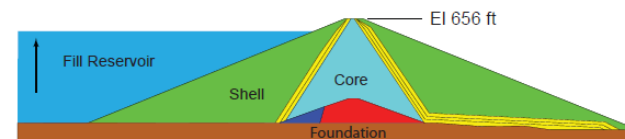
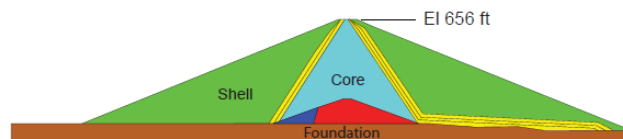
Year 4: April - June  
Stage 2 Excavation

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



- ▶ 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

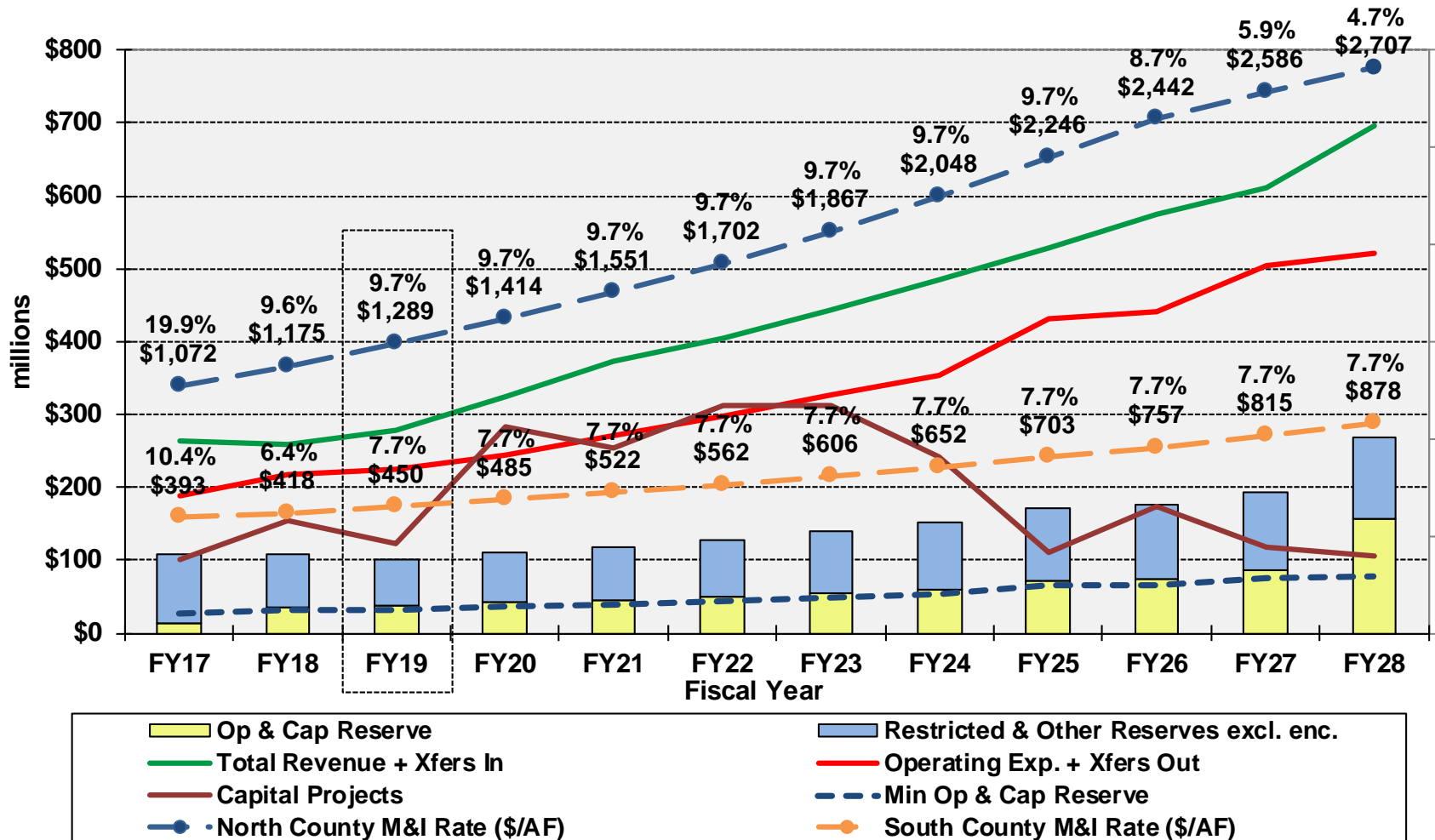
- Plan & construct improvements to infrastructure
- Purchase imported water
- Operate & maintain local reservoirs
- Operate & maintain raw & recycled water pipelines
- Monitor & protect groundwater from pollutants



# 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**

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**File No.:** 18-0710

**Agenda Date:** 9/5/2018

**Item No.:** 2.1.

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## BOARD AGENDA MEMORANDUM

### **SUBJECT:**

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

### **RECOMMENDATION:**

That the Santa Clara Valley Water District Board of Directors and Santa Clara City Council consider directing their respective staff to continue their commitment to meaningful engagement in pursuit of new and innovative partnership opportunities for the continued delivery of a safe, and reliable water supply, and flood protection, in Santa Clara County.

### **SUMMARY:**

This item describes various programs that the Santa Clara Valley Water District (District) provides in support and partnership with the City of Santa Clara (City) as they provide a safe and reliable water supply in the City.

### **Water Supply and Infrastructure Master Plan**

As the groundwater management agency and primary water resources agency for Santa Clara County (County), the District has a mission to provide safe, clean water for the County. In 2012, the Board adopted the Water Supply and Infrastructure Master Plan (Water Master Plan) which outlines the District's strategy for providing a reliable and sustainable future water supply for the County and ensuring new water supply investments are effective and efficient. The three key elements of the Water Master Plan strategy are 1) secure existing supplies and infrastructure, 2) optimize the use of existing supplies and infrastructure, and 3) expand water conservation and recycled water use to meet future increases in demands.

