

Santa Clara Valley Water District Board of Directors Meeting

Headquarters Building Boardroom
5700 Almaden Expressway
San Jose, CA 95118

SPECIAL JOINT MEETING WITH SUNNYVALE CITY COUNCIL AGENDA

**Monday, December 17, 2018
6:00 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

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

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**SPECIAL JOINT MEETING
WITH SUNNYVALE CITY COUNCIL
AGENDA**

Monday, December 17, 2018

6:00 PM

Headquarters Building Boardroom

1. Call to Order and Roll Call.
2. Pledge of Allegiance.

JOINT SUNNYVALE CITY COUNCIL/DISTRICT BOARD AGENDA:

3. Opening Remarks by Board Chair and Sunnyvale City Mayor.

4. Overview of Current/Future Water Supply Planning Efforts, the District's Capital Improvement Program, and the Wholesale Rate-Setting Process.

[18-1111](#)

Recommendation: That the District Board and Sunnyvale City Council receive information on the District's Capital Improvement Program, current and future water supply planning efforts, and the wholesale rate-setting process.

Manager: Jerry De La Piedra, District Assistant Operating Officer, 408-630-2257
Christopher Hakes, District Deputy Operating Officer, 408-630-3126
Darin Taylor, District Chief Financial Officer, 408-630-3068

Attachments: [Attachment 1: PowerPoint](#)

Est. Staff Time: 25 Minutes

5. Countywide Water Reuse Master Plan Update.

[18-1112](#)

Recommendation: A. That the District Board and Sunnyvale City Council receive information on the Countywide Water Reuse Master Plan;
B. That the District Board direct its staff to continue its commitment to meaningful engagement with the City of Sunnyvale in pursuit of new and innovative partnership opportunities for the continued expansion of water reuse in Santa Clara County; and
C. That the Sunnyvale City Council direct its staff to continue its commitment to meaningful engagement with the Santa Clara Valley Water District in pursuit of new and innovative partnership opportunities for the continued expansion of water reuse in Santa Clara County.

Manager: Jerry De La Piedra, District Assistant Operating Officer,
408-630-2257

Attachments: [Attachment 1: PowerPoint](#)

Est. Staff Time: 10 Minutes

6. Update on the Sunnyvale East/West Channels Flood Protection Project.

[18-1125](#)

Recommendation: That the District Board and Sunnyvale City Council receive information on the Sunnyvale East/West Channels Flood Protection Project.

Manager: Christopher Hakes, District Deputy Operating Officer,
408-630-3796

Attachments: [Attachment 1: PowerPoint](#)

Est. Staff Time: 5 Minutes

7. Update on the South San Francisco Bay Shoreline Project.

[18-1108](#)

Recommendation: That the District Board and Sunnyvale City Council receive information on the South San Francisco Bay Shoreline Project.

Manager: Ngoc Nguyen, District Deputy Operating Officer, 408-630-2632

Attachments: [Attachment 1: PowerPoint](#)

Est. Staff Time: 5 Minutes

8. Emergency Services Coordination.

[18-1113](#)

- Recommendation:
- A. That the District Board consider directing its staff to commit to ongoing and strengthened coordination and partnership with the City of Sunnyvale on emergency activities and services; and
 - B. That the Sunnyvale City Council consider directing its staff to commit to ongoing and strengthened coordination and partnership with the Santa Clara Valley Water District on emergency activities and services.

Manager: Tina Yoke, District Chief Operating Officer, 408-630-2385

Attachments: [Attachment 1: PowerPoint](#)

Est. Staff Time: 10 Minutes

9. 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.

10. Adjourn to 6:00 p.m. Rescheduled Regular Meeting on January 8, 2019, in the Santa Clara Valley Water District Headquarters Building Boardroom, 5700 Almaden Expressway, San Jose, California.

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File No.: 18-1111

Agenda Date: 12/17/2018

Item No.: 4.

BOARD AGENDA MEMORANDUM

SUBJECT:

Overview of Current/Future Water Supply Planning Efforts, the District's Capital Improvement Program, and the Wholesale Rate-Setting Process.

RECOMMENDATION:

That the District Board and Sunnyvale City Council receive information on the District's Capital Improvement Program, current and future water supply planning efforts, and the wholesale rate-setting process.

SUMMARY:

The Santa Clara Valley Water District (District) serves all of Santa Clara County, providing groundwater management, wholesale water supply, flood protection, and stream stewardship services. The District was originally formed in 1929 to manage groundwater in response to groundwater overdraft and land subsidence. Maintaining groundwater supplies and avoiding land subsidence continue to be the core function of the water supply program.

Originally, the County relied solely on local runoff patterns and natural recharge. However, these were insufficient to maintain groundwater levels. Between the 1930s and 1950s, the District constructed 10 dams to store winter rains for use later in the year. Initially, these efforts were sufficient. However, the post-World War II development boom increased demands, and local supplies were no longer sufficient to meet the County's needs. The District began importing water in the 1960s, first from the State Water Project through the South Bay Aqueduct from the north and then from the federal Central Valley Project via San Luis Reservoir in the 1980s.

The District expanded water conservation and recycled and purified water programs in the 1990s in response to a prolonged drought and continued increases in water demands. The District implements nearly 20 different ongoing water conservation programs that use a mix of incentives and rebates, free device installation, one-on-one home visits, site surveys, and educational outreach to reduce water consumption in homes, businesses and agriculture. These programs are designed to achieve sustainable, long-term water savings and are implemented regardless of water supply conditions. Recycled and purified water is a local, reliable source of supply that helps meet demands in wet, normal and dry years. In 2014, in partnership with the City of San Jose the District commissioned the Silicon Valley Advanced Water Purification Center, an 8 million gallon per day

facility that uses advanced technologies to purify secondary treated wastewater and provides clean high-quality water expected to match California drinking water quality standards. Both agencies continue to work together to investigate expansion of the existing facility. The District is also working with local recycled water producers, retailers, and other stakeholders to develop a Countywide Water Reuse Master Plan that will recommend reliable and efficient projects for potable and non-potable reuse.

The District's system can deliver about 300 million gallons (about 900 acre-feet) of raw water and 200 million gallons (about 600 acre-feet) of treated drinking water every day. The District's distribution system includes 10 reservoirs, 3 pump stations, 142 miles of pipelines, 3 water treatment plants, 1 water purification center, 393 acres of recharge ponds, and 275 miles of jurisdictional streams.

Currently, the county's water supply portfolio includes 55 percent imported water sources, 40 percent local water sources (groundwater, surface water), and 5 percent recycled water. Long-term in-county 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 acre-feet per year higher if not for the District's, cities', water retailers', and community's commitments to water conservation. Water use efficiency programs reduce demand on existing water and energy supplies, helping to lessen the cost and environmental impacts of developing additional supplies.

Current and Future Water Supply Planning

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 in a cost-effective manner. It describes the new water supply investments the District is planning to make, the anticipated schedule, and the associated costs and benefits. The Water Master Plan is based on an "Ensure Sustainability" strategy comprised of three elements:

1. Secure existing supplies and infrastructure;
2. Expand the water conservation and reuse; and
3. Optimize the use of existing supplies and infrastructure.

The District is in the process of updating the Water Master Plan based on current projections regarding future supplies and demands. The Water Master Plan modeling analysis indicates that droughts are and will continue to be the District's greatest water supply challenge. In year 2040, the approximate water supply shortfall is 152,000 AF during drought conditions, while only 36,000 AF during an average water supply condition.

To meet the future water supply needs and promote greater supply diversity, the District continues to explore additional water supply and demand management options. Water supply diversity helps reduce the County's exposure to the risk of any one supply investment not performing up to expectations. In addition, developing alternative supplies reduces the District's reliance on imported water supplies. 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. Potential projects specific to North County include additional recharge ponds, a new raw water pipeline, and additional recycling.

In September 2017, the Board approved planning for a variety of water conservation and stormwater capture projects, referred to as the “No Regrets” package in the Water Master Plan update. These projects would be implemented in any future water supply scenario and are designed to reduce water demands by about 10,000 AFY and increase natural groundwater recharge by about 1,000 AFY. 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 City of San Jose and Saratoga, rain barrel rebates, and rain garden rebates).

In December 2017, the Board approved pursuing a public-private partnership to develop up to 24,000 AFY of potable reuse capacity using the Los Gatos Ponds to percolate purified water into the groundwater basin. In May 2018, the Board approved participation in the California WaterFix to secure Delta-conveyed imported water supplies. In June 2018, the Board approved pursuing the Pacheco Reservoir Expansion Project, which is eligible to receive up to \$484.5 million in State funding.

Staff analyzed the effect of these Board-approved efforts. The projects that are approved for planning are sufficient to meet the District’s water supply reliability level of service goal of meeting 100 percent of demands in normal years and at least 90 percent of demands in drought years.

All projects have challenges, uncertainties, and risks. These include but are not limited to climate change, policy changes, and regulatory action affecting the Delta (e.g., Bay Delta Water Quality Control Plan). This could result in some projects not materializing or resulting in a lower yield than expected. Therefore, the District continues to identify, analyze, and monitor projects that could serve as an alternative project should change be needed. This uncertainty will be managed through the annual review of the Water Master Plan and its assumptions and periodic updates to reflect changed conditions.

A primary purpose of the Water Master Plan is to inform investment decisions. Therefore, a critical piece of the water supply plan is a process to monitor and report to the Board on the demands, supplies, and status of projects and programs. Monitoring will identify where adjustments to the Water Master Plan might be needed to respond to changed conditions. The proposed Monitoring and Assessment Plan (MAP) approach for the Water Master Plan has four steps:

1. Develop an implementation schedule;
2. Manage unknowns and risk;
3. Report to Board annually, or as needed; and

-
4. Adjust the MAP as needed to serve as input to Capital Improvement Program, budget, and annual water rate setting processes.

Capital Improvement Program

The District manages and operates a complex and integrated water supply infrastructure, including storage, transmission, treatment, and recycled water facilities, to meet the Board's Ends Policy E-2, "There is a reliable, clean water supply for current and future generations."

The District currently plans to invest approximately \$1.6 Billion in its 5-year Capital Improvement Program (CIP) to ensure the reliability of its water supply infrastructure. Some of these capital investments include a 5-year upgrade to the Rinconada Water Treatment Plant; a 10-Year Pipeline Inspection and Rehabilitation Program; the seismic retrofit and/or improvements to four of the District's ten dams; pump station upgrades; and installation of additional line valves on several large-diameter pipelines.

Two significant water supply investments in the District's CIP are the Pacheco Reservoir Expansion Project and the Anderson Dam Seismic Retrofit Project. A more detailed explanation of the purpose and status of these projects is provided in the paragraphs that follow.

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.

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.

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 anticipates that the Early Funding award agreement will be executed this month. 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". As such, Governor Brown designated the Pacheco Reservoir Expansion a "State-Led-Storage Project" on August 27, 2018, and Department of the Interior has begun the process of determining the WIIN Act eligibility for the project.

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 in summer of 2019.

The Anderson Dam Retrofit Project's seismic retrofit construction is anticipated to begin in 2020 or

2021, depending on the permitting process. It is estimated to take 4 to 5 years to complete all the dam improvements.

Wholesale Rate Setting Process

The District is the groundwater management agency and primary wholesale water provider in Santa Clara County (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.

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 prevent the over use or under use of the groundwater basin.

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 State Water Project cost to be recouped through the State Water Project tax. The Board adopted 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).

The groundwater charge setting process has many opportunities for stakeholder engagement between the months of January and May of each year, including engaging the Water Retailers Committee and several Board Advisory Committees. A public hearing process extends over several meetings each April. The Board typically adopts the budget and groundwater production charges in early May, which become effective on July 1.

