



## Santa Clara Valley Water District Board of Directors Meeting

Headquarters Building Boardroom  
5700 Almaden Expressway  
San Jose, CA 95118

### SPECIAL BOARD MEETING ON CALIFORNIA WATERFIX AGENDA

Wednesday, May 2, 2018  
5:00 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**

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**Santa Clara Valley Water District  
Board of Directors  
SPECIAL BOARD MEETING ON CALIFORNIA WATERFIX  
AGENDA**

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Wednesday, May 2, 2018

5:00 PM

Headquarters Building Boardroom

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**1. CALL TO ORDER:**

1.1. Roll Call.

1.2. Pledge of Allegiance/National Anthem.

1.3. 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.*

**2. TIME CERTAIN:**

**5:00 PM**

2.1. Update on the California WaterFix, Authorization to Execute Agreements, Designation of District Representative, and Adoption of CEQA Findings.

[18-0355](#)

- Recommendation:
- A. Receive an update on the California WaterFix (WaterFix);
  - B. Consider the potential environmental effects of the project as discussed in the Lead Agency's Final Environmental Impact Report and adopt the Resolution, MAKING RESPONSIBLE AGENCY FINDINGS PURSUANT TO THE CALIFORNIA ENVIRONMENTAL QUALITY ACT TO AUTHORIZE EXECUTION OF AGREEMENTS RELATING TO DESIGN, CONSTRUCTION, AND FINANCING OF THE CALIFORNIA WATERFIX PROJECT;
  - C. Consider the potential costs and benefits of the WaterFix to Santa Clara County and adopt the Resolution, AUTHORIZING SUPPORT OF, AND PARTICIPATION IN, CALIFORNIA WATERFIX;
  - D. Approve and Authorize the Chief Executive Officer (CEO) to execute a Capacity Interest Option Agreement with Metropolitan Water District of Southern California that is in substantial conformance with the Capacity Interest Option Agreement provided in Attachment 1;
  - E. Approve and authorize the Board to execute a Joint Powers Agreement Forming the Delta Conveyance Design and Construction Joint Powers Authority (Design and Construction JPA) that is in substantial conformance to the agreement provided in Attachment 2, and designate a District representative and alternate to serve on the Board of Directors of the Design and Construction JPA for the first two years following formation;
  - F. Direct the CEO to negotiate terms and conditions for the District to participate in the WaterFix Financial Arrangements (See section 4.3), including a joint powers authority for financing construction of the WaterFix and bring the necessary agreements to the Board for approval;
  - G. Delegate authority to the CEO to negotiate terms and conditions and execute an agreement between the Department of Water Resources and the District for preconstruction capital costs for the WaterFix for a District contribution of up to \$3.5 Million (Gap Funding Agreement);
  - H. Direct staff to continue participating in WaterFix discussions to further develop agreements and contract amendments to protect the District's investment; and
  - I. Direct staff to evaluate and negotiate long term water transfers, water supply alternatives and storage opportunities related to WaterFix, and bring terms and conditions to Board for consideration.

Manager: Garth Hall, 408-630-2750

Attachments:      [\\*Attachment 1: Option Agmt Placeholder \(To Post Prior to Mtg\)](#)  
                         [\\*Attachment 2: Draft DCA Agmt Placeholder \(To Post Prior to Mtg\)](#)  
                         [Attachment 3: SCVWD Resolution 17-68](#)  
                         [Attachment 4: 091217 Board Agenda Item](#)  
                         [Attachment 5: 101717 Board Agenda Item](#)  
                         [Attachment 6: Guiding Principles Evaluation](#)  
                         [Attachment 7: Resolution, WaterFix Partipation](#)  
                         [Attachment 8: Resolution, District CEQA Findings](#)  
                         [\\*Attachment 9: PowerPoint Placeholder \(To Post Prior to Mtg\)](#)

Est. Staff Time:      30 Minutes

**3.      ADJOURN:**

- 3.1.      Clerk Review and Clarification of Board Requests.
- 3.2.      Adjourn to 11:00 a.m. Closed Session and 1:00 p.m. Regular Meeting on May 8, 2018, at the Santa Clara Valley Water District Headquarters Building Boardroom, 5700 Almaden Expressway, San Jose, California.

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**File No.:** 18-0355

**Agenda Date:** 5/2/2018  
**Item No.:** 2.1.

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## BOARD AGENDA MEMORANDUM

### **SUBJECT:**

Update on the California WaterFix, Authorization to Execute Agreements, Designation of District Representative, and Adoption of CEQA Findings.

### **RECOMMENDATION:**

- A. Receive an update on the California WaterFix (WaterFix);
- B. Consider the potential environmental effects of the project as discussed in the Lead Agency's Final Environmental Impact Report and adopt the Resolution, MAKING RESPONSIBLE AGENCY FINDINGS PURSUANT TO THE CALIFORNIA ENVIRONMENTAL QUALITY ACT TO AUTHORIZE EXECUTION OF AGREEMENTS RELATING TO DESIGN, CONSTRUCTION, AND FINANCING OF THE CALIFORNIA WATERFIX PROJECT;
- C. Consider the potential costs and benefits of the WaterFix to Santa Clara County and adopt the Resolution, AUTHORIZING SUPPORT OF, AND PARTICIPATION IN, CALIFORNIA WATERFIX;
- D. Approve and Authorize the Chief Executive Officer (CEO) to execute a Capacity Interest Option Agreement with Metropolitan Water District of Southern California that is in substantial conformance with the Capacity Interest Option Agreement provided in Attachment 1;
- E. Approve and authorize the Board to execute a Joint Powers Agreement Forming the Delta Conveyance Design and Construction Joint Powers Authority (Design and Construction JPA) that is in substantial conformance to the agreement provided in Attachment 2, and designate a District representative and alternate to serve on the Board of Directors of the Design and Construction JPA for the first two years following formation;
- F. Direct the CEO to negotiate terms and conditions for the District to participate in the WaterFix Financial Arrangements (See section 4.3), including a joint powers authority for financing construction of the WaterFix and bring the necessary agreements to the Board for approval;
- G. Delegate authority to the CEO to negotiate terms and conditions and execute an agreement between the Department of Water Resources and the District for preconstruction capital costs for the WaterFix for a District contribution of up to \$3.5 Million (Gap Funding Agreement);
- H. Direct staff to continue participating in WaterFix discussions to further develop agreements

and contract amendments to protect the District's investment; and

- I. Direct staff to evaluate and negotiate long term water transfers, water supply alternatives and storage opportunities related to WaterFix, and bring terms and conditions to Board for consideration.

## **SUMMARY:**

### **1.0 Recent Developments**

On October 17, 2017, the District Board adopted Resolution 17- 68 in which the District declared its conditional support for the California WaterFix (WaterFix) and adopted Guiding Principles for Participation in the California WaterFix (Guiding Principles, Attachment 3). Guiding Principle 3 states, *"Given that Westlands Water District and certain other agriculture districts have declined to participate in the WaterFix project, we are supportive of a lower cost, scaled down, and staged project that is consistent with the existing environmental impact reports and other administrative proceedings."* In response to the District's principles and given most Central Valley Project (CVP) contractors had not agreed to finance their share of the project at that time, the Department of Water Resources (DWR) proposed on February 7, 2018, to move forward with a staged project, focusing first on a 6,000 cubic foot per second (cfs) tunnel as the first stage.

The State analyzed the cost and yield of a 6,000 cfs tunnel and initiated environmental review for the proposed changes. Subsequently, Metropolitan Water District of Southern California (MWD) staff provided analysis to their board confirming the estimates of cost and yield, but also showing that the full 9,000 cfs project would have greater environmental benefits, water quality improvements, and resiliency against earthquakes and climate change.

In a letter dated April 9, 2018, Governor Jerry Brown strongly urged the MWD Board to support financing construction of the full 9,000 cfs project in a single stage. The next day, MWD's Board voted to authorize MWD to finance its share of the State Water Project (SWP) portion of a 9,000 cfs project, as well as to fully fund the unsubscribed CVP share of the project, in combination up to 64.6% of total project costs. This decision moved the project away from a staged approach and back to full implementation of the twin tunnel project in one stage, as originally envisioned and currently approved by DWR. MWD's decision is based on the expectation that CVP contractors would ultimately participate through future purchases of capacity interest from MWD, wheeling arrangements, or transfer agreements. The split between the SWP and CVP in the full project was estimated as 67% SWP and 33% CVP based on an updated analysis of the State's modeling work.

### **2.0 Project Costs and Benefits**

The WaterFix project before the Board at this time is the original 9,000 cfs project for which the State adopted an Environmental Impact Report/Environmental Impact (EIR/EIS) in July 2017. 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). MWD is expected to finance the 33% share originally intended for the CVP contractors and, in return, receive an interest in 3,000 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.

The benefits and costs of the project remain similar to those described in the September 12, 2017 and October 17, 2017 Board agenda memos, which are provided as Attachments 4 and 5. The primary benefits of the project are summarized in Table 1.

**Table 1. Summary of WaterFix Benefits**

<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.
<b>Improved yield of storage projects</b>	More than doubles the average benefit of proposed new storage projects

Staff have refined the quantification of the District’s share of cost and water supply yield to reflect the modification in the SWP/CVP project split from 55%/45% to 67%/33% as well as updated modeling results, as described below.

### *2.1 Updated Water Supply Analysis*

The existing long-term average SWP/CVP water deliveries to the District are about 170,000 acre-feet per year (AF/Y); these 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. The State has updated its analysis of WaterFix benefits using the most recent modeling results from DWR, which includes the refined operations criteria approved in the biological opinions. Staff has used the updated models to revise the analysis of water supply yield and costs to the District, reflecting staff's recommended participation approach.

The District's share of SWP WaterFix cost and yield is 2.5%. On the CVP side, staff evaluated the cost and benefit of potentially securing 200 cfs of capacity interest through an agreement with MWD, with the anticipation that a proportional share of CVP project yield (6.7%) would be secured through future operating agreements and contracts with Reclamation.

WaterFix Project	Recommended District Participation Level
State Water Project share of Project (67%)	2.5%
Share of Project Intended for Central Valley Project (33%)	200 cfs (6.7%)

Table 2. Recommended District Participation Level

The results indicate that, if no action is taken to improve the existing Delta conveyance approach, the District's SWP and CVP deliveries could drop by about 36,000 AF/Y due to anticipated additional regulatory constraints to protect threatened and endangered fish within the Delta. With participation in the WaterFix, this decline can be avoided by diversion of water during high flow periods. Total deliveries with the WaterFix remain similar to current average levels, and incremental yield produced by the WaterFix is measured against a degraded future baseline, as described in Section C of staff's September 12, 2017 Board agenda memo (Attachment 4). Based on updated modeling analysis, the District's annual share of available incremental water supply from WaterFix is estimated to be 18,000 acre-feet from the SWP side and 25,000 acre-feet from the CVP side, for a total of 43,000 acre-feet. Greater amounts of yield are realized in wetter years, indicating that benefits may be optimized if coupled with additional storage opportunities. Overall, the modeling indicates that the project could sustain existing levels of imported SWP and CVP supplies and protect Santa Clara County from a 36,000 acre-foot decline in imported water supplies that is projected to occur if no action is taken.

Table 3. Summary of Potential WaterFix Incremental Yield for District

	Updated Analysis	Sep.12, 2017 Staff Analysis

	SWP-Side 2.5% share	CVP-Side 6 share	SWP-CVP Combined	
<b>Estimated incremental water supply yield to District</b>				
<b>Percent of Total Project</b>	1.7%	2.2%	3.9%	2.5% - 3.9%
<b>Annual Average WaterFix Yield Available to District (AF)</b>	18,000	25,000	43,000	28,500 - 44,300 AF/year

## 2.2 Long Term Transfers

Modeling analysis indicates that the District may potentially receive roughly 25,000 AF/Y of CVP supply as WaterFix yield. However, because of the lack of a currently viable CVP participation approach and limited interest from other CVP contractors, the ability to realize this benefit is uncertain.

There is a risk that the District may be unable to secure necessary operating agreements and contracts with Reclamation. A potential approach to offset this risk is to secure long-term transfers from other SWP contractors. Transfer supplies may be available from SWP contractors that have expressed an interest in reducing their cost (and associated share of yield) of participating in the WaterFix. District staff recommends that the District identify opportunities and negotiate potential transfer arrangements and additional storage opportunities that will be brought to the Board for discussion in the future. Independently or paired, additional new water supplies and/or storage would help mitigate this uncertainty associated with securing CVP supplies.

## 2.3 Updated Analysis of District Costs

Assuming the District's participation level is as described in Table 2, 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 updated analysis of levelized unit cost of project participation remains consistent with staff's October 2017 estimate at roughly \$600/AF (2017 dollars). The monthly increase in cost per average household in northern Santa Clara County for FY 2033, which coincides with the anticipated beginning of project operation, is estimated at \$10.26.