The District's Water Master Plan is intended to be updated every five years to adjust to changing conditions. Based on recent analyses, the County could experience shortages of more than thirty percent during extended droughts as demands increase. District staff is updating the Water Master Plan to reflect current and projected conditions and present projects and programs that meet the District's water supply reliability goal.

### **Water Supply Overview**

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Currently, the County's water supply portfolio includes approximately 55 percent imported water sources, 40 percent local water sources (groundwater, surface water), and 5 percent recycled water. Long-term water use averages about 350,000 acre-feet per year (AFY), though use is currently down following the drought. Water use in the County would be more than 70,000 AFY higher if not for District, city, water retailers, and community commitments to water conservation. Water use efficiency programs reduce demand on existing water and energy supplies, helping to lessen the costs and environmental impacts of developing additional supplies. Conservation program elements include a variety of rebate programs for home, landscaping, and businesses as well as service calls and conservation tools. The District plans to increase water conservation contribution savings to 100,000 acre-feet per year by 2030.

To meet the future water needs and promote greater supply diversity, the District continues to explore additional water supply and water demand reduction options. Pursuing supply diversity helps minimize the potential risks of groundwater overdraft and subsidence, as well as overreliance on imported water supplies, which are used to recharge the groundwater basin and irrigate agriculture in Santa Clara County.

Projects being considered include additional water conservation, non-potable recycled water, potable reuse, surface and groundwater storage, stormwater capture, additional recharge ponds, dry year options, etc.

On September 19, 2017, as part of the Water Master Plan update, the District Board authorized staff to begin planning for implementation of the projects and programs in the Water Master Plan's "No Regrets" package. The package, which increases the conservation savings goal to 110,000 AFY by 2040, consists of the following water conservation and stormwater capture projects:

- Advanced metering infrastructure,
- Graywater rebate program expansion,
- Leak repair incentives,
- New Development Model Ordinance, and
- Stormwater capture (agricultural land recharge, stormwater recharge in the Cities of Santa Clara, San Jose and Saratoga, rain barrel rebates, and rain garden rebates).

The next steps in the Water Supply Master Plan Update include bringing a set of preferred projects to the District Board and developing a monitoring and contingency plan. Monitoring supply and demand conditions and reviewing the Water Supply Master Plan investment strategy is important for managing uncertainty, addressing changing regulations and policies, and ensuring that changes in project costs and benefits are considered.

## **Bay Delta Water Quality Control Plan**

The update of the Bay Delta Water Quality Control Plan (Bay Delta Plan) is one of the potential changes that will need to be considered in the context of the District's water supply investment strategy. The Bay Delta Plan, which the State Water Resources Control Board is currently updating,



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establishes water quality objectives and an implementation program for achieving the objectives. The proposed changes include increasing flows in tributaries to the Delta as a means of improving conditions for aquatic species. The changes would reduce urban and agricultural water supplies. The first phase of proposed changes would affect the San Joaquin River, its tributaries, and the southern Delta. Most of the impacts to the Santa Clara County would be from decreases in San Francisco Public Utilities Commission supplies. The frequency of shortages could increase up to 15 percent and the magnitude of shortages could increase by up to almost 20 percent. The impacts from the second phase of changes, which would affect flows in the Sacramento River and its tributaries, as well as interior Delta flows and Delta outflows are unknown but likely more significant.

### **California WaterFix**

On May 8, 2018, the District Board took several actions related to the California WaterFix (WaterFix), including adopting Resolution 18-23 making Responsible Agency findings pursuant to the California Environmental Quality Act (CEQA) and Resolution 18-24, authorizing support of, and participation in, the WaterFix.

Santa Clara County relies on water imported through the Delta by the State Water Project (SWP) and Central Valley Project (CVP) for about 40% of its water supplies, on average. Imported water supplies are projected to decline over time in response to continued environmental degradation in the Delta, climate change and sea level rise, and increased regulatory constraints. Modeling indicates that if no action is taken to improve the existing Delta conveyance approach, the District's SWP and CVP deliveries to the County could drop by about 36,000 AFY. Reductions in these SWP/CVP supplies will have a significant impact on the ability of the District to provide reliable water supplies to our communities, businesses, and local streams, and make it more difficult for us to protect our local groundwater basins and prevent land surface subsidence in North County.

### ***WaterFix Benefits***

With participation in the WaterFix, modeling indicates this decline can be avoided by diversion of water during high flow periods. Total deliveries with the WaterFix would remain similar to current average levels. As reported to the Board on May 8, 2018, the primary benefits of the project are summarized in the table below.

<b>Benefit</b>	<b>Staff Analysis of WaterFix</b>
<b>Sustained water supplies</b>	Offsets supply reduction, improves groundwater storage conditions, increases reserves in the Semitropic Groundwater Bank, reduces the frequency and magnitude of water shortages.

<b>More fish-friendly diversions</b>	Equipped with state-of-the-art fish screens located away from important fish habitat; 52% of SWP/CVP exports, on average, will be through these more fish friendly diversions; diverts primarily during higher flow periods safer for fish.
<b>Reduced reverse river flows to protect fish</b>	Changes negative flow (-2,200 cfs on average) to more natural, positive flow (+50 cfs); reduces entrainment.
<b>Improved water quality</b>	20% decrease in average annual salinity of SWP/CVP exports; reduces salt loading to drinking water treatment plants and county groundwater basins.
<b>Resiliency during Delta failure events</b>	Continues water deliveries if Delta fails from earthquakes, sea level rise, and extreme flood events.
<b>Resiliency to climate change including sea level rise</b>	Diverts where salinity intrusion will be minimal under sea level rise scenarios; facilitates diversion during extreme storm events.
<b>Increased access to transfer supplies</b>	Conveys transfer water when existing system cannot; reduces water loss during transport.