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: PowerPoint

UNCLASSIFIED MANAGER:

Jerry De La Piedra, District Assistant Operating Officer, 408-630-2257

Christopher Hakes, District Deputy Operating Officer, 408-630-3126

Darin Taylor, District Chief Financial Officer, 408-630-3068

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Overview of Current/Future Water Supply Planning Efforts, the District's Capital Improvement Program, and the Wholesale Rate-Setting Process

Special Joint Meeting with City of Sunnyvale

December 17, 2018

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

Legend

- Lakes, reservoirs, rivers, creeks, & bays
- Raw water pipeline
- Drinking water pipeline
- Pump Plants
 - Vasona
 - Coyote
 - Pacheco
- Drinking Water Treatment Plants
 - Rinconada
 - Santa Teresa
 - Penitencia
- Silicon Valley Advanced Water Purification Center
- Anderson Hydroelectric Facility
- Local wastewater treatment plant and recycled water provider
 - Palo Alto
 - Sunnyvale
 - San Jose-Santa Clara
 - South County
- Recharge Ponds

Water Sources Distribution

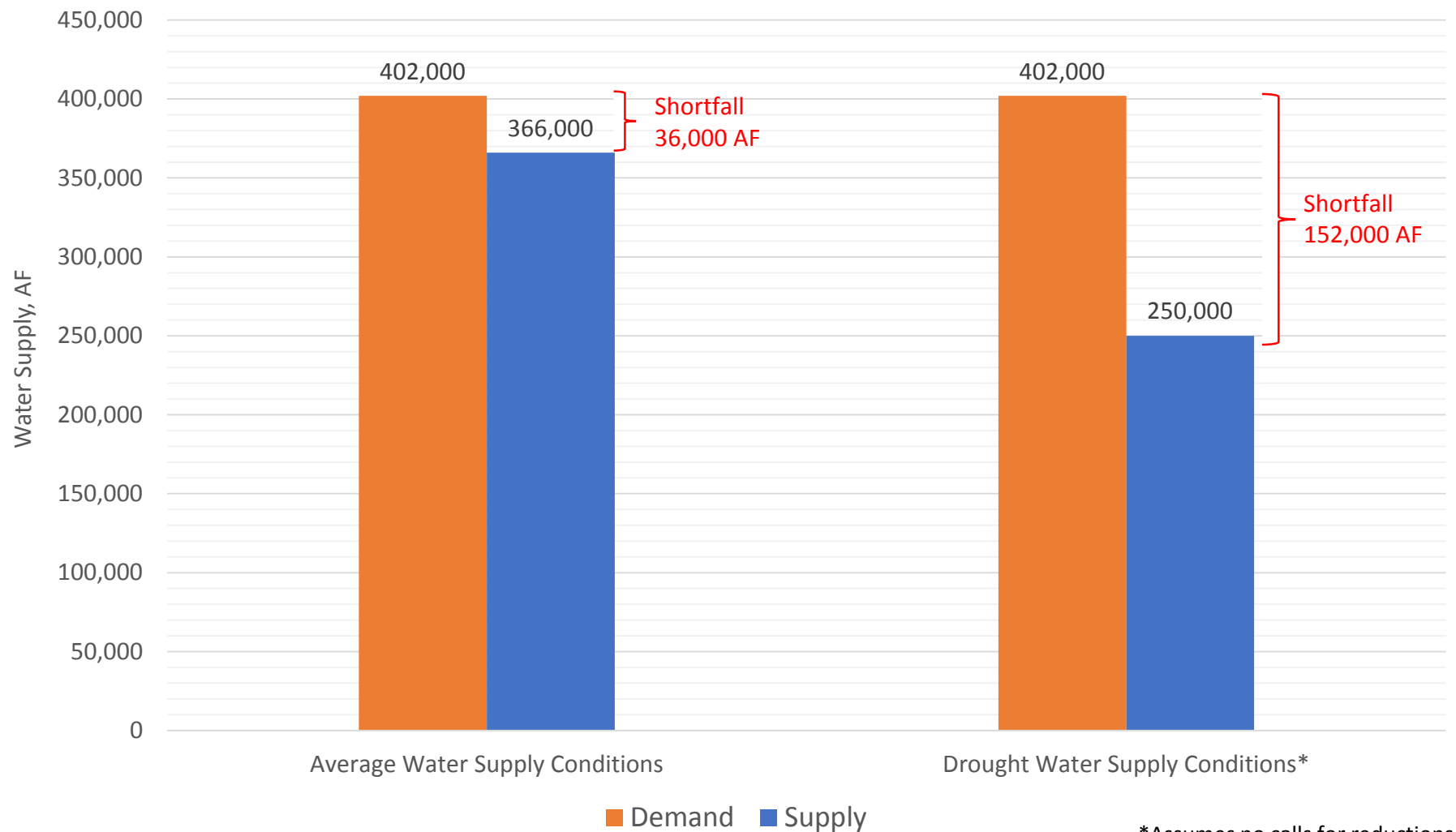
Source	Percentage
Natural Groundwater Recharge	40%
Local Surface Water	15%
Recycled	25%
San Francisco	15%
Delta-Conveyed	5%

Attachment 1
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Attachment 1
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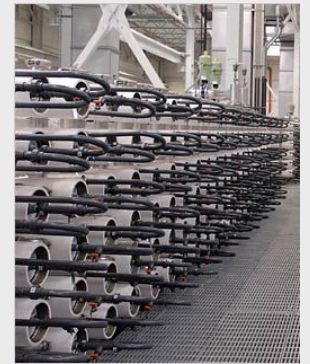
Water Supply Master Plan Update

Analysis shows declining reliability in year 2040



Attachment 1

Many Projects and Portfolios of Projects have been Evaluated for Filling the Gap



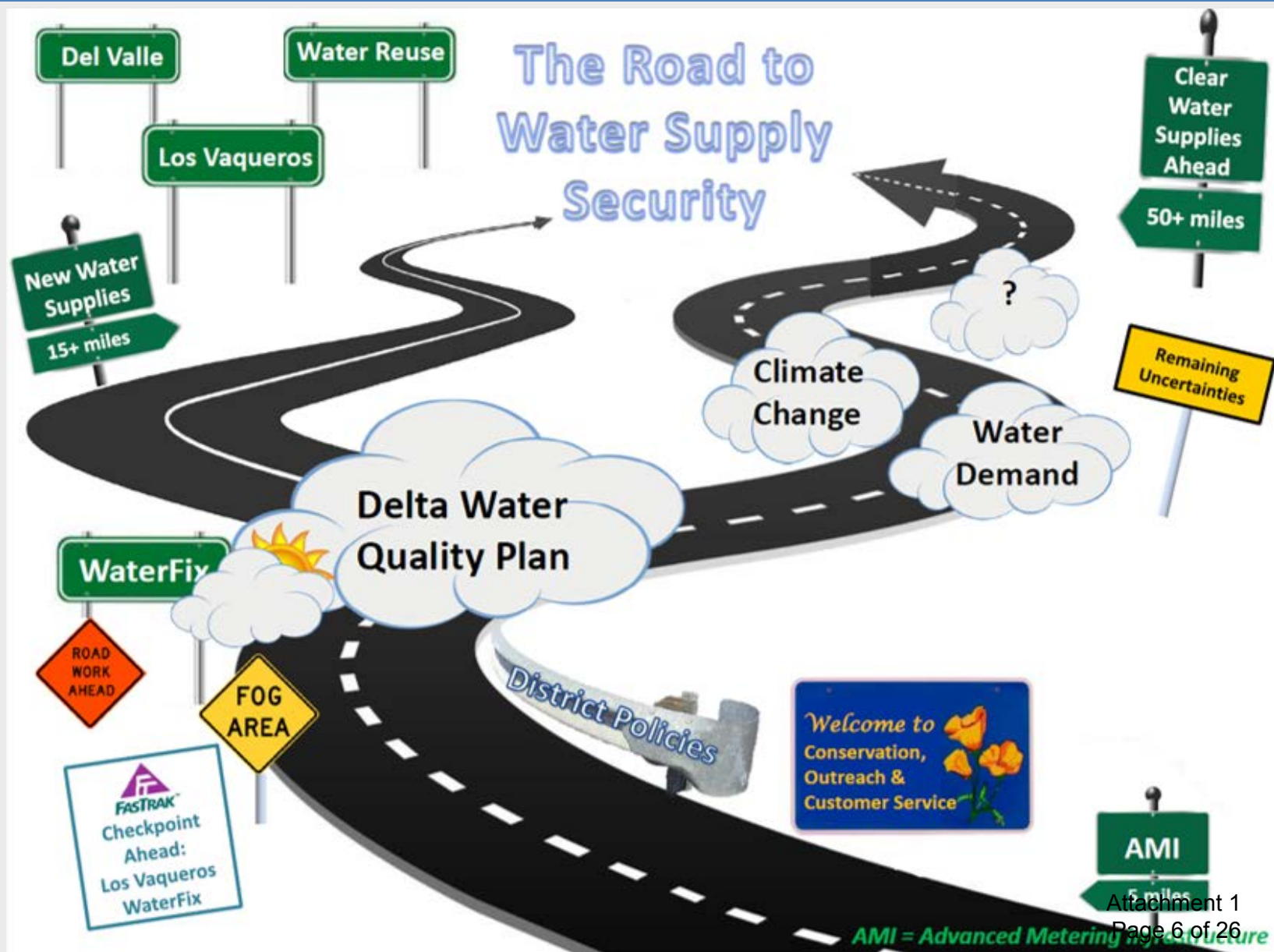
2012 Board-Adopted “Ensure Sustainability” Strategy

Three Elements:

1. Securing existing supplies and infrastructure
2. Expand conservation and reuse
3. Optimize the system



Manage Unknowns and Risks



Capital Improvement Program – Key Water Supply Projects

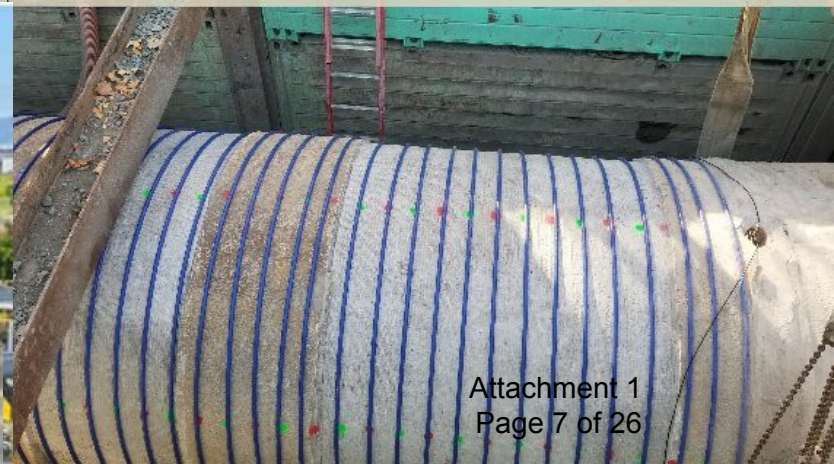


**Rinconada WTP Reliability Improvements
(\$290 Millions)**



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

**10-Year Pipeline Rehabilitation
(\$125 Million)**



**Expedited Purified Water Program (EPWP)
(\$1 Billion)**

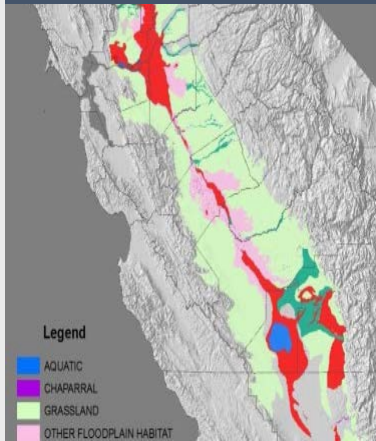
The Pacheco Reservoir Expansion Will Address Five Big Challenges

Restore Federally Threatened Fish



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

Improve the Delta



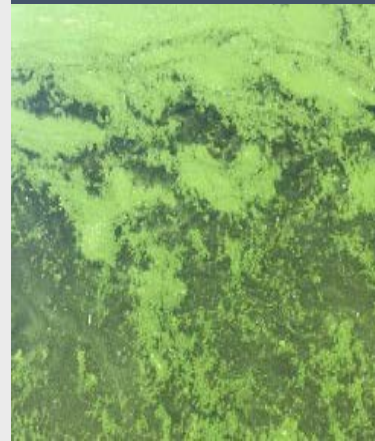
90% of Delta watershed wetlands have disappeared

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

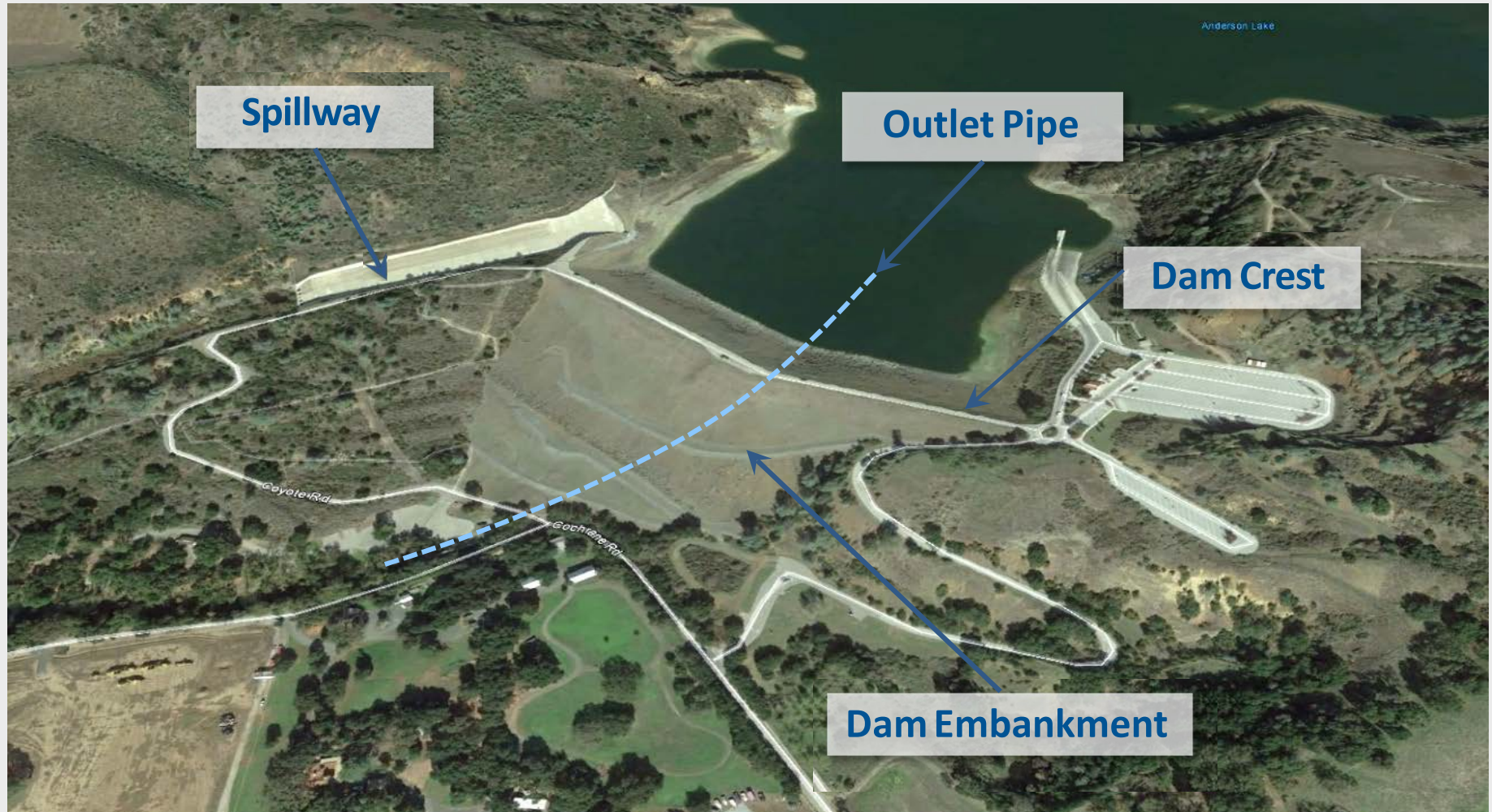
Reduce Flooding to Disadvantaged Communities