**Table 4. Summary of District costs**

	<b>Updated Analysis</b>		<b>Sep.12, 2017 Staff Analysis</b>
	SWP-Side 2. share	SWP-CVP Combined	
<b>Costs to Santa Clara County</b>			
<b>Percent of Total Project Costs</b>	1.7%	3.9%	2.5% - 3.9%

<b>Total Capital Costs (2017 dollars)</b>	\$280 million	\$650 million	\$420-650 million
<b>Present Value (PV) fully financed Capital Cost (2017)</b>	\$230 million	\$535 million	\$345 - 535 million
<b>Total Annual O&amp;M (2017 dollars)</b>	\$1.1 million	\$2.5 million	\$1.6-2.5 million
<b>Cost per Acre-Foot (2017 dollars)</b>	\$610	\$600	\$600
<b>Rate Impacts (assuming all CWF costs are placed on water rates)</b>			
<b>Peak North County M&amp;I Groundwater Charge Increase (FY45)</b>	\$151/AF	\$313/AF	Not provided
<b>Monthly Increase per Avg. Household (FY33) N. County</b>	\$4.96	\$10.26	Not provided
<b>Monthly Increase per Avg. Household (FY33) S. County</b>	\$0.00	\$4.47	Not provided

As shown in Table 5, the dollar per acre foot cost for the WaterFix is among the lowest while its potential yield is highest among projects analyzed by staff, making the WaterFix a cost-effective project.

**Table 5. Comparison of Potential Water Supply Options**

Project	Unit Cost	Average Annual Yield (AF)	District Lifecycle Cost (Present Value, 2017)
Morgan Hill Recharge	\$400/AF	2,000	\$20 million
Los Vaqueros <sup>1</sup>	\$400/AF	3,000	\$40 million
California WaterFix	\$600/AF	41,000	\$620 million
Sites Reservoir <sup>1</sup>	\$800/AF	8,000	\$170 million
Water Contract Purchase	\$800/AF	12,000	\$360 million
Lexington Pipeline	\$1,000/AF	3,000	\$90 million
Groundwater Banking	\$1,300/AF	2,000	\$60 million
Saratoga Recharge	\$1,300/AF	1,000	\$50 million
Dry Year Options/Transfers	\$1,400/AF	2,000	\$100 million
Potable Reuse - Los Gatos Ponds	\$2,000/AF	19,000	\$1.22 billion
Pacheco Reservoir <sup>1</sup>	\$2,700/AF	6,000	\$450 million
Potable Reuse – Ford Pond	\$2,800/AF	3,000	\$300 million
Potable Reuse – Injection Wells	\$3,100/AF	12,000	\$1.18 billion

### 3.0 Board Guiding Principles

Staff evaluated whether the proposed project and project participation approach satisfy the Board's

seven guiding principles established in October 2017 (Attachment 3). The results, summarized in Attachment 6, show that conditions leading to the Board's adoption of Guiding Principle 3 have substantially changed, and that all other principles have been achieved, or significant progress has been made toward achieving them.

Guiding Principle 3 states: *"Given that Westlands Water District and certain other agriculture districts have declined to participate in the WaterFix project, we are supportive of a lower cost, scaled down, and staged project that is consistent with the existing environmental impact reports and other administrative proceedings."* The State responded to the District's principle by proposing a staged project on February 7, 2018, and, along with State and federal contractors, focused significant analysis on a first stage that included a single 6,000 cfs tunnel.

The consideration of a staged approach was driven by lack of participation from CVP contractors; however, MWD's April 10, 2018, decision to finance the unsubscribed CVP portion of the tunnels has produced a significant change in conditions. Concerns regarding the ability to fund the project have been substantially mitigated. MWD's approach reduces the District's financial risk by providing the District with additional options to resolve issues and receive WaterFix benefits on the CVP side. Staff have successfully negotiated terms and conditions for a capacity interest option agreement with MWD to hold a space for future District participation at minimal cost, as discussed in Section 4.1. If the District is unable to secure the needed approvals from Reclamation to receive benefits on the CVP side, the option agreement will allow the District to forego CVP participation and associated costs.

The current WaterFix project also meets the following key elements of Guiding Principle 3:

- *District elected officials active in WaterFix governance:* Design and Construction Authority (DCA) and Finance Joint Powers Authority (JPA) includes District as governing board member, specifically as Chair and Vice Chair in governance structure during rotating terms.
- *Less impacts to fisheries and environment:* The District championed and won inclusion of an environmental compliance committee within the DCA structure. As originally planned by DWR, WaterFix intakes will be fitted with state-of-the-art fish screens that are more protective of fish, and project operations are expected to result in more positive net river flows than under current conditions.

Given that conditions leading to the Board's adoption of Guiding Principle 3 have substantially changed, and the WaterFix project meets all other Guiding Principles and cost-effectively provides significant water supply benefits as described above and in Attachments 4 and 5, staff recommends that the District adopt the Resolution Authorizing District Participation in the WaterFix provided in Attachment 7.

## **4.0 Key Agreements and Arrangements**

Staff has continued to work with state and federal agencies and other prospective WaterFix participants to further define the project and develop agreements consistent with the Board Guiding Principles. Key agreements are described below.

### *4.1 CVP Option Agreement*

Since MWD's April 10 decision, District staff have explored opportunities to protect the District's CVP supplies by negotiating an option agreement with MWD. This agreement provides the District up to three (3) years to secure necessary agreements and approvals with Reclamation to support a 200 cfs investment, with the possibility to extend the option term for another two (2) years. The District would pay a lump sum amount of \$10 Million over the next three years, of which \$5 Million will be applied to the purchase of the capacity, to preserve the option to purchase a capacity interest in the project for its CVP supplies. The District could exercise this option if and when it determines there are sufficient assurances that it would realize the water supply benefits of its CVP participation. This approach limits the financial risk to the District if Reclamation support is not secured.

### *4.2 Joint Powers Agreement Forming the Delta Conveyance Design and Construction Joint Powers Authority (Construction JPA Formation Agreement)*

The Design and Construction JPA Formation Agreement creates the Design-Construction Authority (DCA, or Design and Construction JPA) made up of participating SWP and CVP contractors for the single purpose of designing and constructing the conveyance project. The Design and Construction JPA would contract with DWR to take on the responsibility of project delivery and would perform the detailed work of designing and constructing the WaterFix facilities. The Design and Construction JPA is also intended to address some of the project cost uncertainties and ensure quality control and effective cost management. The structure, roles and responsibilities of the Design and Construction JPA were described in more detail during agenda item 2.8 at the August 22, 2017 Board meeting.

The Design and Construction JPA Formation Agreement, provided as Attachment 2, would be executed between the SWP and CVP contractors that will bear at least some of the financial obligation for the WaterFix and that elect to become members. The Design and Construction JPA would be governed by a 5- to 7-member Board of Directors made up of the District, should the District decide to participate, and other participating water agencies. Upon formation, the Design and Construction JPA Board would adopt governance policies and provide for the delegation of responsibilities to Design and Construction JPA staff for the design and construction of the WaterFix. Directors would rotate through chair and vice-chair positions for the Board as well as through similar positions on an Environmental Compliance and Mitigation Committee proposed by District staff and endorsed by other water agencies. Stand-up costs for the Design and Construction JPA are currently estimated at \$1 million, with each member contributing \$200,000 per Board seat.

The Design and Construction JPA would dissolve after DWR's final acceptance of the project.

Participation in the Design and Construction JPA would give the District a prominent role in ensuring the project is constructed on budget, on schedule and according to specifications. Staff recommends

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that the Board authorize the CEO to execute the Construction JPA Formation Agreement if the final agreement is in substantial conformance to the agreement provided in Attachment 2. Staff also recommends that the Board designate a District representative and alternate to serve on the Design and Construction JPA Board of Directors for the first two years following formation.

#### *4.3 WaterFix Financial Arrangements*

Several approaches for financing the WaterFix have been proposed by various water agencies and DWR (collectively, the “WaterFix Financial Arrangements”):

- A) Several public water agencies have approved the formation of a joint powers authority (the “Financing JPA”) that would facilitate the issuance of revenue bonds by DWR (the “DWR Bonds”) to finance the construction of the WaterFix. The Financing JPA may issue bonds (the “Financing JPA Bonds”) for the purpose of financing WaterFix through the purchase of the DWR bonds; and
- B) Staff from various public water agencies have proposed supporting the Financing JPA bonds by protecting the purchasers of such bonds from the risk of non-payment or invalidity of DWR Bonds through one or more agreements, including debt service support agreements, or through the purchase by participating public water agencies of DWR Bonds or other property through installment purchase agreements; and
- C) The Financing JPA and DWR would enter into a security agreement (the “Security Agreement”) pursuant to which DWR would agree that if it defaults in the payment of debt service on the DWR Bonds or other agreed-upon conditions, DWR would transfer to the Financing JPA or another designated entity all of DWR’s right, title and interest in the Waterfix and use its efforts to assist any other necessary transfers to permit the Financing JPA or other designated entity to construct the WaterFix; and
- D) The Financing JPA may also be used to finance the purchase of the unsubscribed capacity interest, or CVP share, of the WaterFix.

On April 10, 2018, the MWD Board authorized and approved MWD’s participation in the WaterFix Financial Arrangements. The staff of a number of other water agencies have indicated that they will recommend their boards consider participation in the Finance JPA. These water agencies include Dudley Ridge Water District (partial participation), Zone 7 Water Agency (previously approved), Alameda County Water District, Kern County Water Agency (partial participation), Antelope Valley-East Kern Water Agency, Coachella Valley Water District, Desert Water Agency, Mojave Water

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Agency, San Bernardino Valley Municipal Water District, and the San Geronio Pass Water Agency. Staff recommends that the Board authorize the CEO to negotiate terms and conditions for the District to participate in the WaterFix Financial Arrangements and bring the necessary agreements to the Board for approval.

**4.4      *Agreement between the District and Department of Water Resources for Gap Funding of Preconstruction Capital Costs for the California WaterFix (Gap Funding Agreement)***

WaterFix revenue bonds are not expected to be issued until approximately mid-2019. In the interim, DWR anticipates meeting a funding gap of \$133 million with contributions from project participants through a Gap Funding Agreement as well as with State Water Resources Development System funds. Gap funding would be reimbursed with interest upon issuance of the first series of bonds. The funds would be used to support preconstruction work, including study, review, planning, engineering, and design.

The District's share of gap funding is expected to be proportional to its 2.5% participation level in the SWP share of the WaterFix, which corresponds to roughly \$3.5 million. Staff recommends that the Board delegate authority to the CEO to negotiate terms and execute the gap funding agreement between the District and DWR for up to \$3.5 million.

**4.5.      *Other Important Agreements***

There are several other important agreements being contemplated and negotiated; these include an amendment to the SWP contract for WaterFix cost allocation and improved water management, an amendment to the District's CVP contract to provide for conveyance of the District's CVP supplies through the WaterFix, and several additional financing agreements related to charges, crediting, and bond issuance. These will be brought to the Board for action upon conclusion of negotiations.

**5.0 Environmental Review**

An Environmental Impact Report (EIR) for WaterFix was prepared by DWR, the lead agency under CEQA. The Final EIR was certified and the project was approved by the Lead Agency in July 2017. DWR also adopted the Findings of Fact (Findings), the Statement of Overriding Considerations (SOC) and the Mitigation Monitoring and Reporting Program (MMRP), and filed a Notice of Determination (NOD). The Final EIR identifies the District as a Responsible Agency for actions related to the project. The NOD, Final EIR, Findings, SOC, and MMRP can be found on DWR's website at: <http://baydeltaconservationplan.com/NoticeofDetermination.aspx>.

Pursuant to Section 15096 of the CEQA Guidelines, before a responsible agency reaches a decision on a project, the agency must consider the environmental impacts of the project as shown in the EIR and reach its own conclusions on whether and how to approve the project involved. The responsible agency is also required to make findings for each significant impact, adopt a MMRP, and make SOC when a project would result in significant and unavoidable impacts. Staff reviewed DWR's EIR and concluded that the EIR is adequate for use by the District to make a decision on the project. Staff also reviewed DWR's Findings, MMRP, and SOC and recommends that the Board adopt DWR's Findings, MMRP, and SOC to comply with the requirement to make responsible agency and other necessary findings before taking action on the project. Note that DWR, as the Lead Agency, is



ultimately responsible for ensuring that feasible mitigation measures are implemented. A draft resolution for the Board to consider for adopting DWR's Findings, MMRP, and SOC is provided in Attachment 8.

### 6.0 Additional Considerations

Risks associated with project implementation may be managed through implementation of effective organizational structures and execution and implementation of agreements. Table 6 below summarizes some potential risks and actions to manage those risks.