### WaterFix Costs

SWP contractors are expected to pay 67% of project costs and receive 67% of the WaterFix incremental yield; the District would receive 2.5% of the SWP benefit share, corresponding to its share of SWP contract supply (i.e., "Table A" contract amount). Metropolitan Water District (MWD) is expected to finance the 33% share originally intended for the CVP contractors and, in return, receive an interest in 3,000 cubic feet per second (cfs) of capacity. The District may secure an interest in capacity to convey its CVP supplies through an agreement with MWD as well as a proportional share of WaterFix incremental yield through additional agreements with the U.S. Bureau of Reclamation (Reclamation). Staff has estimated that a capacity interest of 200 cfs, or 6.7% of the 3,000 cfs to be held by MWD for CVP contractors, would provide sufficient reliability to sustain the District's CVP supplies if modeling projections are realized.

Staff's analysis of costs indicates that the WaterFix remains one of the most cost-effective options available, with the District's share of capital costs (unfinanced) in 2017 dollars ranging from \$280 million if the District participates only on the SWP side, to \$650 million if the District participates on both the SWP and CVP sides of the project. The levelized unit cost of project participation is roughly \$600/AF (2017 dollars).

**Table 4. Summary of District costs**

	SWP-Side 2.5% share	SWP-CVP Combined
<b>Costs to Santa Clara County</b>		

<b>Percent of Total Project Costs</b>	1.7%	3.9%
<b>Total Capital Costs (2017 dollars)</b>	\$280 million	\$650 million
<b>Present Value (PV) fully financed Capital Cost (2017 dollars)</b>	\$230 million	\$535 million
<b>Total Annual O&amp;M (2017 dollars)</b>	\$1.1 million	\$2.5 million
<b>Cost per Acre-Foot (2017 dollars)</b>	\$610	\$600
<b>Rate Impacts (assuming all CWF costs are placed on water rates)</b>		
<b>Monthly Increase per Avg. Household (FY33) N. County</b>	\$4.96	\$10.26
<b>Monthly Increase per Avg. Household (FY33) S. County</b>	\$0.00	\$4.47

District staff continues to participate in WaterFix discussions to further develop the best and most responsible agreements and contract amendments to protect the District's investment and to bring those agreements to the Board for consideration prior to execution.

#### **City of Santa Clara's Participation in the District's Countywide Water Reuse Master Plan (CWRMP)**

The San José-Santa Clara Regional Wastewater Facility (RWF) is jointly owned by the cities of San José and Santa Clara. Recycled water produced at RWF is distributed by South Bay Water Recycling. Members of the District Board routinely meet with council members from San José and Santa Clara at the Joint Recycled Water Policy Advisory Committee to discuss matters of mutual interest.

Earlier this year, the District initiated the CWRMP to create a collaborative strategy to integrate and expand recycled and purified water as a local, reliable, environmentally adaptive, drought-resistant water supply and guide strategic investment of public funds over the next 20 years. This CWRMP will result in a comprehensive master plan to facilitate non-potable reuse (NPR) integration and expansion with potable reuse (PR) water development in Santa Clara County in collaboration with recycled water producers and through engagement of critical stakeholders. The Master Plan will also provide a framework to make collaborative decisions and implement integrated actions to increase water supply reliability throughout the region. City of Santa Clara is an active participant through the Stakeholder Task Force (TF). Next steps include additional meetings of the TF through 2019, and development of potential alternatives for expanding recycled and purified water in Santa Clara County.

#### **Pacheco Reservoir Expansion Project**

The District is proposing to develop up to a 140,000 acre-foot surface reservoir project by expanding the existing Pacheco Reservoir (Pacheco Reservoir Expansion Project), which is located on the North Fork Pacheco Creek in south-east Santa Clara County. Partners to this project include the District, San Benito County Water District (SBCWD) and Pacheco Pass Water District (PPWD), of which the latter owns and operates the existing 6,000 acre-foot Pacheco Reservoir. On June 26,

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2018, the District Board approved an option agreement with PPWD that provides the District with an option to acquire fee ownership of the existing Pacheco Reservoir should the District decide to proceed with construction of the Pacheco Reservoir Expansion Project.

### *Pacheco Benefits*

Expansion of the existing Pacheco Reservoir will address several water supply, quality, and environmental issues. Specifically, the Pacheco Reservoir Expansion will:

- Improve the resiliency of imported CVP water supplied for recharge.
- Help alleviate taste and odor issues in treated water that typically result from the formation of algae in the San Luis Reservoir during the summer period.
- Mitigate supply interruptions that can occur in late summer/early fall due to lower San Luis Reservoir levels.
- Expand groundwater recharge for medium and high priority sub-basins which would ensure compliance with the Sustainable Groundwater Management Act
- Restore populations of the Federally threatened South Central California Coast Steelhead fish species.

### *Pacheco Funding*

On March 14, 2017, the District executed a Principles of Agreement with SBCWD and PPWD, which committed the parties to coordinate and support the District's preparation and submittal of an application for California Proposition 1 Water Storage Investment Program (WSIP) funding for the Pacheco Reservoir Expansion. This application was submitted by the District to the California Water Commission (CWC) on August 14, 2017, and requested funding for public benefits amounting to \$484.5 million, fifty percent of the estimated cost to construct the Pacheco Reservoir Expansion Project.

The CWC conditionally approved the District's full funding request of \$484.55 million on July 24, 2018, which included an Early Funding award of \$24.2 million. The Early Funding award was authorized by the CWC to reimburse the District for funds expended in the completion of the Environmental Documentation and Permitting for the Pacheco Reservoir Expansion Project. Staff is currently in discussions with the CWC regarding the structure and requirements of the agreement that must be executed to receive the Early Funding award. In addition, for the District to remain eligible to receive the full amount of WSIP funds that have been conditionally awarded (beyond the Early Funding award), a draft CEQA Environmental Impact Report must be issued for public review by December 2021.

The District is also pursuing additional project funding through the Federal Water Infrastructure Improvements for the Nation (WIIN) Act. Should the Pacheco Reservoir Expansion qualify, the WIIN Act has the potential to fund up to 25 percent of the total project costs that are not covered by state

investment through WSIP. The first step in the process to apply for WIIN Act funding is for the Governor of California to designate the Pacheco Reservoir Expansion as a “State-Led-Storage Project”. To this end, Chair Santos sent a letter to Governor Brown on July 2, 2018, officially requesting that the Pacheco Reservoir Expansion receive the required designation.