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

Anderson Dam Project Update

Anderson Dam Existing Configuration



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
- ▶ Operate & maintain local reservoirs
- ▶ Purchase imported water
- ▶ Operate & maintain raw & recycled water pipelines
- ▶ Monitor & protect groundwater from pollutants



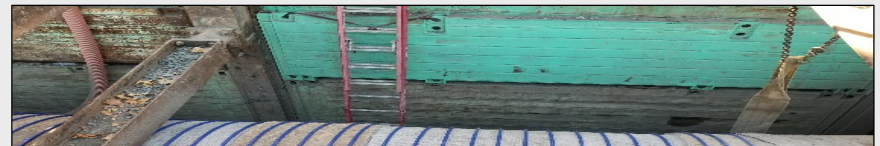
**Dam Seismic Retrofits/Improvements
(\$780 Million)**



**Rinconada WTP Reliability Improvements
(\$290 Million)**



**Expedited Purified Water Prgm (EPWP)
(\$1 Billion)**



**10-Year Pipeline Rehabilitation
(\$125 Million)**

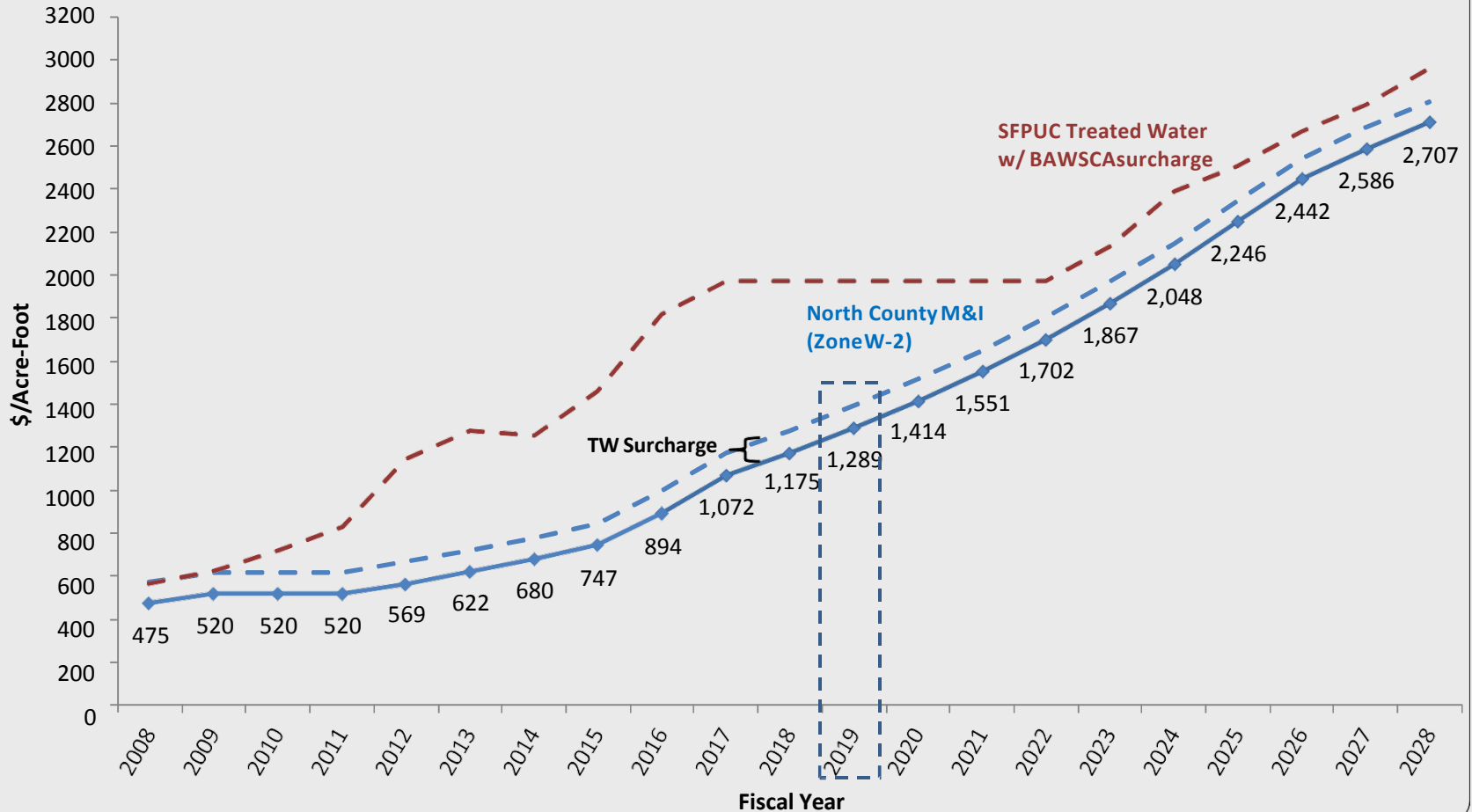
Groundwater Production Charge Projection

(\$ in millions)

Water Utility Enterprise Fund

North County M&I Groundwater Charge

As of May
2018



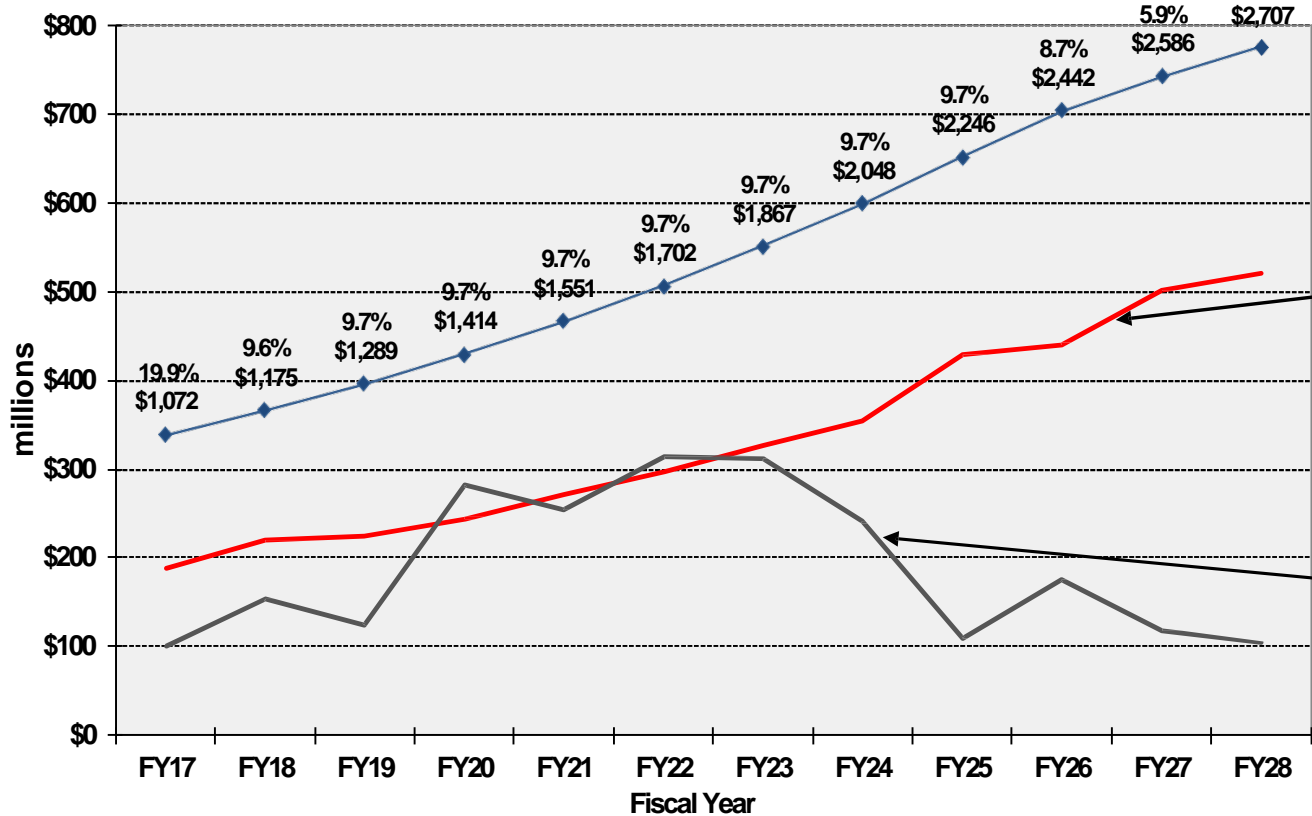
Note: This projection does not account for impacts associated with the Bay Delta Water Quality Control Plan or Pacheco Reservoir Expansion

Groundwater Production Charge Projection

(\$ in millions)

Water Utility Enterprise Fund

As of May
2018



O&M costs driven by California WaterFix & EPWP Water Services Agreement

Capital costs driven by Dam Seismic Retrofits, Rinconada WTP, & EPWP

— Operating Exp. + Xfers Out

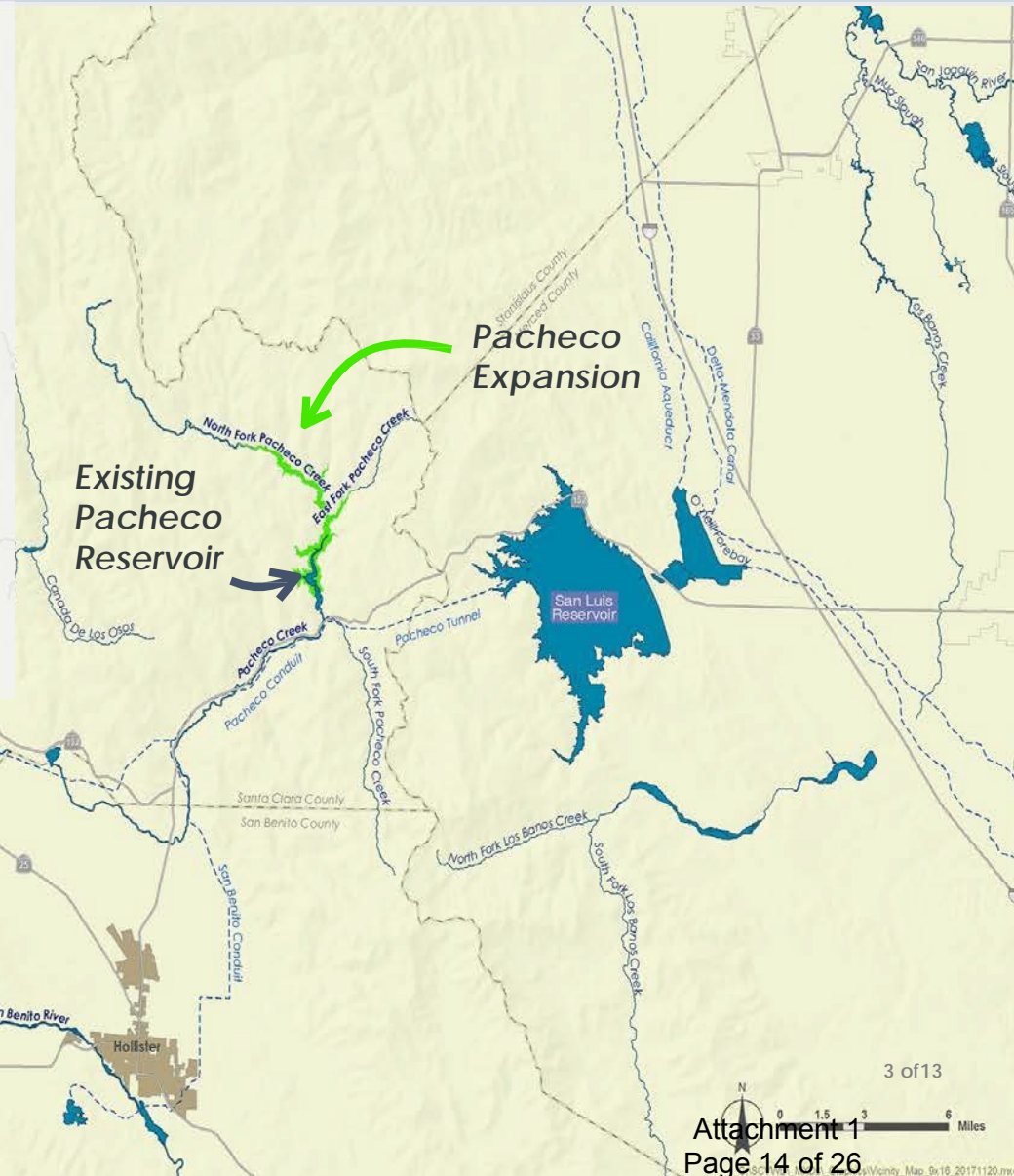
— Capital Projects

◆ North County M&I Rate (\$/AF)