**Table 6. Risk Management Strategy for WaterFix**

Area of Consideration	Management Strategy
<b>1. Water supply uncertainty</b>	Staff will evaluate benefits of participating in long-term transfers and additional storage opportunities and negotiate terms and conditions for consideration and approval by the Board.
<b>2. Financing costs</b>	Develop appropriate terms and conditions for participation in the Finance JPA.
<b>3. Cost control</b>	Secure significant District role in Design and Construction Authority governance.
<b>4. Validation action</b>	Develop and implement the WaterFix Financial Arrangements
<b>5. Permitting delays and/or regulatory constraints</b>	Ensure off-ramps are available in key agreements, enter into Capacity Interest Option Agreement with MWD, and provide updates and receive direction from Board as needed.
<b>6. Federal support for CVP reliability</b>	Negotiate with Reclamation to secure necessary operating agreements and contracts.
<b>7. Other Participants' decisions</b>	Support efforts of others to implement long-term transfers and broaden water management tools; negotiate terms for District participation in long-term transfers and additional storage programs.

### 7.0. Next Steps

1. Within the next two months, staff anticipates bringing the final form of a finance JPA formation agreement to the Board for consideration and approval.
2. In the coming months, staff will work to identify the best opportunities and negotiate terms and conditions for long term transfers and additional storage opportunities.

### FINANCIAL IMPACT:

The cost associated with the Gap Funding Agreement is \$3.5 Million, and the cost associated with the Design and Construction JPA is \$200,000. Funds are available in the projected fiscal year 2018 (FY18) and FY19 budgets to cover both of these costs.

Execution of the Capacity Interest Option Agreement would obligate the District to pay \$10 Million over the next three years, of which \$5 Million would be applied to the purchase of the capacity. Funds are available in FY18 and FY19 for half of this amount, and additional funds will be budgeted

in future years accordingly.

Staff estimates a debt service range of \$900,000 to \$25 Million annually and approximately \$5 Million for annual O&M expenses for the District's participation in the SWP portion of the WaterFix.

Staff estimates a debt service range of \$1.2 Million to \$34 Million annually and approximately \$7 Million for annual O&M expenses if the Board chooses to secure 200 cfs of capacity interest to sustain the District's CVP supplies. Staff will bring potential agreements to secure the capacity interest to the Board for consideration at such time that staff has obtained sufficient assurances of realizing the water supply benefits of its CVP participation .

Estimated California WaterFix costs for SWP participation and 200 cfs of capacity interest are consistent with the CWF costs included in the groundwater production charge projection presented to the Board during the FY19 rate setting cycle.

**CEQA:**

An Environmental Impact Report was prepared by the Department of Water Resources, the lead agency under CEQA and is available at the following website:

<http://baydeltaconservationplan.com/NoticeofDetermination.aspx>.

**ATTACHMENTS:**

- \*Attachment 1: Option Agreement, Placeholder *(To be published at least 24-hours prior to the meeting in accordance with the Brown Act)*
- \*Attachment 2: Draft DCA Agreement, Placeholder *(To be published at least 24-hours prior to the meeting in accordance with the Brown Act)*
- Attachment 3: SCVWD Resolution 17-68
- Attachment 4: 091217 Board Agenda Item
- Attachment 5: 101717 Board Agenda Item
- Attachment 6: Guiding Principles Evaluation
- Attachment 7: Resolution, WaterFix Participation
- Attachment 8: Resolution, District CEQA Findings
- \*Attachment 9: PowerPoint, Placeholder *(To be published at least 24-hours prior to the meeting in accordance with the Brown Act)*

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**File No.:** 18-0355

**Agenda Date:** 5/2/2018  
**Item No.:** 2.1.

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**UNCLASSIFIED MANAGER:**  
Garth Hall, 408-630-2750

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## NON-EXHIBIT ITEM

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### **SUBJECT:**

Update on the California WaterFix, Authorization to Execute Agreements, Designation of District Representative, and Adoption of CEQA Findings - Attachment 1: Draft Option Agreement

### **NOTE:**

A copy of the Draft Option Agreement, to be included as Attachment 1 to the May 2, 2018 Update on the California WaterFix, Authorization to Execute Agreements, Designation of District Representative, and Adoption of CEQA Findings, was not available at the time of Agenda publication.

Copies will be will be distributed and made available to the public at or prior to the meeting, in compliance with the Brown Act.

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## NON-EXHIBIT ITEM

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### **SUBJECT:**

Update on the California WaterFix, Authorization to Execute Agreements, Designation of District Representative, and Adoption of CEQA Findings - Attachment 2: Draft DCA Agreement

### **NOTE:**

A copy of the Draft DCA Agreement, to be included as Attachment 2 to the May 2, 2018 Update on the California WaterFix, Authorization to Execute Agreements, Designation of District Representative, and Adoption of CEQA Findings, was not available at the time of Agenda publication.

Copies will be will be distributed and made available to the public at or prior to the meeting, in compliance with the Brown Act.

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**BOARD OF DIRECTORS  
SANTA CLARA VALLEY WATER DISTRICT**

**RESOLUTION NO. 17 - 68**

**CONDITIONAL SUPPORT OF CALIFORNIA WATERFIX**

WHEREAS, our mission at the Santa Clara Valley Water District (District) is to provide Silicon Valley with safe, clean water to support healthy lives, the environment, and economy; and

WHEREAS, the Board of Directors endeavor through our policies and actions to affirm to the residents of Silicon Valley that we are dependable stewards and that the District can be trusted to provide clean, safe, affordable water, and guarantee our water supply for the future; and

WHEREAS, Santa Clara County relies on State Water Project (SWP) and Central Valley Project (CVP) water conveyed through the Sacramento-San Joaquin Bay-Delta (Delta) for 40 percent of its water supply on average; and

WHEREAS, imported water from the Delta and its watershed has played a significant role in recharging the County's groundwater basin, protecting against further land subsidence, and providing for the well-being of the citizens of Santa Clara County; and

WHEREAS, substantial local investments in water use efficiency and conservation, recycled water and groundwater management are essential but cannot cost-effectively replace imported water; and

WHEREAS, the District has long been committed to sustained reliable water supplies as well as environmental stewardship; and

WHEREAS, if no action is taken, the District's SWP and CVP supplies will be vulnerable to risks from declining ecosystem conditions, increasing regulatory restrictions, seismic risks, climate change and sea level rise, resulting in reduced water supply reliability for Santa Clara County; and

WHEREAS, the California Department of Water Resources (DWR) proposes to construct the California WaterFix, which consists of new intakes on the east bank of the Sacramento River in the northern Sacramento San Joaquin Delta, tunnel(s) connecting these intakes to a new, intermediate forebay, and tunnel(s) carrying water from this forebay to a new pumping plant connected to an expanded and modified Clifton Court Forebay; and

WHEREAS, the California WaterFix is a critical component of the California Water Action Plan, the State of California's blueprint for a "sustainable and resilient future"; and

WHEREAS, the California WaterFix has the potential to protect the District's water supply reliability by upgrading aging infrastructure, thereby reducing the vulnerability of SWP and CVP water supplies to seismic events in the Delta and climate change impacts; and

WHEREAS, the California WaterFix has the potential to improve access to transfer supplies and increase storage project yield while conveying water across the Delta in a way that is safer for the environment; and

WHEREAS, the SWP component of the WaterFix is defined such that benefits of the project would accrue to SWP participants, while the U.S. Bureau of Reclamation's proposed CVP participation approach does not provide sufficient assurances that WaterFix benefits will be realized by CVP participants; and

WHEREAS, on July 21, 2017, DWR certified the final environmental analysis for the California WaterFix and signed the Notice of Determination thereby approving California WaterFix as the proposed project under the California Environmental Quality Act; and

WHEREAS, the District supports the use of unionized labor and Project Labor Agreements (PLAs) to participate in the construction of the WaterFix project.

NOW, THEREFORE BE IT RESOLVED that the Board of Directors of the Santa Clara Valley Water District does hereby find, determine, and order as follows:

1. That the Santa Clara Valley Water District hereby declares its conditional support for the California WaterFix and adopts the Guiding Principles, attached hereto as Attachment 1, for Participation in the California WaterFix; and
2. That the District's Directors and staff will use these Guiding Principles to shape the District's participation in the WaterFix Project, including evaluating the WaterFix project, identifying ways to meet the District's goals, and shaping the project development and any agreements necessary to secure the conditions needed for the District's support. Any proposed material deviation from the Guiding Principles shall be presented to the District Board for its consideration and approval.

PASSED AND ADOPTED by the Board of Directors of Santa Clara Valley Water District by the following vote on October 17, 2017:

AYES: Directors G. Kremen, T. Estremera, N. Hsueh, B. Keegan, L. LeZotte, R. Santos, J. Varela

NOES: Directors None

ABSENT: Directors None

ABSTAIN: Directors None

SANTA CLARA VALLEY WATER DISTRICT

By:

  
JOHN L. VARELA

Chair/Board of Directors

ATTEST:

  
Michele L. King, CMC  
Clerk/Board of Directors

Attachment: Guiding Principles for Participation in the California WaterFix

**Attachment 1**  
**Guiding Principles for Participation in the**  
**California WaterFix**

**Guiding Principle #1 – Santa Clara County needs are the primary drivers in all our decisions involving the WaterFix project.**

Fresno, Huron, Southern California, Discovery Bay, Rio Vista and other places in California have important desires, but providing safe, clean, affordable water for the people, businesses, wildlife and habitat of *Santa Clara County* is our primary focus.

**Guiding Principle #2 – We will not allow Silicon Valley values and priorities to be placed at a disadvantage relative to Central Valley Agriculture or Southern California.**

We support a WaterFix project in which all parties pay their fair share and avoid cost shifting to urban users.

Santa Clara County rate payers and / or taxpayers should *pay no subsidies* to Central Valley Agriculture or Southern California water users.

Ensure that the District receives all prices, benefits and other terms ("me-too" clause), considered as a whole, that are at least equivalent to those terms being offered to other participants of the WaterFix project.

**Guiding Principle #3 – We are advocating for a flexible approach that addresses Silicon Valley stakeholder and community input.**

We take public input seriously, having had over 50 agenda items at properly noticed, public meetings on the WaterFix project and the District's water master supply plan alone (see Appendix A for a partial list of such meetings).

We support a WaterFix project that provides for environmental protections for the Delta, that is part of an overall State effort to improve Delta habitat through, at a minimum, the EcoRestore program, and that takes into account climate change.

To quote from the recent *Baykeeper Issue Brief on the Delta Tunnels*:

"With a portfolio of science-based actions we can stabilize the Delta ecosystem to prevent fish extinctions while permitting sustainable water exports. Signs of hope and solutions include:

....

*Reduction in tunnel scope to a single smaller tunnel.* Several groups, including the Natural Resources Defense Council and the Public Policy Institute of California, have suggested that a single tunnel could help achieve the reliability and resiliency sought by water contractors while maintaining an engineered limit to diversions that would be less susceptible to over-extraction and abuse."

Additionally, to quote Governor Brown in the LA Times on October 5<sup>th</sup>, 2017:

But Brown said Thursday that WaterFix could survive, albeit in a scaled-down version, without money from Westlands and other agricultural districts that receive delta supplies from the federal Central Valley Project.

"The project can be altered to reduce the costs if the federal contractors don't want to be a part of it," the governor said. "The state needs the water. We're not going to commit suicide. We gotta have it."

Given that Westlands Water District and certain other agriculture districts have declined to participate in the WaterFix project, we are supportive of a *lower-cost, scaled-down, and staged* project that is consistent with the existing environmental impact reports and other administrative proceedings. We support considering an approach that incorporates the following in the first stage of the project:

- a) One tunnel instead of the two tunnels;
- b) A reduced intake volume from the original 9,000 cubic feet per second;
- c) A reduced number of intakes on the Sacramento River;
- d) A project that incorporates and ensures less impacts on fisheries and the environment relative to current operations; and
- e) Allows Santa Clara Valley Water District elected officials to be actively involved as leaders in the governance of the WaterFix project to ensure the project is implemented appropriately and to prevent any Southern California water grab.

Any changes to the project that diverge from this principle must be brought before the board before any final agreement is announced.

**Guiding Principle #4- As water is a human right, we must make investments to make sure our water supply meets future needs at a cost affordable by everyone**

Our District believes in an "all-of-the-above approach" to water supply. We have significant ongoing investments in water conservation. We are looking seriously at highly purified (drinkable) water, recycled water, storm water capture, rain water capture, grey water usage, etc. We take into account the importance of local supplies and resiliency.

At the same time, the cost of water is an important consideration to our ratepayers and we believe that water is a basic human right. Of the options that produce a significant quantity of supply, our imported supply is the lowest cost per unit source available to the District, and a staged WaterFix project could help stabilize the increasing cost of our overall supply portfolio. The cost of water is a social justice issue; the WaterFix project would help keep down the cost of our water supply portfolio and make safe, clean water more affordable.

Consistent with this principle, our support of the WaterFix is conditioned on the per acre-foot cost remaining similar to current estimates.