### **Anderson Dam Project Update**

The Anderson Dam Seismic Retrofit Project (Anderson Dam Retrofit Project) work is currently focused on design and environmental documentation. The 60% design plans were completed in April 2018 and are currently being reviewed by the state Division of Safety of Dams (DSOD) and the Federal Energy Regulatory Commission (FERC).

The Anderson Dam Retrofit Project’s draft Environmental Impact Report (EIR) is currently being prepared. In parallel, the District has initiated meetings with various environmental regulatory agencies (California Dept. of Fish & Wildlife; Regional Water Quality Control Board; Army Corps of Engineers; U.S. Fish & Wildlife Service; National Marine Fisheries Service; and others) to discuss the Anderson Dam Retrofit Project construction, the likely environmental impacts, and to determine what mitigation measures and permit conditions will be required by these agencies before the Anderson Dam Retrofit Project can be constructed. The draft EIR will be released for public review later this calendar year.

The Anderson Dam Retrofit Project’s seismic retrofit construction is anticipated to begin in 2020 or 2021. It is estimated to take 4 to 5 years to complete all the dam improvements.

Before the Anderson Dam Retrofit Project construction begins, the District’s Office of Emergency Services will establish communication protocols with appropriate personnel at the City of San Jose to share real-time flow diversion information and to provide them with warnings, as necessary, of higher-than-normal diversions in the event of heavy, back-to-back storm systems.

### **Infrastructure Overview**

The District operates a complex infrastructure and integrates natural and constructed systems to capture and convey raw and treated water. The District’s system can deliver about 300 million gallons of raw water and 200 million gallons of treated drinking water every day. The District’s distribution system includes 10 reservoirs, 3 pump stations, 142 miles of pipelines, 4 water treatment plants, 393 acres of recharge ponds, and 275 miles of jurisdictional streams.

The District plans to invest approximately \$2.1 Billion in its 5-year Capital Improvement Program (excluding the Pacheco Reservoir Expansion Project) to ensure the reliability of our water supply infrastructure. Some of the current/recent capital investments include:

- **10-Year Pipeline Inspection & Rehabilitation Program** - This Program involves the inspection, planning, design, and renewal of the District’s pipelines and tunnels to rehabilitate distressed pipe sections as required, and replace old valves, flow meters, pipeline appurtenances assemblies, and piping, as appropriate. The District recently completed rehabilitation and repair of the Almaden Valley Pipeline and the Pacheco Conduit. In the next two years, the

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Program work will include the Cross Valley Pipeline, Calero Pipeline, and the Central Pipeline.

- Penitencia Force Main/Delivery Main Seismic Retrofit - This recently-completed project included the replacement of about 900 lineal feet of each of three pipelines - the 60-inch diameter Penitencia Force Main, 66-inch diameter Penitencia Delivery Main, and 72-inch diameter South Bay Aqueduct, currently conveying raw and treated water to and from the Penitencia Water Treatment Plant. This project has reduced the potential damage to and post-earthquake recovery time of the pipelines and the associated vault structures through the innovative use of earthquake-resistant ductile iron pipe.
- Anderson Dam Seismic Retrofit - The District is in the process of retrofitting four of its dams and associated infrastructure to meet current seismic design standards and other Division of Safety of Dam (DSOD) design and operational criteria. The current estimated investment for these four projects is \$780M. Anderson Dam is the largest of the District's dams, with a retrofit estimated cost of \$550M. Anderson Dam's project work will include excavation and reconstruction of its embankments; replacement of the intake structure and installation of two new outlet pipes; and replacement of the emergency spillway structure.

### **How Water Supply Services Are Funded**

The District is the groundwater management agency and primary wholesale water provider in the County. The District actively manages the groundwater basins by replenishing them with local and imported water, and by operating surface water treatment plants that provide "in-lieu" recharge. A complex system that includes 10 reservoirs, 142 miles of pipelines, 4 water treatment plants, and 3 pump stations, helps keep water flowing across the County.

The cost to operate and maintain this system is reimbursed primarily through groundwater charges and treated water charges paid by water retail customers. Groundwater charges differ depending on the "zone of benefit." The North County (Zone W-2) is defined as the portion of the County north of the Coyote Valley. The South County (Zone W-5) is defined as the portion of the County extending from Coyote Valley to Gilroy.

District Board Resolution 99-21 guides staff in the development of the overall pricing structure based on principles established in 1971. The general approach is to charge the recipients of the various benefits for the benefits received. More specifically, pricing is structured to manage surface water, groundwater supplies and recycled water conjunctively to ensure the sustainability of the Santa Clara Valley Groundwater Basin and Llagas Groundwater Subbasin.

Each year, the Board establishes groundwater production charges as well as surface water charges, recycled water charges, treated water surcharges, and the amount of the SWP cost to be recouped through the SWP Override tax. The groundwater charge increase for North County Zone W-2 for Fiscal Year 2018-19 equates to an increase of \$3.92 per month to the average household and is driven by critical infrastructure repair and replacement needs and efforts to bolster water supply reliability (this does not include any increase from the retail provider).

### **FINANCIAL IMPACT:**

There is no fiscal impact from this presentation.

**CEQA:**

The recommended action does not constitute a project under CEQA because it does not have a potential for resulting in direct or reasonably foreseeable indirect physical change in the environment.

**ATTACHMENTS:**

Attachment 1: PowerPoint

**UNCLASSIFIED MANAGER:**

Nina Hawk, 408-630-2736





## Agenda Report

18-0574

Agenda Date: 9/5/2018

### BOARD AGENDA MEMORANDUM

#### SUBJECT:

2018 Legislative Efforts and Recommended Position on State Legislation: Senate Bill 1301 (Beall) Expedited Permitting for Flood Protection and Dam Safety.