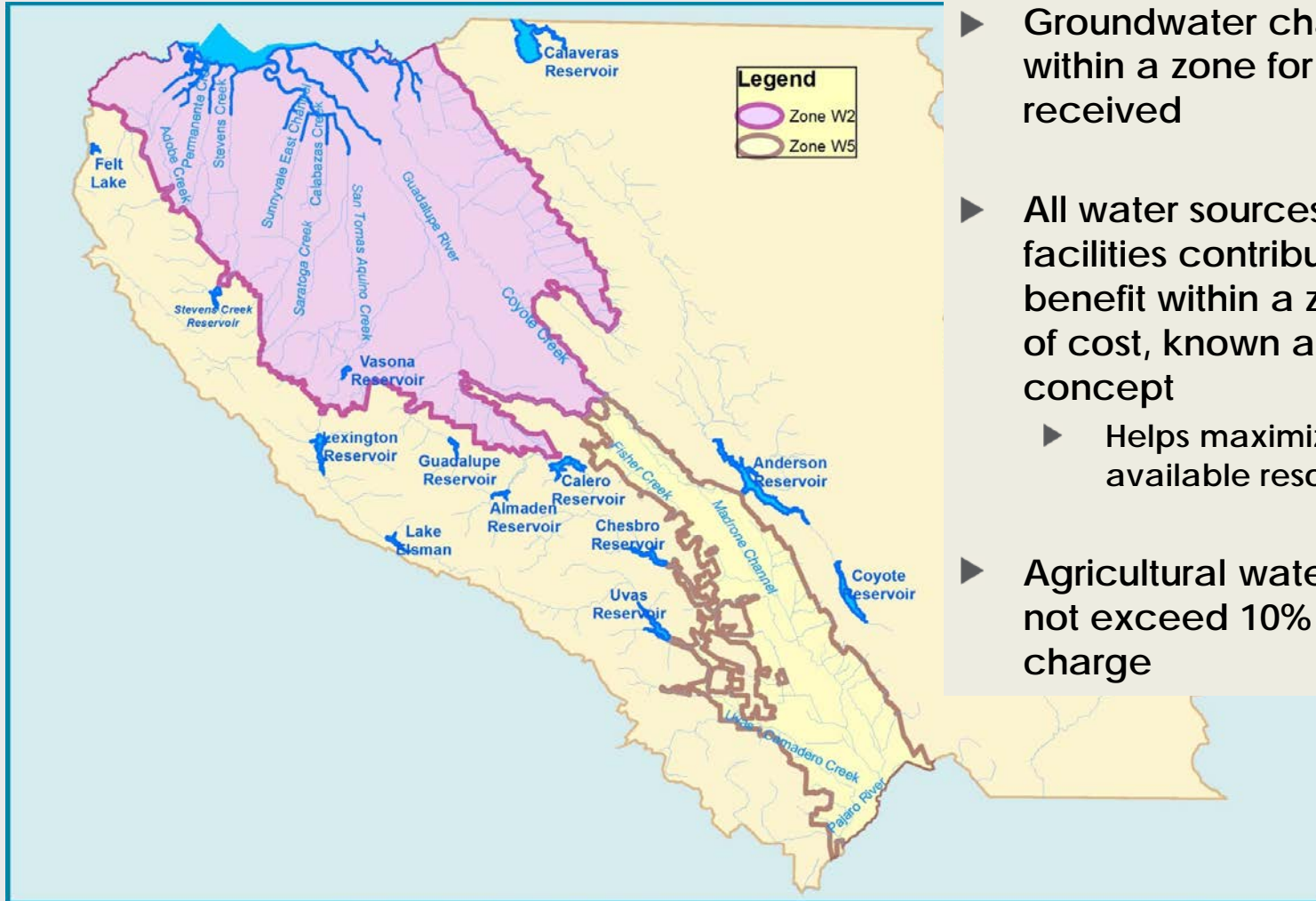
Note: This projection does not account for impacts associated with the Bay Delta Water Quality Control Plan or Pacheco Reservoir Expansion

Pacheco Reservoir Expansion Funding Strategy

- ▶ Received \$485M WSIP Prop 1 funding
 - ▶ Including \$24.2M early funding
- ▶ Pursuing \$250M federal funding under WIIN Act
- ▶ Contemplating \$250M WIFIA loan
- ▶ SBWD will partner up to 10%
- ▶ Other agencies may partner
- ▶ Water Charges



Resolution 99-21 is the Board's Pricing Policy



- ▶ Groundwater charges are levied within a zone for benefits received
- ▶ All water sources and water facilities contribute to common benefit within a zone regardless of cost, known as “pooling” concept
 - ▶ Helps maximize effective use of available resources
- ▶ Agricultural water charge shall not exceed 10% of M&I water charge

Zone of Benefit Study in progress

Infrastructure differences drive different groundwater production charges in each zone

North County

- 3 water treatment plants
- Reservoirs – Almaden, Calero, Guadalupe, Lexington, Stevens Creek, Vasona
- Silicon Valley Advanced Water Purification Center
- Imported Water – State Water Project

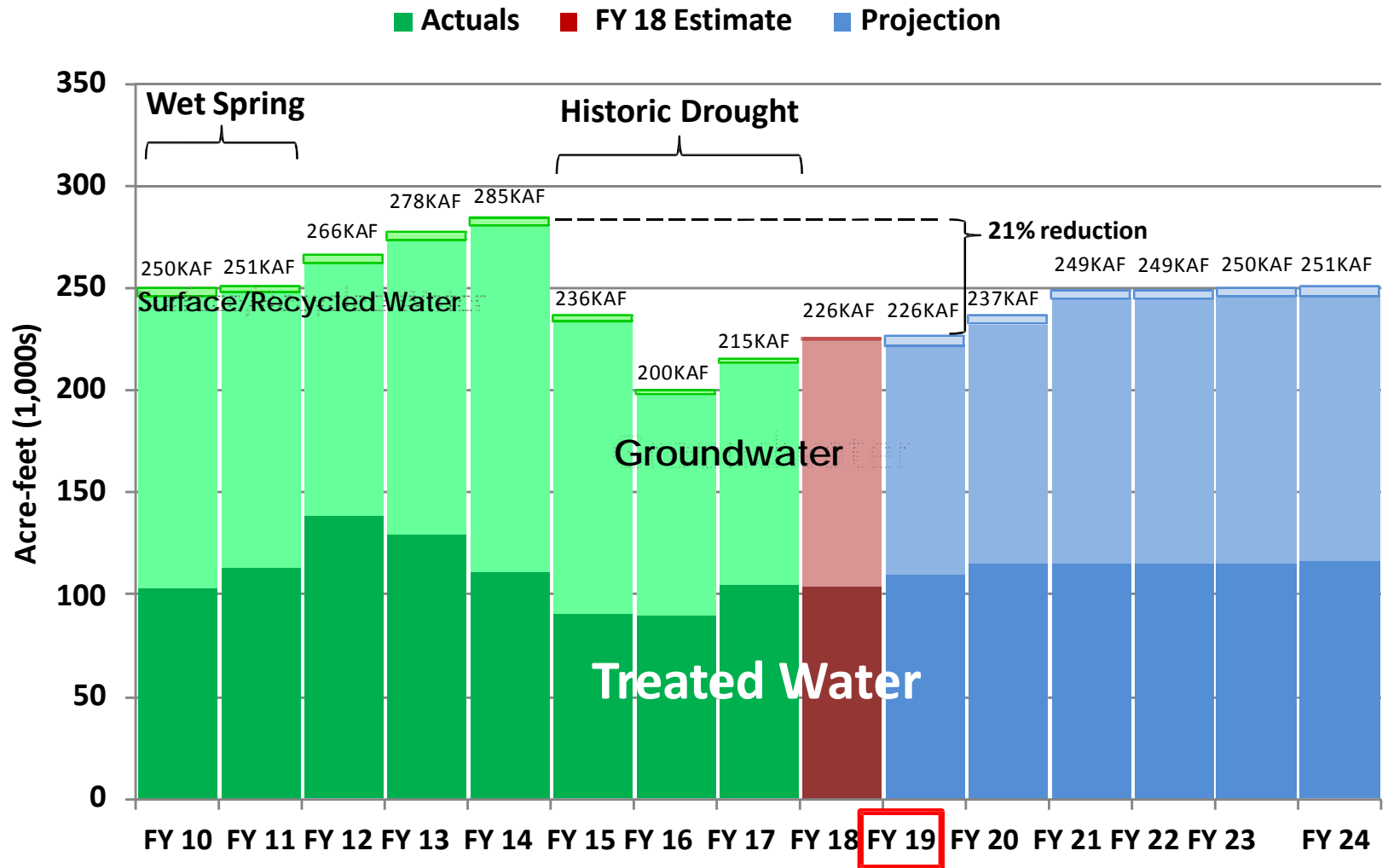
Shared

- Reservoirs – Anderson & Coyote
- Imported Water – Central Valley Project

South County

- Reservoirs – Chesbro, Uvas
- SCRWA Recycled Water System

Water Usage (District Managed)



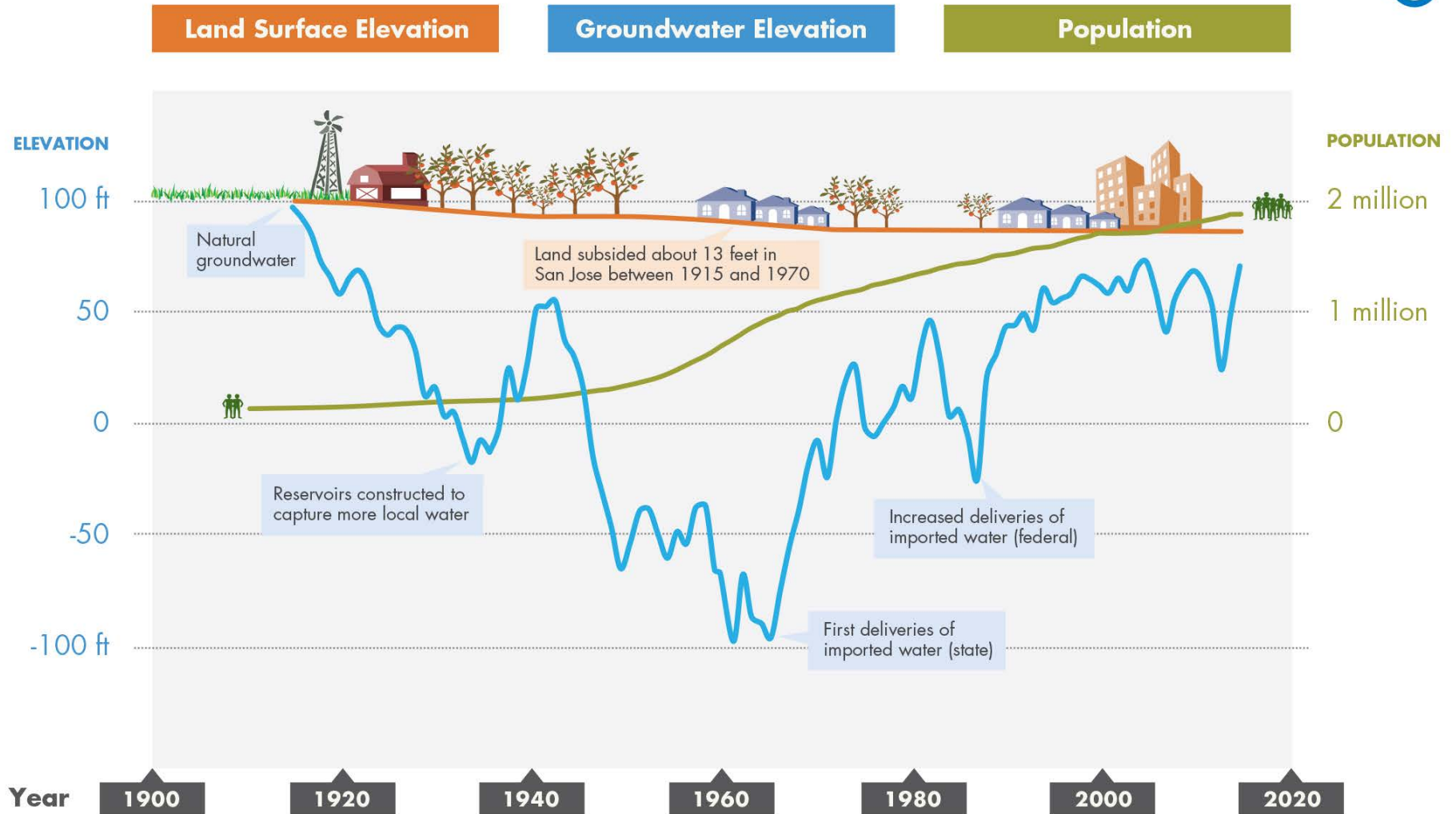
FY 2019-2020 Schedule (Tentative)