**Guiding Principle #5 – Equity and costs are important.**

The District Board may further refine this Principle #5 in future Board meeting(s) that are part of the rate setting process. Those communities and / or organizations that pay SWP property taxes (funds) and receive on average 85% of their water supply from sources other than the District-managed supplies will receive, directly or indirectly and not exceeding the amount of SWP property tax paid, those funds back in the form of additional, incremental, dedicated, segregated funds exclusively for water conservation programs, recycled water, purified water, wastewater treatment plant environmental upgrades, Automatic Meter Infrastructure (AMI) updates, or dedicated environmental focused grants starting in FY 2019 until FY 2024. To unlock these additional, incremental, dedicated funds, the communities and organizations will be required to make at least 20% match of the District's contribution; otherwise the dedicated, segregated funds go back to the District by FY 2026.

**Guiding Principle #6 – Any final arrangement must provide flexibility to acquire supplemental water by taking advantage of future wet years to ensure residents have a reliable water supply, no matter what extreme weather the changing climate brings.**

The District supports the State Water Project WaterFix participation approach, which would allocate the benefits and costs of the WaterFix to the District in proportion to its current 2.5% level of participation in the State Water Project.

Additionally, the District shall commit to and / or purchase enough supplies from the project to replace the projected deficit in current imported water supplies over time, and to ensure against future uncertainty. More specifically, we commit to securing sufficient supplemental water supplies if they become available at a reasonable price to avoid a deficit in our water supply, with potentially additional investments to provide insurance against future uncertainty.

Simultaneously, it is critical that the WaterFix provide reliability for our CVP supplies as well as our SWP supplies and that both supplies can be moved through the WaterFix.

If we do not act, given competition for limited water supplies in California, undoubtedly, water made available through improvements in the State Water Project and the Bay-Delta will instead go to Central Valley Agriculture and Southern California.

**Guiding Principle #7 – Keep negotiating for the best deal for Santa Clara County**

Our final guiding principal is that staff shall continue participating in California WaterFix planning discussions with State and federal agencies as well as other prospective WaterFix participants, to further define the project, and to develop agreements to secure the conditions needed for the District's support.

## Appendix A - Board Meeting Agenda Items regarding California WaterFix

1. May 10, 2011 - Overview of Delta Issues
2. August 26, 2011 (Board Workshop)- Secretary of California Natural Resources Agency, John Laird, and several representatives of environmental groups discussed the ecosystem restoration goal of the BDCP.
3. October 14, 2011 (Board Workshop) - Deputy Secretary of the California Natural Resources Agency, Gerald Meral, and several general managers of California water agencies discussed the water supply reliability goal of the BDCP.
4. March 28, 2012 (Board Workshop) - Several elected officials and residents of Delta counties discussed the in-Delta perspective on BDCP, along with perspectives from Senior Policy Fellow at the Public Policy Institute of California, Ellen Hanak.
5. May 15, 2012 (Board Agenda Item)- Staff prepared a BDCP update following release of the preliminary administrative draft of the BDCP.
6. August 7, 2012 (Board Agenda Item) - Following the July 25th announcement by the Governor and Obama Administration on key elements of the BDCP proposed project, staff provided an update on the Bay Delta Conservation Plan and results of an opinion survey.
7. February 26, 2013 – (Board Agenda Item) Prior to the release of the second Administrative Draft of the BDCP, staff provided an update on the BDCP and established a Board Ad Hoc Committee to assist the Board with developing policies relating to the District's engagement in the BDCP.
8. October 11, 2013 (Board Workshop)- Director of California Department of Water Resources, Mark Cowin, Undersecretary of California Department of Food and Agriculture, Sandra Schubert, and Economist David Sunding provided an overview of BDCP in relation to other State planning efforts and discussed the statewide economic impacts and perspective on BDCP.
9. November 8, 2013 (Board Workshop) - California Department of Fish and Wildlife staff and several representatives of environmental and in-Delta interests discussed habitat restoration and conservation in the Delta and the perspectives of in-Delta users
10. November 13, 2013 (Board Workshop) - Director of Department of Fish and Wildlife Chuck Bonham, technical experts in Delta risks, and BDCP project managers discussed Delta risks, the relevance of BDCP to Delta fisheries, and plan components and analysis.
11. December 9, 2013 (Board Workshop) - Secretary of California Natural Resources Agency, John Laird and other invited guests provided perspectives on the importance of BDCP to the State, County and economy of Silicon Valley. Staff provided a preliminary analysis of BDCP benefits and costs to Santa Clara County
12. January 27, 2014 (Board Workshop) - Former Director of the San Francisco Public Utilities Commission's Water System Improvement Program, Julie Labonte, and President and CEO of Hallmark Group Capital Program Management, Chuck Gardner, described implementation of large water supply infrastructure construction projects.
13. May 27, 2014 (Board Agenda Item) - Following the five 2013–2014 District Board Workshops on BDCP, staff provided an update on Bay Delta Conservation Plan, a summary of the workshops, and responses to Board questions raised during and after the workshops.
14. July 22, 2014 (Board Agenda Item) - Staff presented draft District comments on the Public Review Draft BDCP and its EIR/EIS and on the draft BDCP Implementing Agreement for Board review for consistency with Board Policy. Staff also presented an update on the BDCP and responses to additional Board questions.

15. September 23, 2014 (Board Agenda Item) - Staff responded to questions and concerns raised by Board Members and the League of Women Voters of California with various aspects of the BDCP
16. January 22, 2015 (Board Workshop) - Staff and a panel of invited guests described the BDCP adaptive management strategy and the current scientific understanding of habitat restoration in general as well as with respect to BDCP restoration actions.
17. May 26, 2015 (Board Agenda Item) - Staff provided an update on the BDCP and described the new approach proposed by the State to separately develop California WaterFix and EcoRestore.
18. October 27, 2015 (Board Agenda Item) - Staff provided an update on the BDCP and the re-circulated draft environmental documents including draft staff comments on the re-circulated documents.
19. January 26, 2016 (Workshop) - A panel of guests provided updated information and resource agency perspectives on the California WaterFix and California EcoRestore.
20. April 15, 2016 (Board Agenda Item) - Staff provided an overview of imported water and current issues
21. July 12, 2016 (Board Agenda Item) - Staff provided an updated business case analysis and a draft District policy statement for the State Water Board hearing on the petition to change the point of diversion for the SWP and CVP
22. September 27, 2016 - Update on Implementation of the 2012 Water Supply and Infrastructure Master Plan and Development of the 2017 Water Supply Master Plan (WSMP)
23. January 31, 2017 - Update on the 2017 Water Supply Master Plan and Potential Storage Options
24. March 14, 2017 – Review and confirm proposed Principles related to the Waterfix and receive WaterFix update
25. April 25, 2017 - Update on the 2017 Water Supply Master Plan and Alternative Water Supply Strategies
26. May 9, 2017 – Updated information on the Delta Stewardship Council's Delta Plan, the District's CWF Principles relevant to the Delta Plan amendments
27. May 25, 2017 (Workshop) Guests Chuck Gardner, John Bednarski, Pat Pettiette, and Bob Goodfellow provide presentation on cost estimation, risk assessment and management, and cost control for the WaterFix
28. July 11, 2017 – Update on WaterFix and providing a schedule for future presentations through Fall 2017
29. August 22, 2017 – 1) Analysis of issues facing imported water supply reliability; 2) Update on WaterFix including proposed design and construction management and governance.
30. September 12, 2017 – California WaterFix water supply analysis, cost and water allocations, and financing.

#### Ad Hoc and Advisory Committee Meetings

1. March 18, 2013 – BDCP – Initial meeting, discuss and define the BDCP Ad Hoc Committee's purpose and intended outcome
2. April 9, 2013 – BDCP – 1) Review scope and purpose of the Committee; 2) Discuss the Delta Stewardship Council's Delta Plan; 3) Overview of BDCP, Chapters 104; 4) Discuss the Natural Resource Defense Council's proposed portfolio-based BDCP alternative

3. April 22, 2013 - BDCP – 1) Overview of BDCP, Chapters 104 (continued from 4/9/13); 2) Overview of BDCP, Chapters 5-7; 3) Discuss the Natural Resource Defense Council's proposed portfolio-based BDCP alternative (continued from 4/9/13)
4. May 28, 2013 – BDCP – 1) Discussion of BDCP EIR/EIS alternatives; 2) Discussion of Conservation Measure 1 Construction Mgmt Structure; 3) delta Dialogues – Discussion Group; 4) BDCP Schedule and Board Workshops
5. June 25, 2013 – BDCP – 1) Overview and discussion of Chapters 8-10; 2) Discussion of Board member communication and outreach
6. August 22, 2013 – BDCP – 1) Overview of the role of science in Delta planning; 2) Schedule for Bay Delta issues and Board communication
7. October 9, 2013 – BDCP – 1) Overview of the Role of Science in Delta Planning (carryover from August 22, 2013 meeting); 2) Update on BDCP; 3) Schedule and future agendas
8. December 17, 2013 – BDCP – 1) Discuss 2013 Board Workshops on BDCP; 2) Discuss potential 2014 Board items; 3) Discuss next steps for public outreach and engagement
9. January 13, 2014 – BDCP – 1) Discuss 2013 Special Board Workshops on BDCP; 2) Report out by Committee members on BDCP and related issues
10. January 24, 2014 – BDCP - Discuss 2013 Special Board Workshops on BDCP (Continued from 1/13/14); 2) Report out by Committee members on BDCP and related issues
11. June 3, 2014 – BDCP – 1) Updates on the BDCP and BDCP EIR/EIS; 2) Report out by Committee members on BDCP and related issues
12. July 10, 2014 – BDCP - 1) Updates on the BDCP and BDCP EIR/EIS; 2) Report out by Committee members on BDCP and related issues
13. September 9, 2014 – BDCP – 1) Discuss staff responses to Board member questions on the BDCP; 2) Discuss staff responses to the BDCP comment letter from the League of Women Voters of CA; 3) Schedule for Board communication on BDCP
14. October 6, 2014 – Agricultural Water Committee (BDCP Update)
15. May 13, 2015 – BDCP – 1) Update on BDCP; 2) Election of Chair and Vice Chair; 3) Report out by Committee members on BDCP and related issues
16. October 5, 2015 – Agricultural Water Committee (BDCP Update)
17. October 13, 2015 – BDCP – 1) Update on BDCP and the recirculated draft environmental documents; 2) Report out by Committee members on BDCP and related issues
18. November 24, 2015 – BDCP 1) Update on WaterFix Business Case; 2) Report out by Committee members on BDCP and related issues
19. February 22, 2016 – BDCP 1) Update on Waterfix Business Case; 2) Update on the Design Construction Enterprise and related agreements; 3) Draft Policy Statement for State Water Resources Control Board proceedings
20. April 4, 2016 – Agricultural Water Committee (BDCP Update)
21. June 21, 2016 – BDCP – Update on WaterFix
22. October 3, 2016 - Agriculture Advisory Committee - Water Supply Update, including WSMP
23. October 17, 2016 – EWRC - Water Supply Update, including WSMP
24. October 25, 2016 – BDCP – Update on WaterFix, EcoRestore and other Delta planning efforts



- 25. October 26, 2016 – Water Commission - Water Supply Update, including WSMP**
- 26. November 8, 2016 - BDCP disbanded**
- 27. January 17, 2017 – Joint Board meeting with Open Space Authority - WSMP Update**
- 28. April 12, 2017 – Water Commission - 2017 WSMP Update**

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**File No.:** 17-0630

**Agenda Date:** 9/12/2017

**Item No.:** \*2.1.

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## BOARD AGENDA MEMORANDUM

### **SUBJECT:**

California WaterFix Update, Including Water Supply Analysis, Cost and Water Allocation, and Financing.

### **RECOMMENDATION:**

Receive and discuss information on the California WaterFix, including a water supply analysis, cost and water allocations, and financing.

### **SUMMARY:**

This agenda item provides an opportunity for the Board and the public to receive information on the proposed California WaterFix (WaterFix) project, which is intended to help restore the health of the Delta ecosystem and to ensure the long-term reliability of water supplies conveyed through the Delta. The proposed WaterFix includes dual tunnels under the Delta that would provide an alternative conveyance pathway for moving water from the north Delta to the existing pumping plants in the south Delta. The addition of proposed WaterFix intakes in the north Delta would allow the State and federal water projects to adjust operations in response to environmental conditions and climate change effects, protect exports from the threat of salinity intrusion from levee failures and sea level rise, improve access to transfer supplies, and enhance the benefit of storage projects. The WaterFix is also expected to improve flow patterns in the Delta and reduce fish entrainment.

Because Santa Clara County relies on State Water Project (SWP) and Central Valley Project (CVP) water supplies conveyed through the Delta to meet 40 percent, on average, of its water supply needs, the District has an interest in the development of the WaterFix as a potential cost-effective project that could improve the reliability of the District's imported water supplies.