#### RECOMMENDATION:

A. That the Santa Clara Valley Water District Board of Directors and Santa Clara City Council consider directing staff to continue to work together on advocacy efforts on water supply, flood protection, and other issues of mutual interest, including letters of support on bills, rulemaking actions, and/or advocacy with federal and state elected officials and regulatory agency officials, and other actions; and

B. That the Santa Clara City Council consider taking a position of support on Senate Bill 1301 (Beall) - Expedited Permitting for Flood Protection and Dam Safety, and direct city staff to follow up with advocacy efforts as appropriate, including a letter of support.

#### SUMMARY:

Securing adequate funding, authorization, and permits for flood protection and water supply projects is difficult and requires advocacy efforts at the federal and state levels to move projects forward to completion. The District pursues these advocacy efforts year-round by meeting with federal, state and regulatory officials to advocate for funding, authorization, and permits for these projects. The City of Santa Clara (City) has partnered in the past with the District to advocate for such projects by sending letters of support on grant applications, federal funding requests, and other advocacy efforts for these projects. Most recently, the City partnered with the District by providing a letter of support for the District's Pacheco Reservoir Expansion Project's Proposition 1 grant application, which ultimately was awarded full grant funding from the California Water Commission.

Recognizing the importance of joint advocacy efforts in advancing critical water supply, flood protection, and environmental stewardship projects, staff recommends that the City Council consider supporting a District-sponsored state legislative bill that benefits the region, outlined below.

#### Senate Bill 1301: Expedited Permitting for Flood Protection and Dam Safety

In recent years, there has been a growing threat to human lives and property as a result of floods,

mudslides, drought, and wildfires. Although current law allows state agencies to take quick action in emergency situations by exempting lifesaving projects from normal regulatory permitting, the exemption does not cover those projects that protect human life that do not rise to the level of an emergency. In addition, chronic understaffing at permitting agencies means that permitting projects that will help protect life and property are often delayed by months or even years. The delayed engagement by permitting agencies can result in costly project redesigns and funding shortfalls that add significant delays in bringing the enhanced benefits of the project to the public. Senate Bill (SB) 1301, titled Expedited Permitting for Flood Protection and Dam Safety and authored by State Senator Jim Beall, would address this issue for dams and flood safety projects through interagency collaboration funded by project applicants.

Under SB 1301, an applicant for a dam safety or flood risk reduction project could pay fees to cover the costs of supplemental consultation. The applicant fees would make additional staff resources available to chronically understaffed state permitting agencies and thus expedite the permitting process by allowing permitting agencies to participate earlier and throughout the environmental review and permitting processes. The supplemental consultations could cover:

- Environmental impacts and mitigation;
- Feedback on environmental documents; and
- Identifying any conflicts between the various conditions for permit approval.

SB 1301's supplemental consultation does not exempt dam safety and flood risk reduction projects from the California Environmental Quality Act (CEQA) or any other environmental compliance requirements, but instead would make those requirements more effective and the permitting process more efficient. Earlier and closer coordination among permitting agencies will expedite permitting and speed the implementation of enhanced safety benefits for the public.

This bill is important to the area because it will help accelerate critical dam safety projects and flood risk reduction projects that will help improve flood protection for both residents and businesses while ensuring that the projects are in full compliance with CEQA.

#### **FINANCIAL IMPACT:**

There is no financial impact associated with this item.

#### **CEQA:**

The recommended action does not constitute a project under CEQA because it does not have a potential for resulting in direct or reasonably foreseeable indirect physical change in the environment.

#### **ATTACHMENTS:**

Attachment 1: SB 1301 Fact Sheet

Attachment 2: SB 1301 Sample Letter of Support

**UNCLASSIFIED MANAGER:**

Rachael Gibson, 408-630-3004

**SB 1301 (Beall)**  
**Expedited Permitting for Flood Protection & Dam Safety**  
**Fact Sheet**  
*As Amended August 6, 2018*

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**ISSUE**

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The threat to human lives from natural disaster has been painfully demonstrated by the recent drought, wildfires, mudslides, and floods. Flood control projects and dam safety enhancements can reduce the risks of natural disasters and save lives. Unfortunately, these projects are typically located in rivers, streams, and riparian zones and often face significant delays in the state regulatory process, even after California Environmental Quality Act (CEQA) review has been completed.

Current law permits authorities to take quick action in response to emergencies by exempting lifesaving projects from normal regulatory permitting. However, some high priority projects to protect human life and safety do not rise to the level of an emergency of clear and imminent danger. Furthermore, due to understaffing at state permitting agencies, deadlines for permitting are often missed, particularly for large projects that yield the most public safety benefit.

SB 1301 seeks to help expedite flood and dam safety projects through interagency collaboration funded by project applicants.

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**BACKGROUND**

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CEQA currently requires state agencies to provide advice and comment regarding environmental impacts during the environmental review and community engagement processes. However, under-resourced state agencies often fail to provide meaningful comment during the early stages of the CEQA process and only fully engage during the permit application review.

Late engagement by state agencies can result in costly project redesigns, last minute funding shortfalls, and significant delay in delivering the public safety benefits of flood risk reduction and dam safety projects.

The state's aging public infrastructure poses a growing threat that may only increase while agencies struggle to secure funding, conduct environmental review, and seek permitting approvals. Timely engagement by state

regulators during CEQA review and expeditious treatment of permit applications for high-priority projects will increase human life safety through flood risk reduction and dam safety enhancement.

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**THIS BILL**

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SB 1301 would provide a mechanism for supplemental consultation by state permitting agencies for flood risk reduction and dam safety projects. A project applicant would pay fees to cover the costs of supplemental consultation with relevant agencies that could occur both early in the project design phase and throughout the permitting process. The objectives of the consultations include identifying actions that could expedite the required permits, discussing environmental impacts and mitigation, providing feedback on environmental documents, and identifying any conflicts between the various conditions proposed for permit approval.