Jan 8	Board Meeting: Preliminary Groundwater Charge Analysis
Jan 16	Water Retailers Meeting: Preliminary Groundwater Charge Analysis
Jan 23	Water Commission Meeting: Prelim Groundwater Charge Analysis
Feb 12	Board Meeting: Review draft CIP & Budget development update
Feb 22	Mail notice of public hearing and file PAWS report
Mar 20	Water Retailers Meeting: FY 19 Groundwater Charge Recommendation
Apr 1	Ag Water Advisory Committee
Apr 2	Landscape Committee Meeting
Apr 9	Open Public Hearing
Apr 10	Water Commission Meeting
Apr 11	Continue Public Hearing in South County
Apr 23	Conclude Public Hearing
Apr 24-26	Board Meeting: Budget work study session
May 14	Adopt budget & groundwater production and other water charges

Backup Slides

SANTA CLARA COUNTY GROUNDWATER AT-A-GLANCE

a graphic representation not intended as a technical exhibit



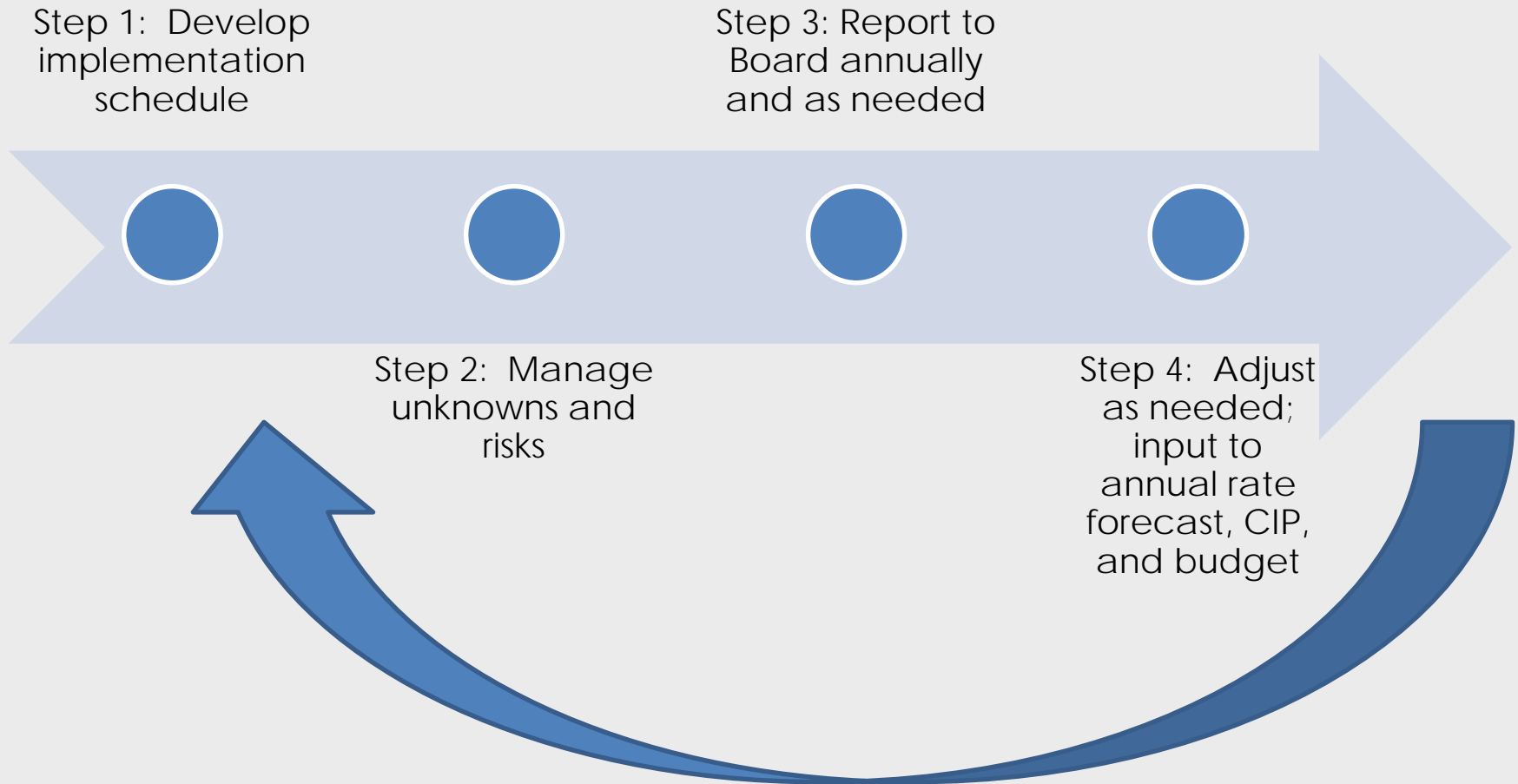
Last updated January 27, 2017

Suggested Projects Achieve Recommended Level of Service Goal

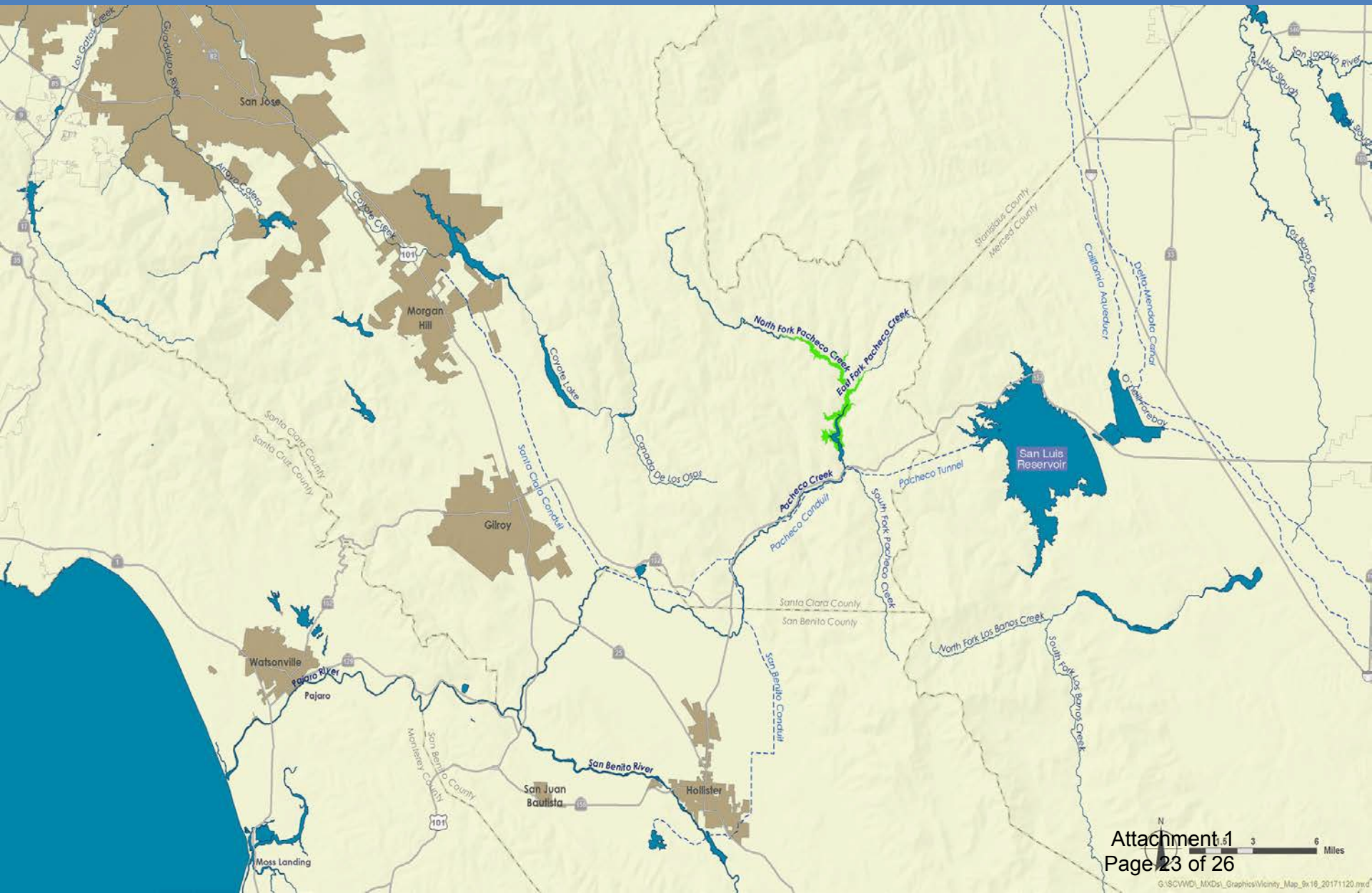
Scenario	Base Case	With Some Suggested Master Plan Projects	With All Suggested Master Plan Projects
Minimum Drought Reliability	Meets 50% of demands	Meets 80% of demands	Meets 90% of demands
Present Value Benefits (2017\$)	Not applicable	\$2,480,000,000	\$2,700,000,000
Present Value Cost to District (2017\$)	Not applicable	\$1,600,000,000	\$2,450,000,000
Benefit:Cost Ratio	Not applicable	1.6	1.1

- Baseline Projects
- Baseline Projects
- Baseline Projects
- No Regrets Package
- No Regrets Package
- Potable Reuse
- Potable Reuse
- South County Recharge
- South County Recharge
- CWF (State Side)
- CWF (State Side)
- CWF (Federal Side)
- Pacheco
- Transfer-Bethany Pipeline

RoadMAP (Monitoring & Assessment Plan)



Pacheco Reservoir Expansion Project Location



Anderson Dam Project Update

Current Project Efforts:

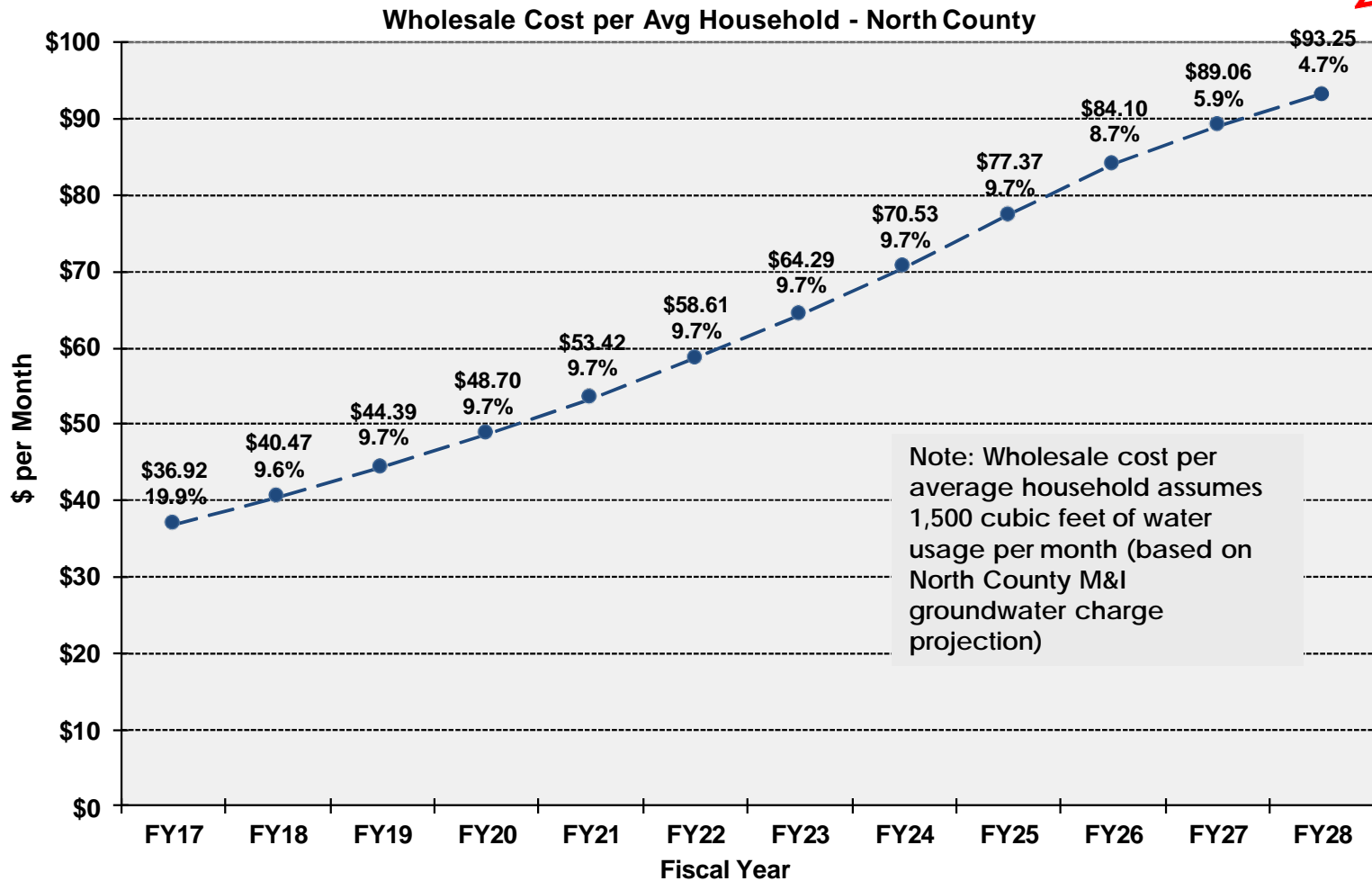
- 60% Design completed; under review
- Geotechnical investigations for spillway replacement
- Preparation of environmental and permit documents
- Full court press on permitting process.