The Department of Water Resources (DWR) is proceeding with WaterFix as an integral part of the SWP. Under this approach, the costs and benefits of the WaterFix would be allocated to all State Water Project contractors south of the Delta, including the District, through existing contracts. The US Bureau of Reclamation (Reclamation) has not yet clearly stated its intent with respect to the WaterFix, but current discussions are centered around an optional participation approach for CVP contractors. The District has not yet decided whether or not to participate in the WaterFix to convey its CVP contract water supplies.

To help prepare the Board for future decisions on involvement with and participation in WaterFix, staff

has planned a series of agenda items describing major elements of the project. At the May 25, 2017 Special Board Meeting, a panel of experts presented detailed information describing the physical aspects of the project, estimated costs, methods for cost control, and construction risk management. At its July 11, 2017 meeting, the Board received an update on several planning and permit related activities for the WaterFix. And at its August 22, 2017 meeting, the Board received an update on WaterFix design and construction management and governance, anticipated operations, and adaptive management program.

This agenda item provides updated information related to project financing, cost and water allocations, and updated water supply analyses. Staff provided preliminary analyses of these at Board meetings on December 13, 2013 and July 12, 2016, based on the draft project documents at the time. This item updates those analyses and discusses a range of potential participation levels for the District in order to inform a potential Board decision in October 2017 on future involvement with and/or participation in the WaterFix project. Staff is planning the following schedule of communication with the Board regarding the WaterFix.

Date	Topic
May 25 2017	Cost estimation, risk assessment and management, and cost control for the WaterFix. (Done)
July 11, 2017	Update on WaterFix. (Done)
August 22, 2017	(1) Issues facing the District's imported water supply and the Delta ecosystem (2) WaterFix update including proposed design and construction management and governance, operations, and adaptive management. (Done)
<b>September 12, 2017 (today)</b>	<b>WaterFix update, including water supply analysis, cost and water allocation, and financing.</b>
September 26, 2017 (tentative)	WaterFix update including proposed term sheets.
October 10, 2017	Staff recommendation and request for Board decisions on involvement with and/or participation in the WaterFix.

### Overview of Agenda Memo

- A. Background
- B. SWP and CVP participation approaches
- C. Water supply analysis
- D. Total WaterFix Costs
- E. Cost allocation

- F. Financing
- G. Costs to Santa Clara County
- H. Next Steps

## **A. BACKGROUND**

### ***A.1 Importance of imported water supplies to Santa Clara County***

Imported water supplies are critical for sustaining the communities and businesses of Santa Clara County and protecting the region from irreversible land subsidence. On average, 40% of the county's water needs are met by importing water through the Sacramento-San Joaquin Delta. Another 15% of county supply needs are satisfied by diversions upstream of the Delta by the San Francisco Public Utilities Commission's Regional Water System.

The District's Delta supplies are conveyed by the State Water Project (SWP) and Central Valley Project (CVP), which together are a critical component of the District's water supply portfolio, providing the majority of water supply to the District's three drinking water treatment plants, recharging the county's local groundwater basins to ensure sustainable supplies and protect against land subsidence, and protecting local surface water reserves. During critically dry years and long-term droughts, the county's dependence on Delta supplies increases as local reserves diminish.

The District's SWP and CVP supplies offer additional flexibility in that these supplies may be stored in facilities outside of the county, including the Semitropic Groundwater Bank (Semitropic), for withdrawal during dry periods. Semitropic has proven to be a valuable resource, providing over 142,000 acre-feet (AF) of critical dry year supply to the county during the 2012 - 2016 drought; however, supplies from Semitropic are conveyed to the District through the Delta, and the reliability of the bank is linked to the reliability of the Delta.

### ***A.2 Risks to imported water supplies***

For the past several decades, protected fish species have declined and ongoing concern over the health of the Delta estuary has led to increasing regulatory restrictions that have reduced the amount of water that could be diverted from the existing Delta channels for delivery to Santa Clara County and other agencies south of the Delta. If no action is taken, it is likely that additional regulatory restrictions will be placed on the SWP and CVP that further limit the District's access to its imported water supplies.

As described in the August 22, 2017 Board item, "Issues Facing the District's Imported Water Supply and the Delta Ecosystem", a number of reports have highlighted the unsustainability of the existing condition, management, and uses of the Delta. The State and United States Geological Survey have predicted high probabilities of a major earthquake in the next 25 years that could cause catastrophic levee failure and significant impairment of water deliveries due to salinity intrusion. These risks are exacerbated by sea level rise and other effects of climate change.

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**A.3 California WaterFix**

The California WaterFix would provide an alternative conveyance pathway for moving water from the north Delta to the existing pumping plants in the south Delta. The conveyance upgrades include three new intakes on the Sacramento River, each with a capacity of 3,000 cfs, and each equipped with state-of-the-art fish screens. These new fish screens would be designed to minimize entrainment and would be more effective at protecting fish than the existing South Delta pumping plants. Two forty-foot diameter tunnels up to 150 feet below ground would convey the water from the Sacramento River to existing pumping plants in the south Delta. Bypass flow criteria would be imposed on diversions from the Sacramento River into the tunnels to ensure adequate flows remain in the river to protect fish; consequently, diversions into the tunnels primarily occur during higher river flow periods on the Sacramento River.

**A.4 Water Supply Master Plan**

The District is committed to developing approaches for improving local and regional water supply reliability and meeting future demands, and is currently updating its Water Supply Master Plan to evaluate local, regional, and statewide water supply projects, including the WaterFix. The Water Supply Master Plan is the District's strategy for providing a reliable and sustainable water supply in a cost-effective manner. Staff is currently evaluating portfolios that include California WaterFix, additional surface and groundwater storage, water conservation/demand management, and additional water reuse, and plans to present the refined portfolios and associated analyses to the Board on September 19, 2017.

**A.5 State Water Contract**

The long-term State Water Contract provides the District with access to the SWP conveyance system and an annual proportional allotment of available water. The maximum amount of SWP water that the District may request for delivery each year is 100,000 acre feet, as set forth in Table A of its State Water Contract. However, the amount of water the District is actually allocated has been as low as 5,000 acre feet per year. Water deliveries are affected by a variety of factors, including hydrological conditions, State Water Resources Control Board regulations, restrictions imposed under federal or California Endangered Species Acts, operational decisions, and other limitations.

The District must make payments regardless of the amount of SWP water actually received. The State Water Contract requires payments to DWR in return for participation in the SWP storage and conveyance system. All SWP Contractors must make payments according to their respective Table A contract amounts and for the portion of the SWP conveyance system needed to deliver their contracted water. The amount of the base payment is not tied to the amount of water actually received.

To protect against default, the SWP State Water Contract includes articles that obligate each SWP Contractor to make payments. The contract articles also include language that obligates, and if necessary compels, a SWP Contractor to levy taxes or assessments in the event of non-payment. Additionally, the State may suspend water deliveries, within health and safety limits, if a contractor is in default for a significant period.

There are additional provisions related to default on charges for SWP capital facilities financed with revenue bonds. The SWP State Water Contracts provide for the state to protect bondholders and non-defaulting contractors against costs resulting from any SWP Contractor's failure to make payments related to the revenue bonds. In practice, the State administers this provision by maintaining a revenue bond reserve equal to one half the maximum annual revenue bond debt service for all outstanding revenue bonds and by adding a 25 percent refundable surcharge to the SWP Contractor's revenue bond capital charge.

In exchange for SWP Contractor payments, DWR is required to make all reasonable efforts to complete facilities necessary for water deliveries, subject to fiscal, construction scheduling, and operating constraints.

### ***A.6 Central Valley Project Water Service Contract***

The District's water service contract with the U.S. Bureau of Reclamation provides the District with deliveries of up to 152,500 acre-feet of water from the CVP system; however, the amount of water that the District actually receives is often much less than the contracted amount and is often limited by regulations and restrictions as well as hydrologic conditions. In 2015, the District was allocated only 40,320 acre-feet of its CVP contract supply.

## **B. SWP AND CVP PARTICIPATION APPROACHES**

Recent discussions among State and federal agencies have assumed that 55% of the cost and water supply benefits of the WaterFix would be allocated to the SWP, and 45% to participating CVP contractors (55/45 split). However, the actual split will depend on which CVP contractors ultimately participate.

DWR plans to move forward with the WaterFix as an integrated part of the SWP. Under this approach, each of the SWP contractors south of the Delta would pay for its proportionate share of the project and receive corresponding project benefits. Contractors would be billed through the DWR's Statement of Charges, consistent with current business practice, and the water supply benefits would be reflected as increased SWP allocations, increased capacity to convey transfers under the existing contract, and continuation of deliveries in the event through Delta pumping is impeded. SWP contractors located north of the Delta will not be allocated any costs related to the WaterFix with the justification that these contractors do not receive benefits from the project. The District's share of costs and benefits correspond to roughly 2.5 percent under the existing SWP contract. No additional action would be required of the District to incur these additional costs and receive these benefits. However, if a SWP contractor wishes to offset increased costs from the WaterFix, or make additional payments to increase its water supply benefits, the existing contract allows for the transfer of SWP supply (Table A supply) from a willing seller to a willing buyer, both of whom must be SWP contractors.

Among CVP contractors and Reclamation, discussions have focused on an opt-in approach. CVP water contractors would have to make a definite decision about whether they want to participate in the project, and if they do, to what degree. The approach, which is still under development, is

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intended to allocate the benefits of the project to project participants, while not harming other CVP contractors who do not participate. Under the approach, if the District pays for 5% of the CVP portion of WaterFix costs, then it would receive 5% of the CVP incremental water supply produced by the WaterFix, as well as a proportional interest in the physical capacity of the project. This approach is still being developed and may change over the coming weeks.

Under this framework, CVP participants would have the ability to sell, exchange, or transfer their rights and obligations to other CVP or SWP contractors

## **C. WATER SUPPLY ANALYSIS**

### ***C.1 Sustaining existing export levels***

The State's long-term modeling analysis predicts that the WaterFix will prevent the degradation of Delta exports over time. Given the current administrative processes and conservative regulatory trends, staff does not anticipate that long term average exports with the WaterFix would exceed those of existing conditions unless new science provides compelling evidence to support such increases. However, analyses indicate that the project will likely maintain at least existing long-term export levels and provide resiliency against future risks.

Existing long-term average SWP/CVP water deliveries south of the Delta average 4.7 million acre-feet per year (MAF/Y). If no action is taken to improve the existing Delta conveyance approach, DWR projects that total SWP/CVP deliveries could drop to 3.5 MAF/Y in response to a set of regulatory constraints, often referred to as the "High Outflow Scenario", proposed but not currently adopted by resource agencies. Other scenarios modeled show a lesser reduction in exports to 3.9 MAF/Y. A future reduction in exports is being viewed by a number of water agencies as the future "no action" or future "base case" scenario, given the current high level of concern for protected fish species and the definite trend of decreasing exports in response to increasing regulations.

Based on the operating criteria included in the Biological Opinions, DWR projects that SWP\CVP water deliveries would range between 4.7 MAF/Y and 5.3 MAF/Y with the WaterFix. The lower end of this range assumes that the WaterFix is operational with High Outflow Scenario regulations in place. The increased regulations in this scenario have been contemplated in recent years by resource agencies but have not been incorporated into current regulations. The upper end represents a lesser case of stepped up export restrictions. Actual deliveries will depend on the specific operational criteria that the regulatory agencies impose at the time new conveyance facilities become operational.

***Figure 1. Long-term annual average SWP/CVP deliveries south of the Delta (SOD)***





○ Values correspond to the High Outflow Scenario

## C.2. Water Supply Benefits for the State and Santa Clara County

The WaterFix is intended to help stabilize and sustain the water supply of the State of California, including 40% of the District's water supplies, which are conveyed through the Delta, providing these supplies with resiliency against changing environmental conditions, sea level rise, climate change, and seismic events.