Supplemental consultation on vital flood and dam safety projects would help the CEQA process work better for community stakeholders and project applicants. Fees paid by large projects needing this type of additional consultation would increase the staffing resources available to state permitting programs. It also would help avoid permitting issues that lead to unanticipated costs such as late-phase project redesigns or significant mitigations for environmental impacts not contemplated in the CEQA process.

SB 1301's supplemental consultation would not exempt dam safety and flood risk reduction projects from CEQA or other environmental compliance, but would make those mechanisms work better when it matters most. With smarter governance tools provided by SB 1301, the state can facilitate the timely delivery of flood protection and dam safety projects that reduce the risk to human life and property while appropriately mitigating for environmental impacts.

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**STATUS/VOTES**

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Assembly Appropriations Committee – Suspense File.

## **SUPPORT**

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Santa Clara Valley Water District (Sponsor)  
AFSCME Local 101  
Alameda County Board of Supervisors  
American Water Works Association (CA-NV Section)  
Bay Area Council  
California State Association of Electrical Workers  
California State Pipe Trades Council  
County of Santa Clara  
Cupertino Chamber of Commerce  
Gilroy Chamber of Commerce  
Metropolitan Water District of Southern California  
Midpeninsula Regional Open Space District  
Milpitas Chamber of Commerce  
Silicon Valley Leadership Group  
Western States Council of Sheet Metal Workers

## **OPPOSITION**

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None

## **FOR MORE INFORMATION**

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**Staff Contact: Estevan Ginsburg**  
**[estevan.ginsburg@sen.ca.gov](mailto:estevan.ginsburg@sen.ca.gov) or (916)651-4015**

[Insert Date]

The Honorable Jim Beall  
California State Senate  
State Capitol, Room 2082  
Sacramento, CA 95814

**Subject: SB 1301 (Beall) Permitting for Flood Protection & Dam Safety - SUPPORT**

Dear Senator Beall:

On behalf of [insert entity name], I would like to express our support for SB 1301, which will help expedite state permits for flood protection and dam safety projects that protect life safety.

State agency environmental permits serve to protect our environment from pollution and human impacts on species. We strongly support these goals, but also see that flood protection and dam safety projects can be delayed by excessively long periods of permit processing. Those delays can put disadvantaged communities located in flood prone areas in danger, possibly with disastrous results.

SB 1301 seeks to improve efficiency in permit processing for flood protection and dam safety projects, without compromising on environmental protection. In recent years, the number of projects seeking permits have increased while understaffing at state permitting agencies remains an issue. SB 1301 would provide a mechanism for supplemental consultation and interagency collaboration on permit processing for flood protection and dam safety projects.

Under the bill, a project applicant would have to option to request supplemental consultation and interagency collaboration. Fees paid by the applicant would cover state costs and would enable enhanced engagement with the project applicant early in the project design phase and throughout the permitting process. This supplemental consultation would identify actions that could expedite the required permits, discuss environmental impacts and mitigation, provide feedback on environmental documents, and to resolve any conflicts between the various conditions proposed for permit approval.

This collaborative approach to vital flood protection and dam safety projects would help the California Environmental Quality Act (CEQA) process work better for community stakeholders and project applicants. It also would help avoid permitting issues that lead to unanticipated costs such as late-phase project redesigns or significant mitigations for environmental impacts not contemplated in the CEQA process.

[Insert entity name] thanks you for authoring SB 1301 and urges your colleagues in the Legislature and Governor Brown to enact these important reforms to expedite flood protection and dam safety projects that protect life safety. If you or your staff have questions, please don't hesitate to contact me.

Sincerely,  
[Insert name]  
[Insert title]

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**File No.:** 18-0574

**Agenda Date:** 9/5/2018

**Item No.:** 2.2.

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## BOARD AGENDA MEMORANDUM

### **SUBJECT:**

2018 Legislative Efforts and Recommended Position on State Legislation: Senate Bill 1301 (Beall)  
Expedited Permitting for Flood Protection and Dam Safety.

### **RECOMMENDATION:**

- A. That the Santa Clara Valley Water District Board of Directors and Santa Clara City Council consider directing staff to continue to work together on advocacy efforts on water supply, flood protection, and other issues of mutual interest, including letters of support on bills, rulemaking actions, and/or advocacy with federal and state elected officials and regulatory agency officials, and other actions; and
- B. That the Santa Clara City Council consider taking a position of support on Senate Bill 1301 (Beall) - Expedited Permitting for Flood Protection and Dam Safety, and direct city staff to follow up with advocacy efforts as appropriate, including a letter of support.

### **SUMMARY:**

Securing adequate funding, authorization, and permits for flood protection and water supply projects is difficult and requires advocacy efforts at the federal and state levels to move projects forward to completion. The District pursues these advocacy efforts year-round by meeting with federal, state and regulatory officials to advocate for funding, authorization, and permits for these projects. The City of Santa Clara (City) has partnered in the past with the District to advocate for such projects by sending letters of support on grant applications, federal funding requests, and other advocacy efforts for these projects. Most recently, the City partnered with the District by providing a letter of support for the District's Pacheco Reservoir Expansion Project's Proposition 1 grant application, which ultimately was awarded full grant funding from the California Water Commission.

Recognizing the importance of joint advocacy efforts in advancing critical water supply, flood protection, and environmental stewardship projects, staff recommends that the City Council consider supporting a District-sponsored state legislative bill that benefits the region, outlined below.

### **Senate Bill 1301: Expedited Permitting for Flood Protection and Dam Safety**

In recent years, there has been a growing threat to human lives and property as a result of floods, mudslides, drought, and wildfires. Although current law allows state agencies to take quick action in emergency situations by exempting lifesaving projects from normal regulatory permitting, the

exemption does not cover those projects that protect human life that do not rise to the level of an emergency. In addition, chronic understaffing at permitting agencies means that permitting projects that will help protect life and property are often delayed by months or even years. The delayed engagement by permitting agencies can result in costly project redesigns and funding shortfalls that add significant delays in bringing the enhanced benefits of the project to the public. Senate Bill (SB) 1301, titled Expedited Permitting for Flood Protection and Dam Safety and authored by State Senator Jim Beall, would address this issue for dams and flood safety projects through interagency collaboration funded by project applicants.