Groundwater Production Charge Projection

(\$ in millions)

Water Utility Enterprise Fund

As of May
2018



Note: This projection does not account for impacts associated with the Bay Delta Water Quality Control Plan or Pacheco Reservoir Expansion

District Act Defines Purposes for Groundwater Charges

1

Imported Water Facilities

2

Imported Water Purchases

3

All Facilities which will “conserve or distribute water including facilities for groundwater recharge, surface distribution, and purification and treatment”

4

Debt

File No.: 18-1112

Agenda Date: 12/17/2018

Item No.: 5.

BOARD AGENDA MEMORANDUM

SUBJECT:

Countywide Water Reuse Master Plan Update.

RECOMMENDATION:

- A. That the District Board and Sunnyvale City Council receive information on the Countywide Water Reuse Master Plan;
- B. That the District Board direct its staff to continue its commitment to meaningful engagement with the City of Sunnyvale in pursuit of new and innovative partnership opportunities for the continued expansion of water reuse in Santa Clara County; and
- C. That the Sunnyvale City Council direct its staff to continue its commitment to meaningful engagement with the Santa Clara Valley Water District in pursuit of new and innovative partnership opportunities for the continued expansion of water reuse in Santa Clara County.

SUMMARY:

This agenda memorandum provides an overview of the conceptual alternatives developed for the District's Countywide Water Reuse Master Plan (Master Plan).

The Master Plan aims to improve water supply reliability through water reuse for Santa Clara County (County) in collaboration with recycled water producers, wholesalers, retailers, users, and other interested parties. The Master Plan will identify: the volume of water available for potential potable reuse (PR) development and non-potable reuse (NPR) expansion; the optimal allocation between PR and NPR; options for system integration; recommendations for building upon NPR projects; potential new PR projects; and proposals for governance model alternatives including roles and responsibilities.

The District is conducting robust engagement across various interest groups and levels, including Partner Agencies, policymakers, stakeholders, industry experts, regulators, business interests, environmental groups and the public. Partner Agencies include the four NPR producers in the County: City of Palo Alto/City of Mountain View Recycled Water System, City of Sunnyvale Recycled Water System, City of San José/City of Santa Clara South Bay Water Recycling (SBWR) and South County Regional Wastewater Authority (SCRWA).

Conceptual Alternatives

The process used to develop conceptual alternatives for the Master Plan included developing guiding

principles with stakeholders, identifying project elements, and grouping elements into conceptual alternatives. The District identified 18 potential project elements for consideration.

Based on Partner Agency input, the District combined the 18 potential project elements into five conceptual alternatives for evaluation. Alternatives include a mix of potential project elements, including some previously proposed projects (from recycled water master plans) and some new elements.

Next Steps

Leading up to completion of the Master Plan, the feasible alternatives will be further refined with hydraulic modeling, cost analysis, and preliminary engineering (10% design). Other factors such as energy usage and greenhouse gas emissions will be considered to further evaluate the feasible alternatives and select a single recommended alternative. Each potential Advanced Water Purification Facility (AWPF) identified will require Reverse Osmosis concentrate management. These options will be further analyzed in the District's Reverse Osmosis Concentrate Management Plan, which is being developed in parallel with the Master Plan.

The feasible alternatives all involve project elements that require new or extended agreements to address issues such as ownership and operations of a joint AWPF. The District is collaborating with Partner Agencies to develop long term agreements for potential expansion of water reuse facilities.

The Feasible Project Alternatives Technical Memorandum is scheduled to be completed in Spring 2019. Additional input from stakeholders and Partner Agencies will be considered when selecting the recommended alternative. Additional meetings of the Stakeholder Task Force and Project Partner Group are planned for early 2019. The final Master Plan is anticipated to be completed in 2019.

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: PowerPoint

UNCLASSIFIED MANAGER:

Jerry De La Piedra, District Assistant Operating Officer, 408-630-2257

Countywide Water Reuse Master Plan

Special Joint Meeting with City of Sunnyvale

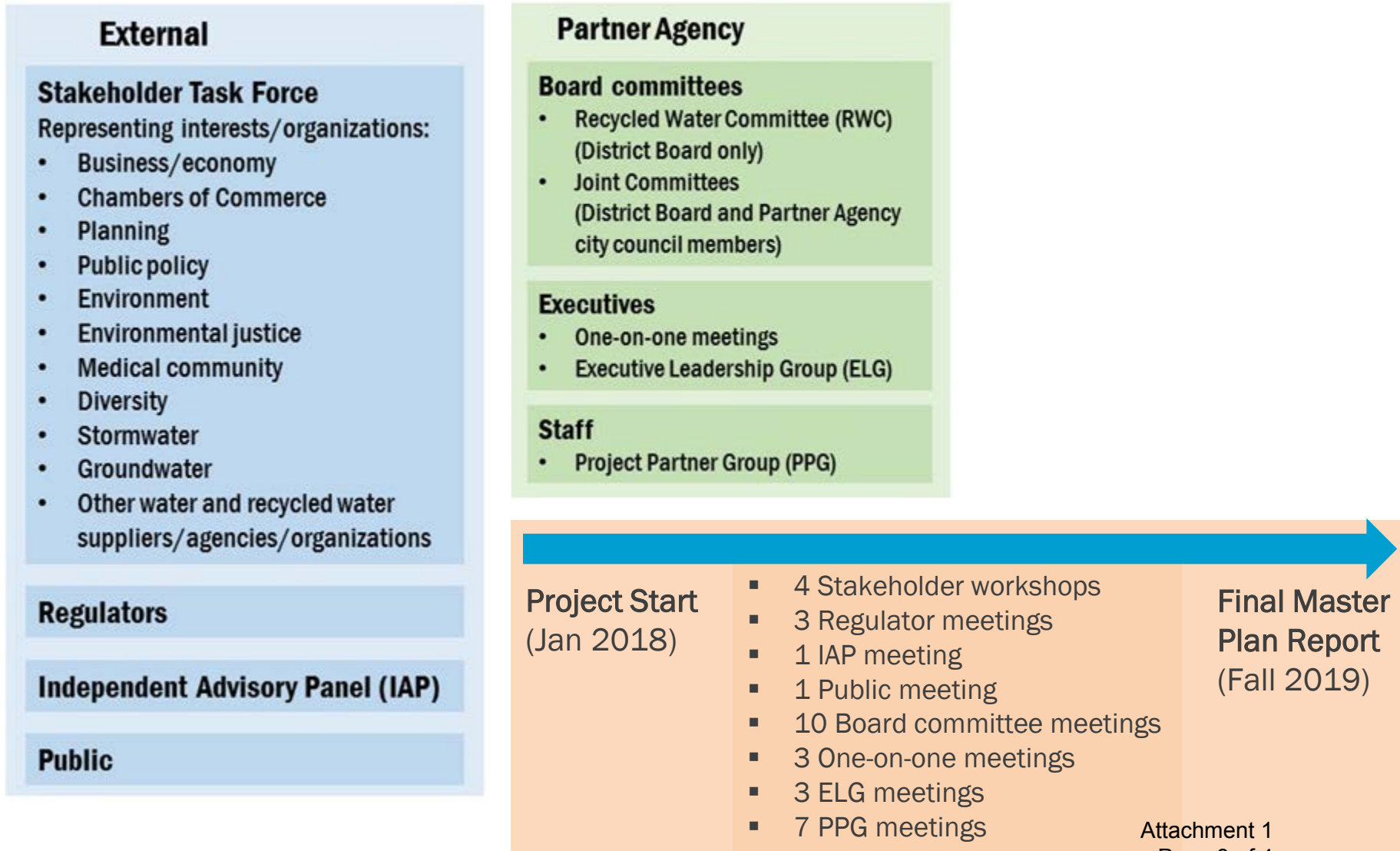
December 17, 2018

Objectives

- Identify **amount available** for PR and NPR and the optimal **PR/NPR split**
- Evaluate options for **system integration**
- Guide expansion via **interagency agreements** and **governance structures**
- Generate support by **engaging stakeholders**



Multiple Levels of Engagement



Next Steps – Feasible Alternatives Development

- **Nov 2018.** Coordinate with RO concentrate management team and water retailers
- **Winter 2019.**
 - Present top alternatives to District Board
 - Develop Class 5 cost estimates and 10% designs, hold PPG meeting
- **Spring 2019.**
 - Assess water supply integration, O&M, environmental benefits, regulatory considerations, and risk assessment; meet with Stakeholder Task Force
 - Meet with ELG/PPG to review Feasible Alternatives TM and recommended alternative

Fall 2019 Complete Master Plan report

File No.: 18-1125

Agenda Date: 12/17/2018

Item No.: 6.

BOARD AGENDA MEMORANDUM

SUBJECT:

Update on the Sunnyvale East/West Channels Flood Protection Project.

RECOMMENDATION:

That the District Board and Sunnyvale City Council receive information on the Sunnyvale East/West Channels Flood Protection Project.

SUMMARY:

The Sunnyvale West Channel Flood Protection Project upgrades the capacity of approximately 3 miles of existing storm drain channel to provide 1% (or 100-year) flood protection for 47 acres of highly valuable industrial lands, including the former Onizuka Air Force Station. The Sunnyvale East Channel Flood Protection Project upgrades the existing capacity of approximately 6.4 miles of existing storm drain channel to provide 1% flood protection for 1,618 parcels. Construction improvements along both storm drain channels will also decrease turbidity and sediment by repairing various erosion sites, thereby improving water quality. In the early stages of the project design process, staff joined both improvement projects into one combined flood protection project, with a single Environmental Impact Report (EIR), to reduce construction costs and minimize construction coordination issues between the two channels. The Project does not protect against tidal flooding, which will be addressed with the completion of the South San Francisco Bay Shoreline Project.

Project Update

- Final EIR was certified by the District Board of Directors in September 2014.
- Generation of the 100% design is on-going and is expected to be completed by March 2019.
- To date, five permanent, necessary right-of-way acquisitions have been acquired, and staff is working with Santa Clara County Parks and Recreation Department and San Francisco Public Utilities Commission (SFPUC) to acquire final leasing agreements, as well as temporary construction easements necessary for the Project. It is anticipated that all acquisitions will be completed by April 2019.
- In June 2017, the District submitted all the required permit applications to the various state and federal regulatory agencies. The permitting process is ongoing and staff is responding to requests for additional information from the California Department of Fish and Wildlife and the Regional Water Quality Control Board. Final permits are anticipated to be received by summer

2019, with award of the construction contract anticipated to occur in late 2019.

- The District has also engaged in partnering with Google, LLC since October 2017 to provide additional environmental enhancement project along 1,100 linear feet of the Sunnyvale West Channel (Caribbean Drive upstream to Caspian Court. These enhancements include improvements to existing public infrastructure and exploration of on-site mitigation opportunities.
- The District and Google, LLC are also exploring similar partnership opportunities on the Sunnyvale East Channel.