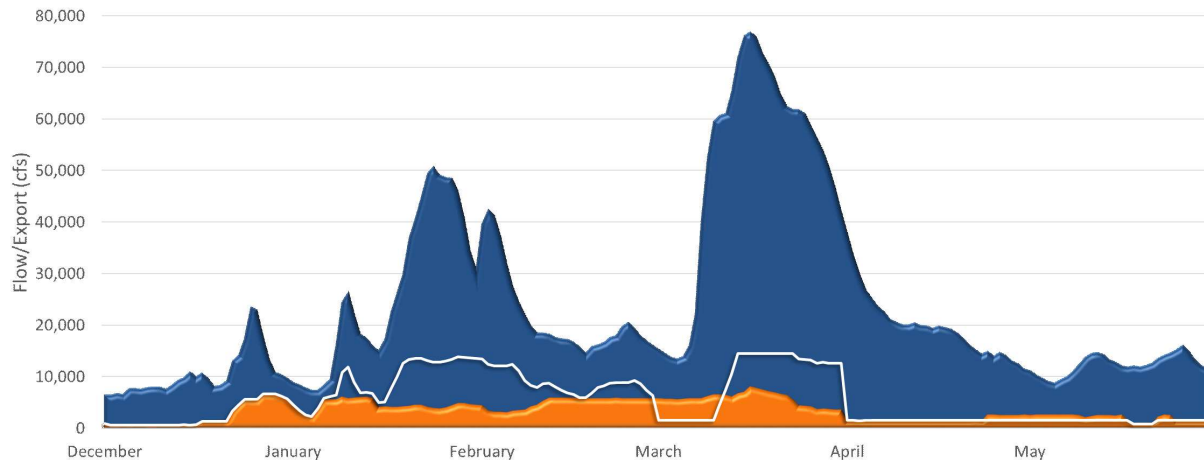
### C.2.1 Storm flow capture

The operating criteria for the WaterFix are crafted such that the project will divert water into the WaterFix tunnels primarily at higher flow events. These are often flows that the SWP/CVP are currently unable to capture without harming fish species of concern due to the location of the existing pumps.

Figure 2 illustrates how the WaterFix could have provided for additional exports during storm events that occurred during the 2015 and 2016 drought. Additional storm flows of roughly 420 thousand acre-feet (TAF) in could have been exported south of the Delta in the winter of 2015-16. This additional flexibility to capture high river flows may become even more important under climate change scenarios that project potentially more frequent and intense floods, more rain and less snow

events, and faster snow melts.

**Figure 2. Potential storm water capture with WaterFix. Source: Analysis by State Water Contractors.**



2015-2016 Winter  
WaterFix could have captured an additional 669,000 acre-feet of storm flows

### *C.2.2 Resiliency to Delta levee failure events*

As described in the August 22, 2017 Board item, “Issues Facing the District’s Imported Water Supply and the Delta Ecosystem”, an important risk to reliable imported water supplies is the condition of the 1,100 miles of levees in the Delta, their vulnerability to earthquakes, and climate change effects such as sea level rise and more extreme flood events. The WaterFix would mitigate these risks by providing two tunnels with intakes on the Sacramento River upstream of the area likely to be affected by salt water intrusion, and designed to withstand anticipated large floods with a one-in-200-year frequency.

### *C.2.3 Resiliency to climate change*

As described in the August 22, 2017 Board item, “Issues Facing the District’s Imported Water Supply and the Delta Ecosystem”, an important risk to reliable imported water supplies is sea level rise and other climate change effects. WaterFix can protect against sea level rise by diverting from the north Delta where salinity intrusion will be minimal under reasonable sea level rise scenarios. WaterFix also provides additional flexibility to capture storm flow events, as described above, which may be more frequent under climate change scenarios.

WaterFix facilities are being designed and constructed for a 55-inch sea level rise at the Golden Gate. This equates to about an 18-inch rise from the present levels at the proposed north Delta diversions. On top of that, project engineers have built in a safety factor to handle a 200-year storm event.

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#### *C.2.4 Access to transfer supplies*

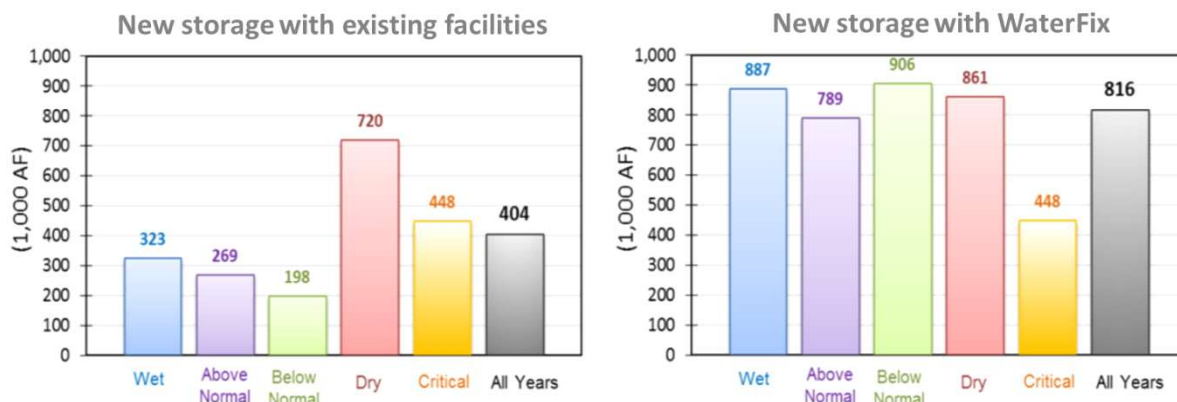
WaterFix provides the ability to more effectively move transfer water. With existing regulations, transfers cannot be moved across the Delta when the SWP allocation is about 50% or greater. This scenario occurs when pumping restrictions cause water to be backed up in northern reservoirs during winter and spring months, with a limited window to move the water across the Delta during the summer. Under these circumstances, all available pumping capacity is used to move this stored SWP and CVP water, and there is no additional capacity available to convey transfer supplies. The WaterFix would allow stored water to be conveyed earlier in the year which would increase the opportunity to convey transfer water during summer months to the District and other south-of-Delta contractors.

The use of WaterFix to move transfer supplies would also reduce losses across the Delta, which currently average roughly 25% and have been as high as 35% of the total transfer amount. The WaterFix's ability to minimize this loss would increase the effectiveness of any transfer the District participated in.

#### *C.2.5 Improving storage project yield*

The Association of California Water Agencies (ACWA) recently analyzed how improved Delta conveyance capability could increase the benefits of eight proposed storage facilities. They found that WaterFix could more than double the average benefit of the proposed new storage projects under current regulatory constraints if the proposed storage projects were integrated into the operations of the SWP/CVP (see Figure 3 below). Similar to improved transfer capacity, the WaterFix would improve the ability to convey water from storage north of the Delta to storage south of the Delta. Staff's analysis indicates that investment in WaterFix would increase the yield of local and regional storage projects such as the expansion of Pacheco Reservoir, Sites Reservoir, and Los Vaqueros Reservoir Expansion. Additional information on this interaction will be provided in the planned September 19, 2017 Board agenda item on the Water Supply Master Plan.

***Figure 3. Average annual changes in SWP/CVP deliveries with new storage and existing facilities (left) and with new storage and WaterFix (right) by water year type. Source: MBK Engineers, 2017.***



### C.3 Water supply analysis in the context of the District's Water Master Plan

Staff estimated the incremental water supply available to Santa Clara County and assessed how water supply conditions would change if the District participated in the WaterFix. The analysis assumes the participation approaches described in Section B are implemented, and that the District can choose to increase its participation on the SWP side above 2.5% by purchasing additional SWP supplies from other participating SWP contractors. On the CVP side, the District will need to decide whether it wishes to participate in the project, and if so, to what degree. Three participation scenarios were evaluated:

1. Balanced participation (2.5% SWP/2.5% CVP): The District participates in the WaterFix at a 2.5% level through the SWP, corresponding to 2.5% of water supply benefits and 2.5% of costs. This level of participation is consistent with the District's share of benefits and costs under its existing SWP contract. In addition, the District purchases 2.5% of the water supply benefits offered to CVP contractors.
2. Higher CVP participation (2.5% SWP/5% CVP): The District's participation level is 2.5 percent for the SWP; the District purchases 5 percent of the water supply benefits offered to CVP contractors.
3. Higher SWP participation (5% SWP/2.5% CVP): The District increases its participation level on the SWP side by purchasing a long-term transfer of an average of approximately 15,700 acre-feet of WaterFix incremental water supply from other SWP contractors. On the CVP side, the District purchases 2.5% of benefits.

These scenarios were analyzed relative to a future base case with no WaterFix and declining exports, consistent with the State's High Outflow Scenario ("HOS") described in Section C.1:

Base case: The WaterFix does not exist, and new export restrictions further restricting pumping from the South Delta have been implemented. Average annual exports from the SWP and CVP projects decrease from 4.7 MAF per year to 3.5 MAF per year.

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The three scenarios and the base case were analyzed using water supply assumptions consistent with the District's Water Supply Master Plan, including the following:

- 2040 demand projections are utilized and the District's existing water system facilities are in place.
- All dam seismic retrofit projects are completed.
- Retailers continue on their path to achieve 32,000 acre-feet per year of non-potable recycled water by 2040.
- Currently planned and on-track conservation savings of 99,000 acre-feet are attained.
- Main and Madrone pipelines are repaired.

In addition, the three scenarios and base case also includes a set of "No Regrets" actions, which would likely be pursued regardless of development of any of the water supply alternatives being evaluated as part of the Water Master Plan. These actions include:

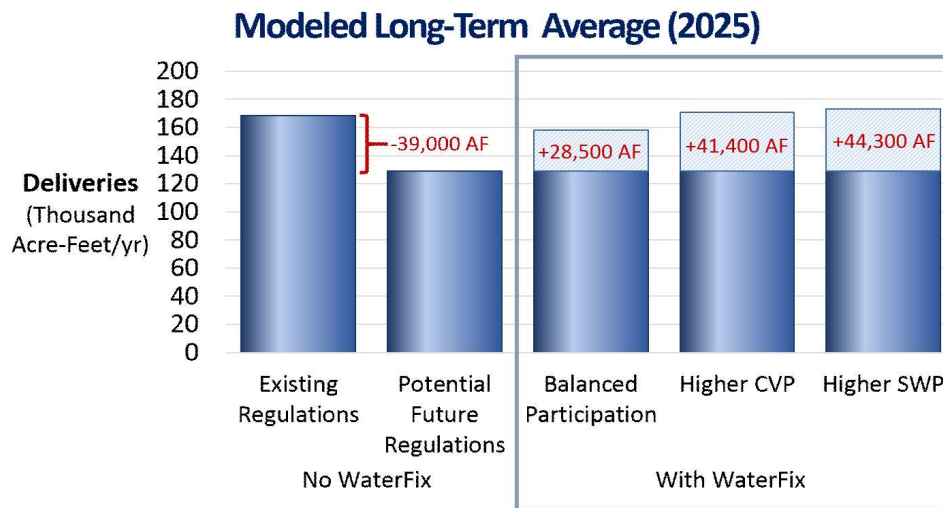
- Implementation of a new development model ordinance
- Graywater program expansion
- Offer leak repair incentives
- Expand advanced metering infrastructure
- Increase stormwater recharge (2 projects)
- Develop agricultural land recharge
- Development of rain gardens
- Incentivize rain barrels

### *C.3.1 Results*

#### *C.3.1.1 Water supply benefits*

The analysis indicates that the three participation scenarios would offset losses in the District's SWP and CVP water supplies that would potentially occur if no action were taken. Figure 4 summarizes the results, comparing the District's average annual SWP and CVP deliveries under existing conditions, under potential future regulations consistent with the High Outflow Scenario, and under the three participation scenarios. The Higher CVP and High SWP participation scenarios are predicted to maintain SWP and CVP supplies at existing levels, while the Balanced Participation scenario provides lesser water supplies but offsets most of the potential losses that would potentially be incurred if no action is taken.

***Figure 4. Projected imported water supplies under various participation levels***



The District's analysis also indicates that participation in the WaterFix under the three scenarios could significantly improve groundwater storage conditions, substantially increase reserves in the Semitropic Groundwater Bank, and reduce the frequency and magnitude of water shortages. These benefits will be described in more detail and compared to the benefits of other alternative water supply projects as part of the Water Master Plan analysis, which will be presented to the Board on September 19, 2017.

#### *C.3.1.2 Water quality benefits*

In addition to increasing the District's water supplies relative to the base case, operation of the proposed north delta intakes is anticipated to improve the water quality of the District's imported water supplies by decreasing the average annual salinity of SWP/CVP exports by about 22 percent compared to the future base case. This would reduce the salt loading of deliveries to the District's three drinking water treatment plants, and to the District's managed groundwater recharge program. In addition, because current treatment plant processes do not substantially change the salt content of source water, any improvement in the salinity of source water is reflected in the potable water that is consumed, and in potable water that is distributed through irrigation systems to landscaping. In total, staff estimates that reducing the salinity of imported water by 22 percent would reduce the total amount of salt loading to groundwater in northern Santa Clara County through landscape irrigation and managed recharge by about 18 percent. This result is significant in the context of the District's Salt and Nutrient Management Plans.

#### **D. Total WaterFix costs**

The overall costs for the proposed infrastructure improvements and environmental mitigation for the WaterFix were originally developed for the Bay Delta Conservation Plan (BDCP) and were reported in Appendix 8 of the 2013 BDCP Environmental Impact Report/Environmental Impact Statement for that project. This estimate was subsequently revised to reflect the changes made as part of the WaterFix, including optimal alignment of project facilities and updated operations and mitigation

costs. At the District's May 25, 2017 Special Board Workshop, the Board received a detailed description of the methods used to develop this latest estimate of project costs.