Under SB 1301, an applicant for a dam safety or flood risk reduction project could pay fees to cover the costs of supplemental consultation. The applicant fees would make additional staff resources available to chronically understaffed state permitting agencies and thus expedite the permitting process by allowing permitting agencies to participate earlier and throughout the environmental review and permitting processes. The supplemental consultations could cover:

- Environmental impacts and mitigation;
- Feedback on environmental documents; and
- Identifying any conflicts between the various conditions for permit approval.

SB 1301's supplemental consultation does not exempt dam safety and flood risk reduction projects from the California Environmental Quality Act (CEQA) or any other environmental compliance requirements, but instead would make those requirements more effective and the permitting process more efficient. Earlier and closer coordination among permitting agencies will expedite permitting and speed the implementation of enhanced safety benefits for the public.

This bill is important to the area because it will help accelerate critical dam safety projects and flood risk reduction projects that will help improve flood protection for both residents and businesses while ensuring that the projects are in full compliance with CEQA.

**FINANCIAL IMPACT:**

There is no financial impact associated with this item.

**CEQA:**

The recommended action does not constitute a project under CEQA because it does not have a potential for resulting in direct or reasonably foreseeable indirect physical change in the environment.

**ATTACHMENTS:**

Attachment 1: SB 1301 Fact Sheet

Attachment 2: SB 1301 Sample Letter of Support

**UNCLASSIFIED MANAGER:**

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**File No.:** 18-0574

**Agenda Date:** 9/5/2018  
**Item No.:** 2.2.

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Rachael Gibson, 408-630-3004



## Agenda Report

18-0712

Agenda Date: 9/5/2018

### BOARD AGENDA MEMORANDUM

#### **SUBJECT:**

Emergency Services Coordination.

#### **RECOMMENDATION:**

That the Santa Clara Valley Water District Board of Directors and the Santa Clara City Council consider directing their respective staff to commit to ongoing and strengthened coordination and partnership on emergency activities and service.

#### **SUMMARY:**

The six-person Emergency Services staff within the Emergency Services and Security Unit is responsible for the District's emergency operations. This includes leading the development of plans, conducting emergency management trainings and exercises, ensuring the availability of resources, and collaborating with other agencies.

The unit also has responsibility for the Emergency Operations Center (EOC). In addition to the EOC, the District also has two Department Operations Centers (DOCs) that are utilized to directly support field operations in Watershed and Water Utility.

The DOCs are managed within the Watershed and Water Utility Divisions of the District and are activated independently or in coordination with the EOC, depending upon the nature of the emergency. When a DOC is activated, staff in the DOC often interact and collaborate with employees from other entities such as District retailers or County agencies such as HazMat/Fire and the City of Santa Clara.

Some emergencies that the District could respond to include floods, levee or facility issues, water contamination, water supply disruption, pipeline damage, underground storage subsidence, dam failure and earthquake.

The District communicates with the cities and county in multiple ways regarding emergency preparedness and response. There are Operational Area Calls conducted by the county where the District shares information. The Emergency Services and Security Manager communicates directly with the municipal emergency managers as needed. The District also produces and distributes written communications to our stakeholders.

One of the lessons of the 2017 floods was the importance of collaborating with other agencies. Over the past year, through collaboration, open communication, and development of close professional

ties, the District and the City of San Jose have developed a robust Emergency Action Plan (EAP) to respond to future incidents.

EAPs are scenario-specific and are based on streams, dams and affected locations. The District has also embarked on a program to develop EAPs for sites that are prone to flooding in collaboration with relevant municipalities or other agencies. These EAPs clarify responsibilities of the District and the municipalities/agencies.

Another important initiative is the District's active monitoring of storms and the development of metrics to ascertain the likelihood of floods. These efforts are designed to provide the District with the ability to better prepare for and respond to rapidly changing situations.

To prepare for future incidents, Emergency Services has initiated an aggressive training program. With the intent of enhancing their knowledge, District staff assigned to the EOC have participated in a series of classes on the basic EOC roles. Staff have also attended trainings based upon function. For example, a course specific to Logistics was well-attended in February 2018. It allowed attendees to dive deeper into their roles and identify gaps in their documentation or ability to fulfill potential demands in the aftermath of a major event. Additional trainings and exercises are planned for the future, as is the District's participation in our stakeholder agencies' events.

### Response Structure

The District utilizes the Incident Command System (ICS), Standardized Emergency Management System (SEMS), and National Incident Management Systems (NIMS) for consistency in terminology, communications, and overall structure. These are the systems used by municipalities, which are based on emergency response best practices.

### Personnel Resources

Over 160 District personnel are assigned to the EOC. Included in the roster is a wide range of categorical technical specialists. Some examples include pipeline emergency, levees, water quality, meteorology/hydro, and dam safety.

The District's EOC Public Information Branch, which is managed by the Public Information Officer, has well-developed capabilities. The functions within this branch include Information Gathering and Dissemination, Government Relations, CEO/Board Support, Media Relations, and Call Center Operations.

The District has redundant communication capabilities to communicate with District staff: hardline phone, text messaging, pagers, hand-held radio, County radios (Control 10), amateur radio, satellite phone, and mass notification (Blackboard Connect).

### Equipment Resources

The District's construction equipment is based on watershed and creek management activities. Some examples of available equipment include excavators, dump trucks, loaders, backhoes and cranes.

These are some of the resources that could potentially be requested as mutual aid to support a response outside of the District.

With these planning efforts, resources and systems in place at the District, it's imperative that there is ongoing collaboration with the cities and county. An emergency services program can only be successful when implemented in coordination with its partners. An integral partner with the District is the City of Santa Clara, which illustrates the need for a strong partnership to build emergency capabilities.

**FINANCIAL IMPACT:**

There is no financial impact associated with this item.