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:

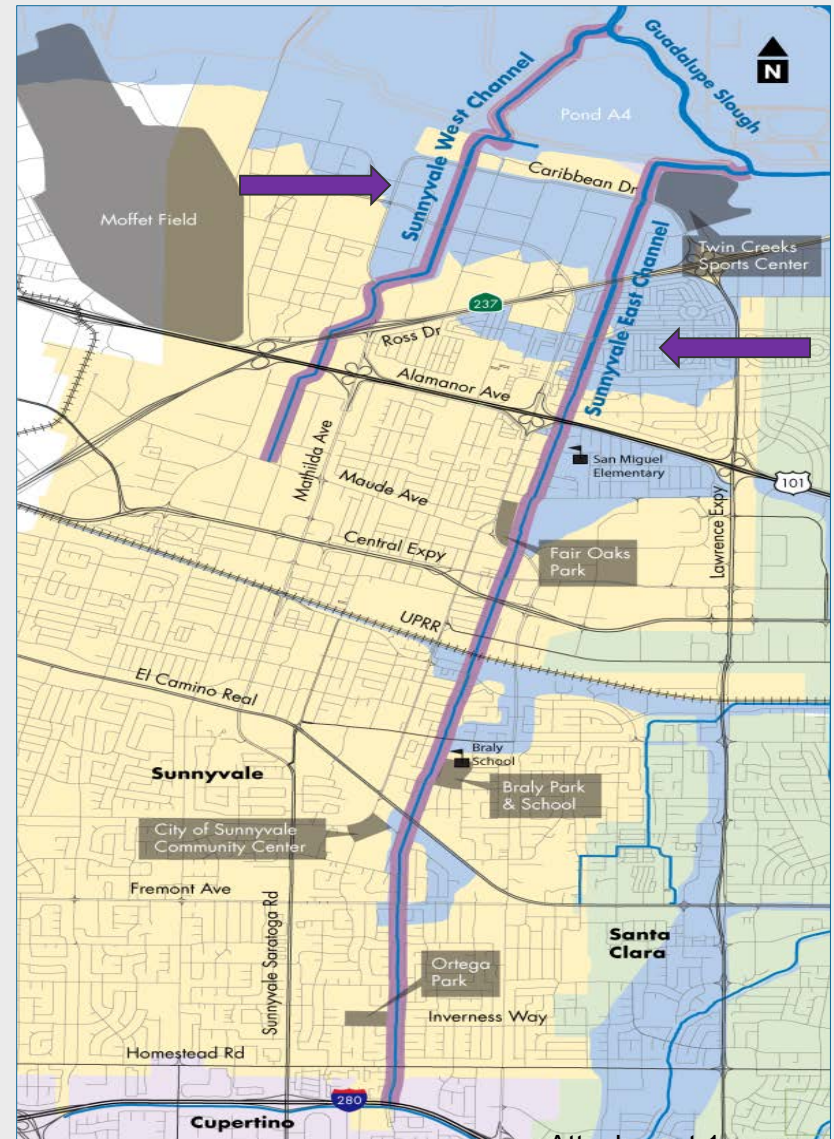
Attachment 1: PowerPoint

UNCLASSIFIED MANAGER:

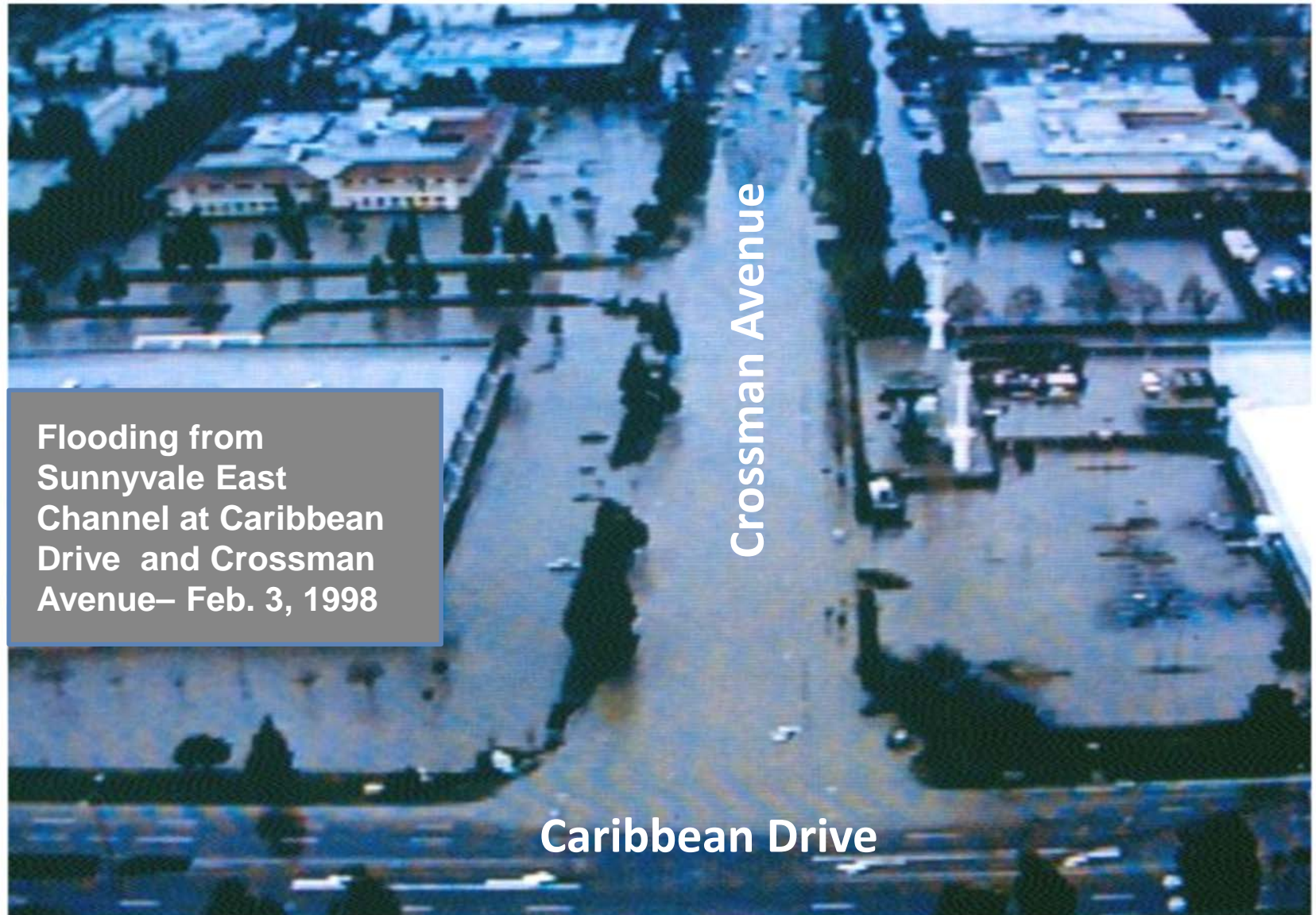
Christopher Hakes, District Deputy Operating Officer, 408-630-3796

Sunnyvale East-West Flood Protection Project

- Storm drain channels constructed by the District in 1960's;
- Historical flooding in 1963, 1968, 1983, 1986 and 1998;
- Project is funded by Safe Clean Water measure;
- Design 99% Complete (9.4± miles);
- Submitted permit applications to Resource Agencies (June 2017);
- Permanent right-of-way acquisition complete
 - TCE's pending;
- Construction Contract Award— Late of 2019



Sunnyvale East-West Flood Protection Project



Sunnyvale East Channel

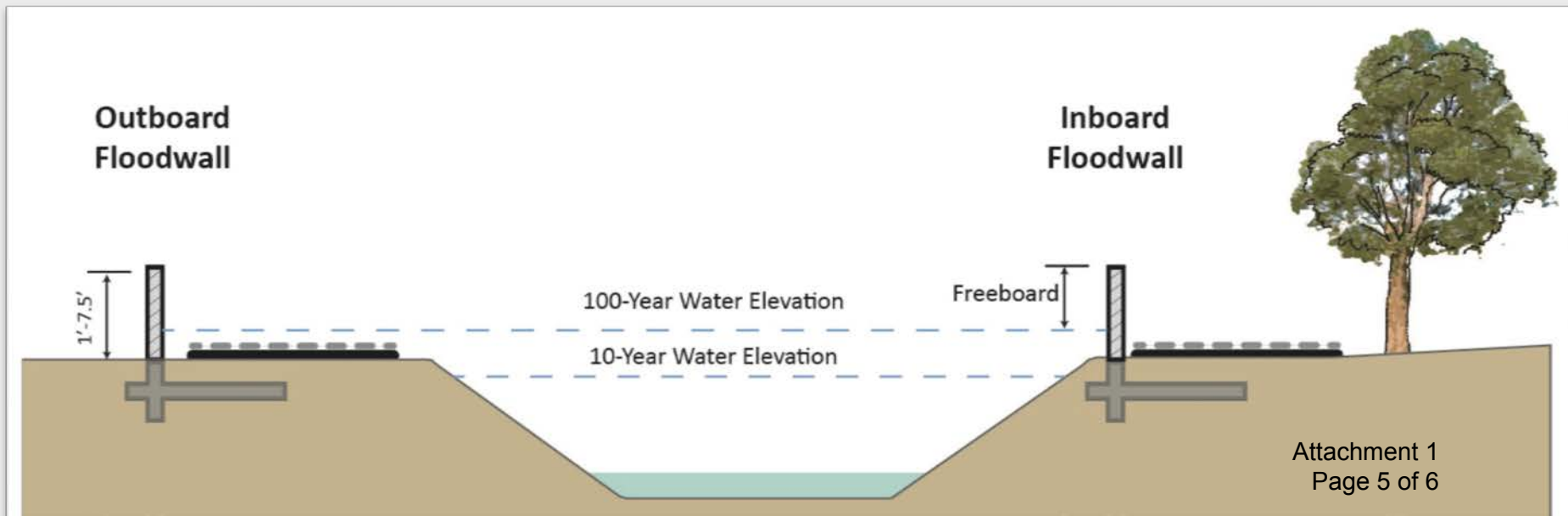


Sunnyvale West Channel



Proposed floodwalls

- ▶ Provides 100-year flood protection and meets freeboard standards
- ▶ East Channel: S.F. Bay to U.S. 101
- ▶ West Channel: S.F. Bay to Mathilda Avenue
- ▶ Vertical heights ranging from 1 foot to 7.5 feet above ground



Proposed bridge/culvert modifications

- Provide 100-year flood protection and meet freeboard standards

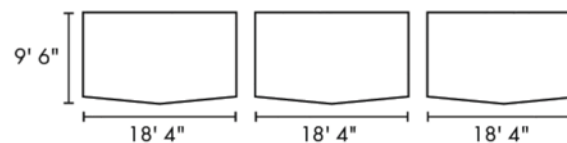
Bridge/culvert replacements

- East Channel: Caribbean Drive Bridge
 - Replace with larger bridge, triple box culvert
 - Requires traffic management during construction
- West Channel:
 - Carl Road Culvert: Replace with larger, single box culvert
 - Java Drive: Reinforced Concrete Box culvert extension

Caribbean Drive Bridge



Triple Box Culvert Section



Santa Clara Valley
Water District



File No.: 18-1108

Agenda Date: 12/17/2018

Item No.: 7.

BOARD AGENDA MEMORANDUM

SUBJECT:

Update on the South San Francisco Bay Shoreline Project.

RECOMMENDATION:

That the District Board and Sunnyvale City Council receive information on the South San Francisco Bay Shoreline Project.

SUMMARY:

The overall goal of the South San Francisco Bay Shoreline Project (Shoreline Project) is to safeguard hundreds of homes, schools, and businesses along Santa Clara County's 18 miles of shoreline from the risk of coastal flooding. The Shoreline Project will also restore tidal marsh and related habitat that was lost due to former salt production activities, provide opportunities for recreational and public access along the bay shoreline, and takes into consideration safeguarding against sea level rise over a 50-year period (through Year-2067).

The Shoreline Project is being undertaken by the Santa Clara Valley Water District (District) in partnership with the United States Army Corps of Engineers (USACE) and the State Coastal Conservancy (Conservancy). Congressional authorization to conduct the Shoreline Project was granted by the Water Resources Development Act in 1976. The District and Conservancy are the non-federal sponsors, also referred to as "local project sponsors." The Shoreline Project efforts began in 2005 for all of Santa Clara County, which was divided into 11 areas, called Economic Impact Areas (EIA). In September 2010, the District requested that USACE re-evaluate the project scope and conduct the project in phases beginning with the area among the highest potential for flood damages and economic impacts. The District's Board endorsed this new scope in March 2011, and the project was thereafter refocused to the EIA 11 area located in north San Jose between the Alviso Slough and Coyote Creek. The first phase of the Shoreline Project in north San Jose has been progressing on schedule and received authorization for design and construction in December 2015, followed by receipt of \$177.2 million for design and construction in July 2018.

In 2015, while the District and Conservancy were working with the USACE on the Shoreline Project in north San Jose, the District hired a consultant to prepare a Preliminary Feasibility Study for the shoreline areas located between San Francisquito Creek in Palo Alto to Guadalupe River in San Jose. This area is 14 miles long and known as EIAs 1-10. EIAs 1-10 includes the cities of Palo Alto, Mountain View, Sunnyvale, San Jose, as well as NASA Moffett Field and the Alviso Complex Ponds

A1 to A8. The intent of the Preliminary Feasibility Study was to assess a preliminary coastal flood risk management alignment along with related benefits and costs to safeguard against a 1-percent coastal flood including protection for sea level rise. The preliminary study findings will be used to determine the Shoreline Project's next study phase and to identify potential study partners.

The cities of Palo Alto, Mountain View, Sunnyvale and San Jose, as well as NASA Moffett Field, U.S. Fish and Wildlife Service, Conservancy and Mid-Peninsula Open Space Authority were all consulted in the identification of the preliminary alignment. The Preliminary Feasibility Study for EIAs 1-10 was completed in March 2017. The study's report was finalized after receipt and consideration of comments from all consulted agencies noted above.

In November 2018, the USACE has received \$500,000 in the FY 2019 work plan to continue the Shoreline Feasibility Study efforts for the next study phase. The District and USACE will begin discussing next steps to move forward in early 2019. In addition, in January 2019, the District will be meeting with City of Sunnyvale staff to discuss Shoreline Project collaboration for EIAs 7, 8, and 9 that are in City of Sunnyvale.