Total capital construction costs for water facilities and mitigation are estimated to be \$16.7B, in 2017 dollars. Of this amount, \$16.3B is for water facilities and \$400M is for mitigation construction costs. The estimate of annual operations and maintenance costs is \$64.4M per year. The portion related to water facility operations, including power needs and capital replacement costs is estimated to be \$44.1M, while annual mitigation costs are an additional \$20.3M. For this memo, costs have been converted to 2017 dollars using an escalation rate of 3 percent, as shown in Table 1.

**Table 1: California WaterFix Cost Summary**

	2014 \$M	2017 \$M
<b>CAPITAL COSTS</b>		
<b>Water Facility</b>		
Construction	9,499	10,380
Contingency (36%)	3,378	3,692
Program Management/Construction Management/Engineering	1,920	2,098
Land Acquisition (includes 20% contingency)	146	160
<b>Sub Total Water Facility</b>	<b>14,943</b>	<b>16,330</b>
<b>Mitigation (includes 35% contingency) (1)</b>	<b>367</b>	<b>401</b>
<b>Total Water Facility and Mitigation Capital Costs</b>	<b>15,310</b>	<b>16,731</b>
<b>ANNUAL OPERATIONS AND MAINTENANCE COSTS (2)</b>		
<b>Water Facility</b>		
Facility O&M	20.0	21.9

Power	6.6	7.2
Capital Replacement	13.7	15.0
<b>Sub Total Water Facility</b>	<b>40.3</b>	<b>44.1</b>
<b>Mitigation (1)</b>	<b>18.6</b>	<b>20.3</b>
<b>Total Annual O&amp;M Costs</b>	<b>58.9</b>	<b>64.4</b>
(1) The mitigation costs for capital and O&M for 25 years equals \$796M in 2014 dollars or \$870M in 2017		

## E. COST ALLOCATION

The current approach allocates 55 percent of the cost and water supply benefits of the WaterFix to the SWP, and 45 percent to participating CVP contractors (55/45 split). However, the actual split will depend on which CVP contractors participate.

The approach assumed for allocation of costs among the individual SWP and CVP WaterFix participants is that described in Section B above.

## F. WATERFIX FINANCING

The approach currently being developed assumes that bonds will be issued to fund the construction, planning, and other preconstruction costs, including reimbursement of funds and services previously provided by a subset of contractors. Both DWR and a joint powers authority comprised of participating SWP and CVP contractors (Finance JPA) would issue bonds in a manner that would separately fund the SWP and CVP portions of cost.

### *F.1 Financing the SWP share of WaterFix*

Long-term financing of the SWP share of project costs (\$9.2B in 2017 dollars, assuming a 55/45 SWP/CVP split) is expected to be provided by DWR's issuance of revenue bonds. The principal and interest on the bonds would be paid with revenues collected by DWR under its existing SWP water supply contracts.

DWR anticipated legal challenges to its authority over the project, potentially affecting the marketability of revenue bonds to private investors. DWR therefore filed a "validation action" with the Sacramento County Superior Court regarding DWR's authority to, among other things, issue revenue bonds to finance the planning, design, construction and other capital costs of the WaterFix. DWR believes it has existing legal authority to finance and construct the WaterFix, but a validation action provides the requisite assurance to the financial community for the sale of the WaterFix revenue bonds. While the validation action is being resolved, which could take several years, DWR proposes to initially make direct placement sales of revenue bonds to the Finance JPA to allow funding for the project to proceed. DWR anticipates issuing these bonds beginning in mid-2018.

An approach for project financing is currently under discussion between DWR and potential WaterFix



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participants. Under this approach, the Finance JPA would purchase WaterFix revenue bonds directly from DWR as they are issued, and the proceeds of these bonds would be used to pay for capital construction costs. The Finance JPA would simultaneously finance its purchase of these WaterFix revenue bonds by issuing its own bonds (Finance JPA Bonds). DWR would pay the debt service for the Finance JPA Bonds through collection of charges applied under existing SWP contracts to all SWP contractors south of the Delta.

If a final judicial determination is made that DWR has the authority to issue revenue bonds, such bonds would be issued to refund all outstanding Finance JPA Bonds. In the event that DWR does not have the authority to issue revenue bonds for the WaterFix, a process would be established to potentially convey the interest and ownership of the project to the Finance JPA or designee. In the scenario that DWR does not have the authority, SWP contractors that are members of the Finance JPA would have to “step up” to pay the debt service for the outstanding Finance JPA Bonds.

### ***F.2 Financing the CVP contractor share of WaterFix***

The approach currently under discussion assumes that financing for the CVP portion (\$7.5B in 2017 dollars) of project costs would be provided by bond issuances by the Finance JPA. The Finance JPA would issue separate bonds for each participating CVP contractor, commensurate with that CVP contractor’s participation level in the WaterFix and backed only by that CVP contractor, thus eliminating the need for step up provisions. The participating CVP contractors would provide payments to the Finance JPA to cover debt service, and the Finance JPA would provide bond proceeds to DWR under a separate agreement for construction of the WaterFix.

### ***F.3 Interim funding***

DWR’s direct placement of WaterFix revenue bonds is not expected until the middle of 2018. In the interim, DWR proposes to fund continuing design and preconstruction costs by using “Article 51(e) revenue”, as well as requesting additional contributions from participating contractors.

Article 51(e) revenues are SWP funds that DWR may allocate to certain SWP purposes, subject to the Director of DWR’s discretion. DWR is proposing to use Article 51(e) revenues to fund project planning and design work through December 31, 2017.

Beginning in January 2018, DWR intends to request additional contributions from willing SWP and CVP contractors to fund preconstruction costs. This “Gap Funding” would be provided under agreement with DWR and would be subject to reimbursement, similar to previous advances made by certain SWP contractors for planning costs. The reimbursement would occur at the time of DWR’s first issuance of bonds, anticipated in mid-2018.

## **G. COSTS TO SANTA CLARA COUNTY**

The cost of the District’s participation in the WaterFix will depend on the ultimate split between the SWP and CVP, as well as further development of the CVP participation approach and actual market conditions at the time of debt issuance. Staff has estimated costs to Santa Clara County based on the current participation approaches for the SWP and CVP described in Section B and the

participation scenarios described in Section C.3.

### *G.1. Total Cost*

Table 2 shows the total financed capital costs of the WaterFix and the District's potential share under the scenarios described in Section C3. Potential costs are described in terms of both undiscounted costs and present value. Staff used the conservative financing assumptions listed in Table 3. Annual O&M costs are estimated at \$64.4 Million in 2017 dollars. The District's share of O&M costs would range from \$1.6 to \$2.5 million per year in the scenarios evaluated.

The District's share of fully financed WaterFix capital costs, in present value dollars, is estimated to range from \$345 million to \$535 million, assuming the participation approaches described in Section B are implemented. These estimates will differ significantly with different assumptions regarding bond structure, inflation rates, and interest rates.

**Table 2. Range of potential WaterFix capital costs to Santa Clara County (a)**

WaterFix Participation Scenario	Total Water Facility and Mitigation Capital Costs		
	Construction cost (2017 \$M)	Undiscounted (\$M)	Present Value (\$M)
<b>WaterFix Total</b>	<b>16,730</b>	<b>40,150</b>	<b>13,850</b>
<b>WaterFix - SCVWD share:</b>			
• <b>Balanced Participation</b>	<b>420</b>	<b>1,005</b>	<b>345</b>
• <b>Higher CVP</b>	<b>605</b>	<b>1,455</b>	<b>500</b>
• <b>Higher SWP</b>	<b>650</b>	<b>1,555</b>	<b>535</b>

- The District's share of O&M costs would range from \$1.6 to \$2.5 million per year in the scenarios evaluated. Mitigation O&M begins in 2021 and water facility O&M begins in 2034.
- The present value analysis assumes a discount rate of 5.5%, which is equal to an assumed risk-free rate of 2.5% plus a 3% inflation rate, which is consistent with the District's standard present-value assumptions.

**Table 3. Key financing assumptions used to estimate costs to Santa Clara County**

Key Financing Assumptions	
Type of Bond	Tax-exempt fixed rate bonds
Amortization Period	30 years
Debt Service pattern	Level debt service with 12 months capitalized interest
Annual Inflation Factor	3%
Interest rates	MMD* + 1.65%; approximately 5%
Debt Service Reserve	1 x maximum annual debt service
Present Value Discount Rate	5.5%

\*MMD = municipal market data

## G.2. Incremental costs

Table 4 provides estimates of the cost per acre foot of incremental WaterFix supply as a “levelized” unit cost; this is the unit cost that, if assigned to every unit of water produced over a 100 year operating period, will produce sufficient revenue to recover the cost of the project in present value terms. The levelized unit cost is expressed in constant 2017 dollars. The cost of the project includes both the total capital cost of the project as well as the present value of O&M over 100 years of operation and the cost of power needed to deliver the water to Santa Clara County.

**Table 4. Levelized unit cost**

WaterFix Participation Scenario	Potential Average Project Yield (AF per year) (a)	Levelized Unit Cost (2017 \$/AF) (b)
Balanced Participation	\$28,500	\$598
Higher CVP	\$41,400	\$598
Higher SWP	\$44,250	\$598

(a) Yield is expressed relative to the base case described in Section C3.

(b) Note the levelized unit cost is the same for all three participation scenarios because the changes caused by changing participation levels are offset by corresponding changes in yield.

*G.3. Impacts on Santa Clara County ratepayers*

The District's share of WaterFix costs for participation in the CVP share of the project would be paid through water rates. Costs for participation in the SWP share of the project could be repaid through water rates, the ad valorem State Water Project tax, or a combination of the two. The decision on whether to use the ad valorem tax for the District's SWP share of WaterFix costs will be influenced by the outcome of potential litigation regarding DWR's authority to build the WaterFix as a component of the State Water Project.

Staff estimated the incremental cost impact to ratepayers in fiscal year 2027 under two scenarios; 1) all WaterFix costs are repaid through water rates; and 2) the SWP portion of WaterFix costs is recovered through the ad valorem tax. The results are shown in Tables 5 and 6.

**Table 5. Estimated incremental impact of WaterFix on District groundwater charges and Santa Clara County monthly household costs without use of the SWP tax for fiscal year 2027.**

	Balanced Participation	Higher CVP	Higher SWP
<b>M&amp;I groundwater charge increase (\$/AF)</b>			
north county	\$109	\$165	\$192
south county	\$40	\$81	\$40
<b>Total increase per average household (\$/month)</b>			
north county	\$3.80	\$5.70	\$6.60
south county	\$1.40	\$2.80	\$1.40

**Table 6. Estimated incremental impact of WaterFix on District groundwater charges, SWP tax and Santa Clara County monthly household costs with use of the SWP tax for fiscal year 2027.**

	Balanced Participation	Higher CVP	Higher SWP
<b>M&amp;I groundwater charge increase (\$/AF)</b>			
north county	\$47	\$87	\$47
south county	\$24	\$68	\$12

<b>SWP tax increase, average single family (\$/yr)</b>			
north county increase	\$19.90	\$19.90	\$39.80
south county	\$15.30	\$15.30	\$30.60
<b>Total increase per average household (\$/month)</b>			
north county	\$3.30	\$4.70	\$4.90
south county	\$2.10	\$3.60	\$3.00

## H. Next Steps

Staff will continue to engage in discussions to develop documents and agreements that develop the WaterFix participation structure. Staff will bring key term sheets and agreements to the Board for review prior to requesting the Board to make a decision on involvement with the WaterFix on October 10, 2017.

Staff's presentation will be provided with a supplemental memo.

## 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:

- \*Supplemental Agenda Memo
- \*Supplemental Attachment 1: PowerPoint
- \*Supplemental Attachment 2: Supporting Info PowerPoint
- \*Supplemental Attachment 3: Response to August 22, 2017 Questions
- \*Supplemental Attachment 4: Board Communications List
- \*Supplemental Attachment 5: WaterFix Financial Risks
- \*Handout 2.1-A - K. Irvin

## UNCLASSIFIED MANAGER:

Jerry De La Piedra, 408-630-2257

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**File No.:** 17-0615

**Agenda Date:** 9/12/2017

**Item No.:** \*2.1.

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## SUPPLEMENTAL BOARD AGENDA MEMORANDUM

### **SUBJECT:**

California WaterFix Update, Including Water Supply Analysis, Cost and Water Allocation, and Financing.

### **REASON FOR SUPPLEMENTAL MEMORANDUM:**

This supplemental memo conveys additional information identified after the initial memo was released, consistent with Executive Limitations Policy EL-7-10-5.

### **RECOMMENDATION:**

Receive and discuss information on the California WaterFix, including a water supply analysis, cost and water allocations, and financing.