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**ATTACHMENTS:**

Attachment 1: PowerPoint

**UNCLASSIFIED MANAGER:**

Tina Yoke, 408-630-2385

# Emergency Services Coordination





# President's Day Flood 2017, San Jose

Photo Credit: LA Times



# Response Structure

Incident Command System (ICS)

Standardized Emergency Management System (SEMS)

National Incident Management System (NIMS)

Emergency Operations Center (EOC)

Department Operation Centers (DOCs)

Based on Watershed and Water Utility functions



# Potential Emergencies (examples)

## Watershed

- ▶ Flooding
- ▶ Levee or other facility issue

## Water Utility

- ▶ Water contamination
- ▶ Water supply disruption
- ▶ Pipeline damage
- ▶ Underground storage subsidence

## Water Utility and Watershed

- ▶ Dam Failure
- ▶ Earthquake



# Communication and Notification

## How does the Water District communicate with Cities and County?

- Operational Area Calls
- Direct communication, emergency managers
- Written Communications

## Stream and Reservoir Monitoring

- Hydrology, Hydraulics and Geomorphology Unit
- Automated Local Evaluation in Real Time (ALERT)



# Resources (personnel)



- ▶ 160+ assigned to EOC
- ▶ Technical Experts (Watershed and Water Utility)
- ▶ Public Information Branch
  - ▶ Communication redundancy

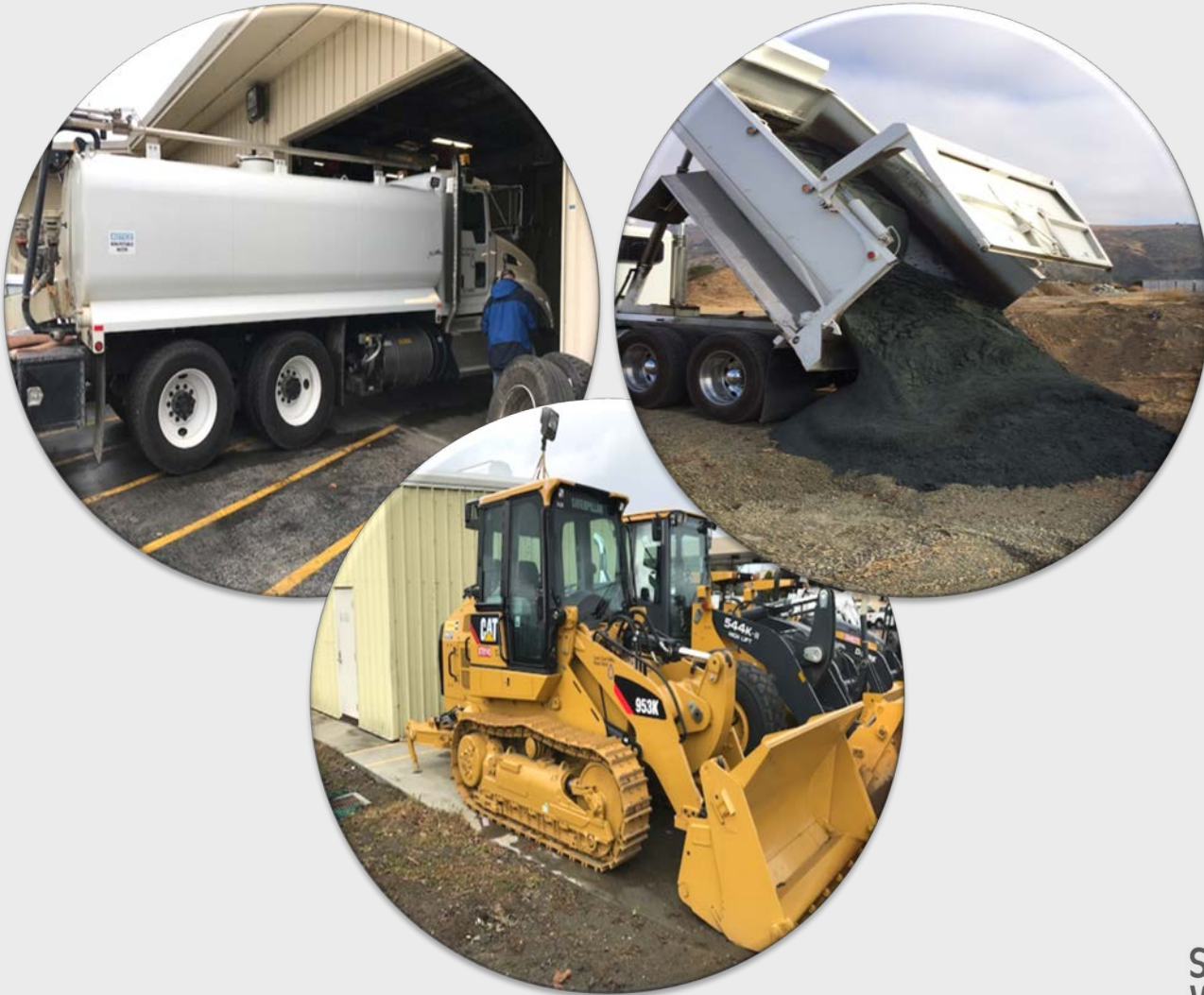


# Resources (equipment)

- ▶ Excavators
- ▶ Dump Trucks
- ▶ Loaders
- ▶ Excavators
- ▶ Cranes
- ▶ More



# Resources (equipment)





# Emergency Action Plans (EAPs)

- ▶ Scenario Specific – streams, dams, locations
- ▶ Inundation Maps and Downstream Contact Lists
- ▶ Activation Levels, scenario data and monitoring
- ▶ Lessons Learned from 2017 flood
- ▶ Multi-Agency Coordination (MAC)
- ▶ Coordination with Emergency Operations Plan (EOP)



# Emergency Services and Security Unit

- Manager, 5 staff assigned to emergency services within unit
- Emergency Planning, Training and Exercise
- EOC Readiness
- City and County Collaboration and Coordination

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**File No.:** 18-0712

**Agenda Date:** 9/5/2018

**Item No.:** 2.3.

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## BOARD AGENDA MEMORANDUM

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Tina Yoke, 408-630-2385