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: PowerPoint

UNCLASSIFIED MANAGER:

Ngoc Nguyen, District Deputy Operating Officer, 408-630-2632



Santa Clara Valley
Water District



Coastal
Conservancy

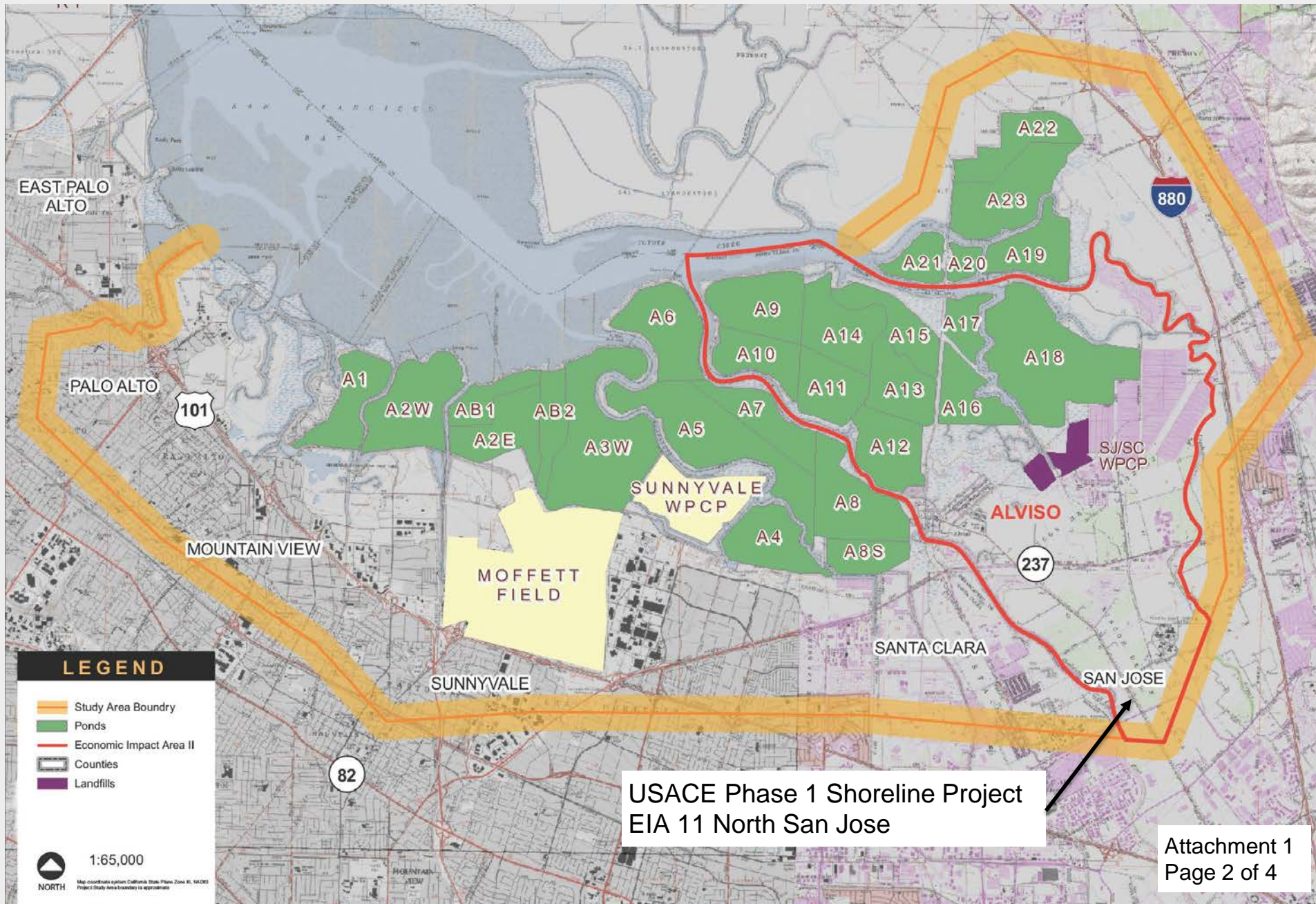
South San Francisco Bay Shoreline Project District – City Meeting December 17, 2018



SANTA CLARA
COUNTY PARKS



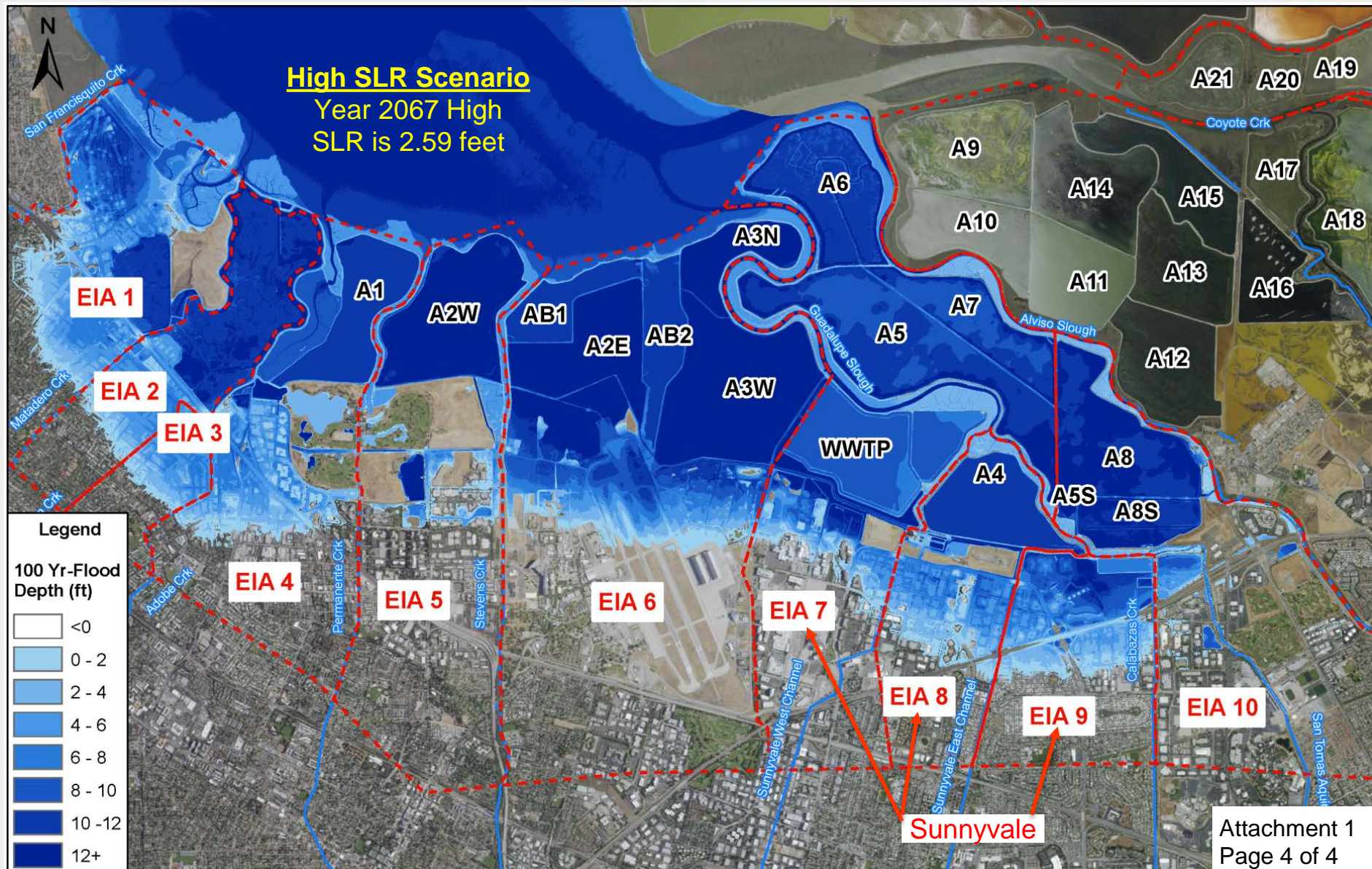
Shoreline Study Authorization



Preliminary EIA 1-10 Shoreline Flood Risk Management Alignment



100-Year Coastal Inundation Map



File No.: 18-1113

Agenda Date: 12/17/2018

Item No.: 8.

BOARD AGENDA MEMORANDUM

SUBJECT:

Emergency Services Coordination.

RECOMMENDATION:

- A. That the District Board consider directing its staff to commit to ongoing and strengthened coordination and partnership with the City of Sunnyvale on emergency activities and services; and
- B. That the Sunnyvale City Council consider directing its staff to commit to ongoing and strengthened coordination and partnership with the Santa Clara Valley Water District on emergency activities and services.

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 municipalities such as the City of Sunnyvale.

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 Sunnyvale, which illustrates the need for a strong partnership to build emergency capabilities.

To build this partnership between the District and City of Sunnyvale, it's important to explore options for collaborative emergency planning, as well as joint trainings and exercises. These collaborative efforts will better prepare both agencies to respond and recover from emergencies. Understanding how best to communicate, coordinate, and share resources during an emergency, will strengthen this partnership and increase capabilities to best serve the public.

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: PowerPoint

UNCLASSIFIED MANAGER:

Tina Yoke, District Chief Operating Officer, 408-630-2385

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Emergency Services Coordination



Flooding Sunnyvale E. Channel, Dec. 2012

Near Caribbean Drive



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
- ▶ Land 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)



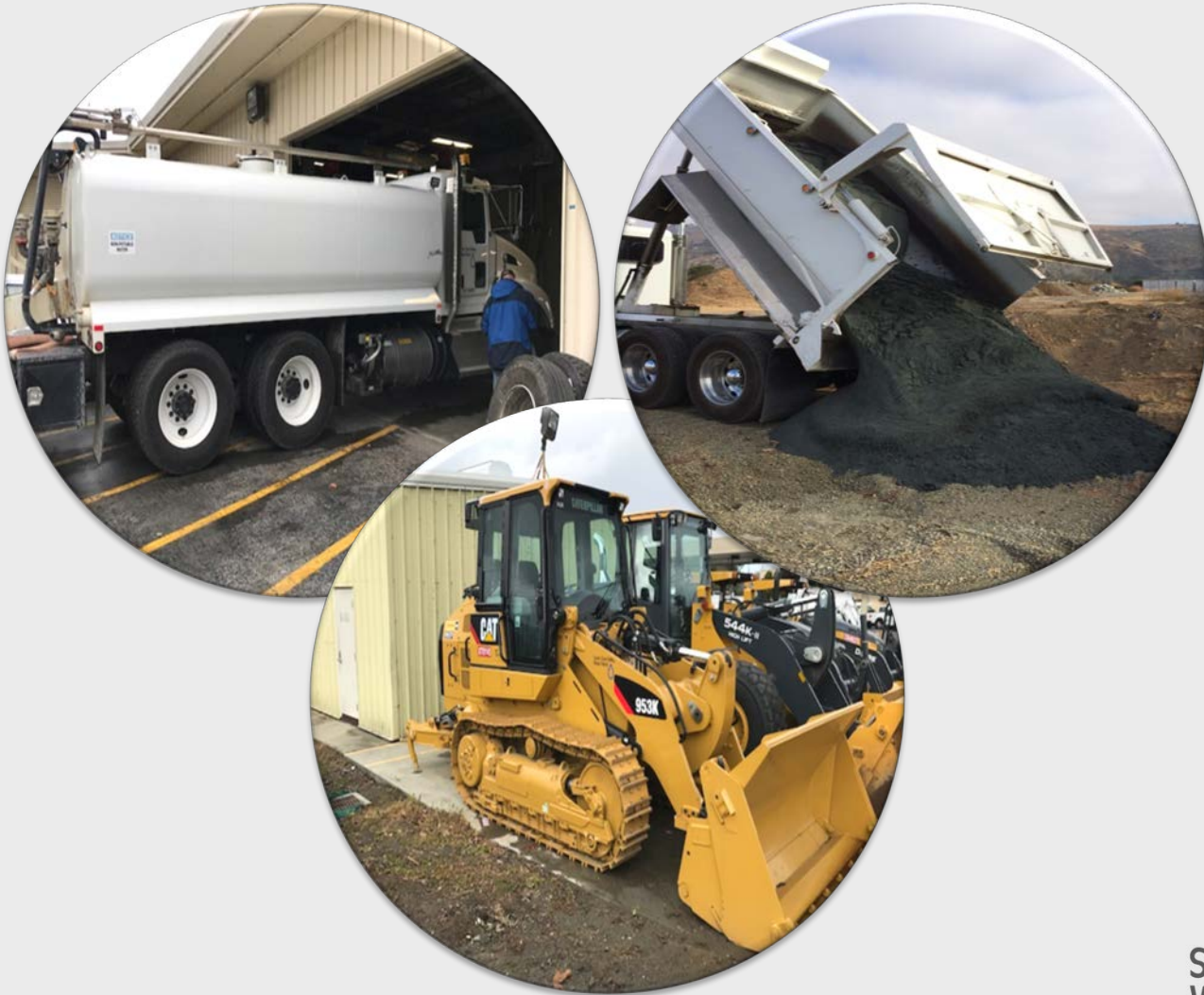
- ▶ 160+ assigned to EOC
- ▶ Technical Experts (Watershed and Water Utility)
- ▶ Public Information Branch
 - ▶ Communication redundancy

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