### **SUMMARY:**

This Supplemental Memorandum is to convey the staff PowerPoint presentation and supporting materials (Attachments 1 and 2), as well as to respond to questions and concerns raised during the August 22, 2017 Board meeting (Attachment 3), and provide a list of the open, public Board meetings and workshops that have been held on the Bay Delta Conservation Plan and California WaterFix since 2011 (Attachment 4).

In addition, Curt Schmutte, a consulting engineer who regularly leads tours of the Delta, will provide a presentation on the current state of the Delta.

### **Curt Schmutte, Consulting Engineer:**

Mr. Schmutte is a registered civil engineer who has 30 years of experience working on Bay-Delta issues, including over 20 years at the Department of Water Resources (DWR) working on levee improvement programs, land subsidence research, economic risk analyses, seismic flood risk mitigation strategies, and habitat restoration projects. He managed DWR's levee program as well as the North Delta flood control and ecosystem restoration project and the Suisun Marsh ecosystem restoration effort. As levee program manager for DWR, Mr. Schmutte initiated the Delta Risk Management Strategy project. He also served as an expert witness on the Jones Tract levee failure litigation. Mr. Schmutte was the manager of habitat restoration projects for the State and Federal Contractors Water Agency (SFCWA). He is also

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a consultant to Metropolitan Water District of Southern California on delta levee, Yolo Bypass, ecosystem restoration, hydrodynamic modeling and emergency response planning efforts.

**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: Staff PowerPoint  
Attachment 2: Supporting Information PowerPoint  
Attachment 3: Response to August 22, 2017 Questions  
Attachment 4: Board Communications List  
Attachment 5: WaterFix Financial Risks

**UNCLASSIFIED MANAGER:**

Jerry De La Piedra, 408-630-2257

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# California WaterFix Update

## SCVWD Board Meeting

### September 12, 2017



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Santa Clara Valley  
Water District



Attachment 1, Page 1 of 18

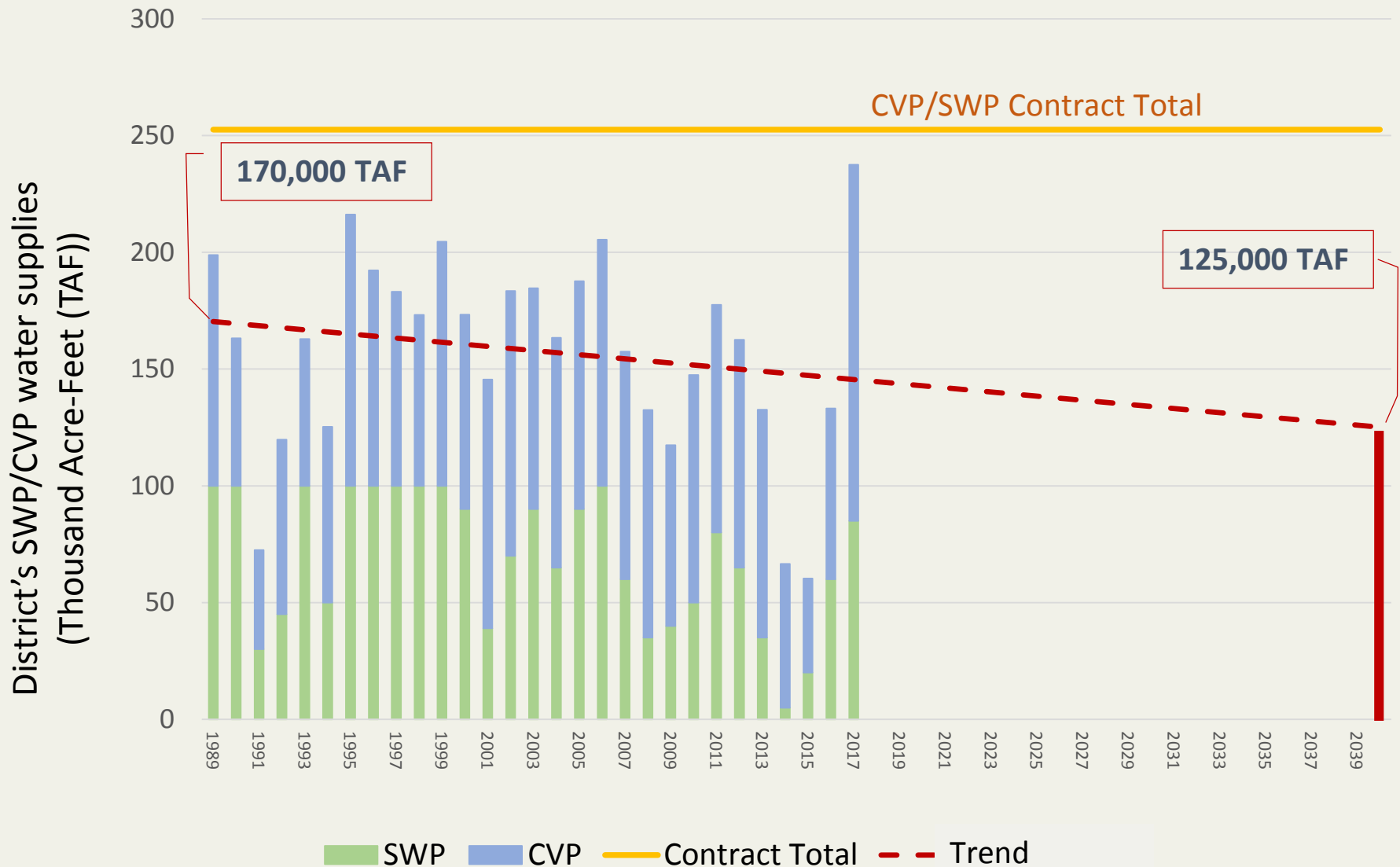
Imported water is important to Silicon Valley:

- ❖ **Has seen us through droughts**
- ❖ **Protects Silicon Valley's infrastructure from damage** due to sinking land levels
- ❖ Supports Silicon Valley's **world-leading economy**

However supplies are at risk. WaterFix is **one of the least expensive solutions** to sustain existing supplies. It plans to:

- ❖ **Upgrade aging infrastructure**
- ❖ Protect the **environment, fish and wildlife**
- ❖ Keep our water **clean, safe and healthy**

# The current path leads to less imported water in the future



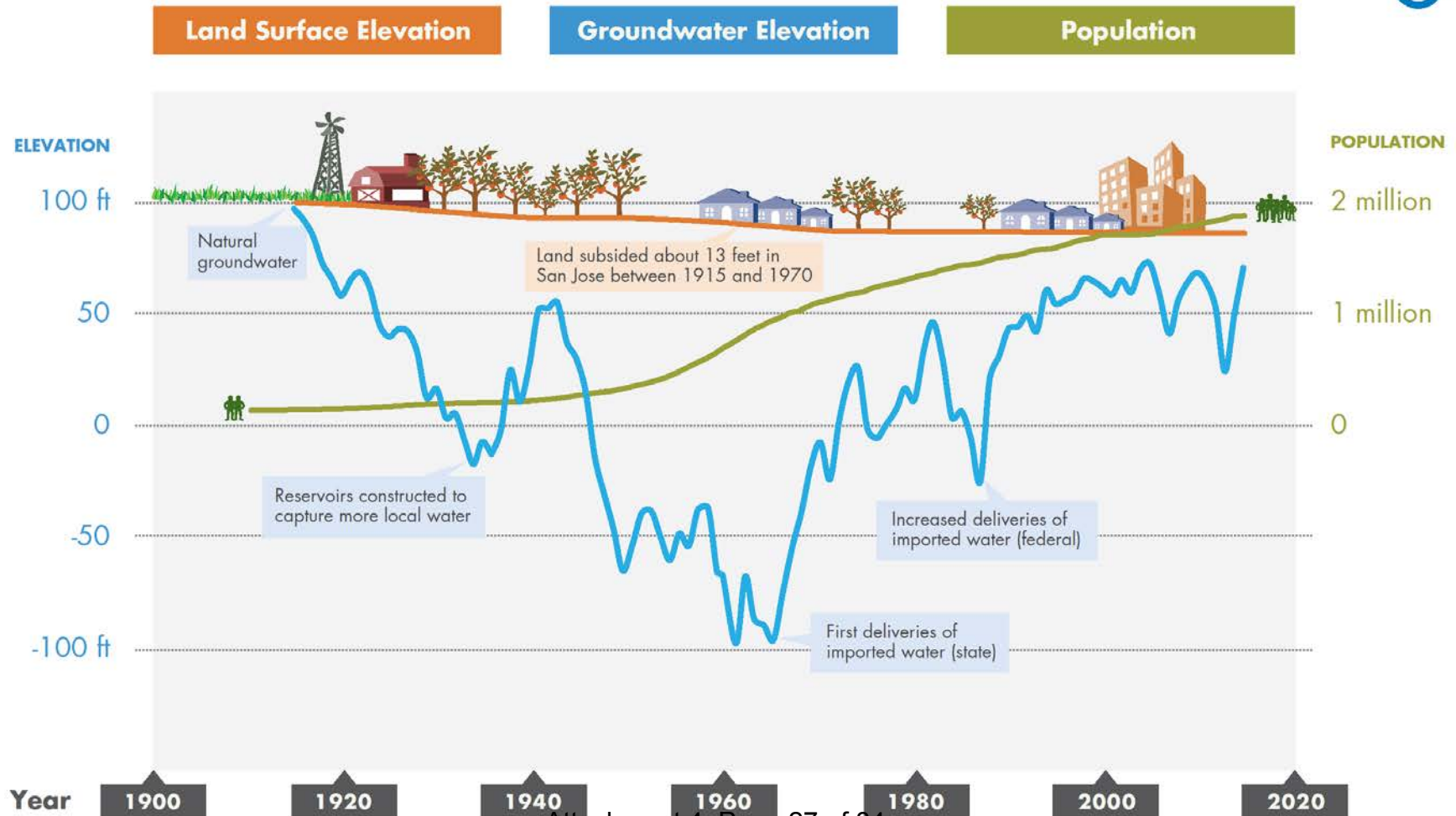
# California WaterFix is one of the least expensive supply options

Water Supply Option	Cost/AF
No Regrets (Stormwater, gray water, more conservation)	\$300
Morgan Hill Recharge	\$400
<b>California WaterFix</b>	<b>\$600</b>
Sites Reservoir	\$800
Imported Water Contract Purchase	\$800
Lexington Pipeline	\$1,000
Saratoga Recharge	\$1,300
Dry Year Options/Transfers	\$1,400
Potable Reuse – Los Gatos Ponds	\$1,700
Potable Reuse – Injection Wells	\$2,000
Los Vaqueros Reservoir	\$2,300
Potable Reuse - Ford Pond	\$2,500
Pacheco Reservoir	\$2,700
Groundwater Banking	\$5,700

WaterFix is designed to secure existing supplies and reduce shortages during droughts

## SANTA CLARA COUNTY GROUNDWATER AT-A-GLANCE

*a graphic representation not intended as a technical exhibit*

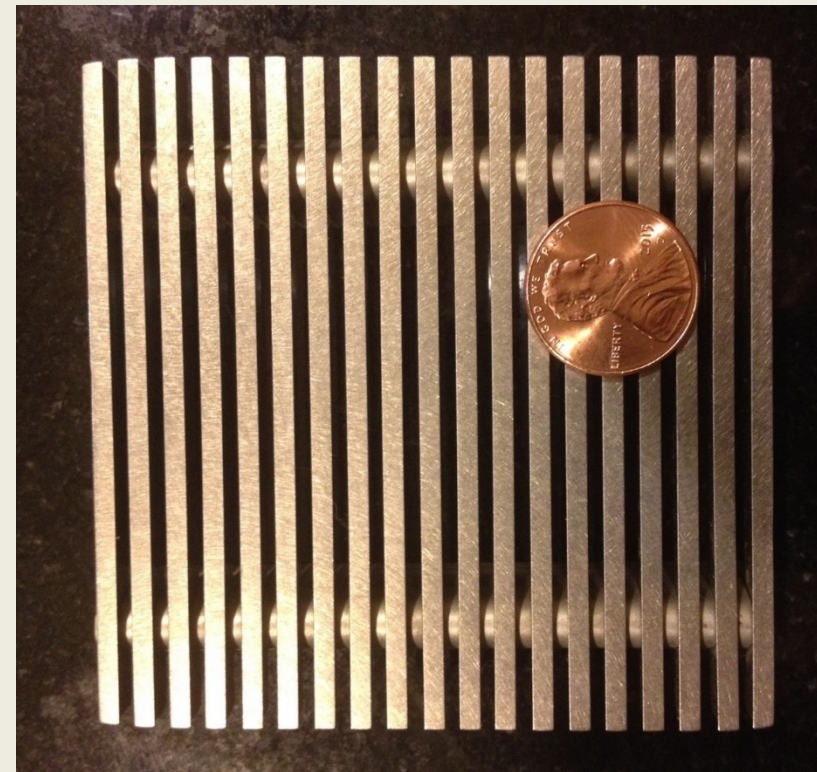
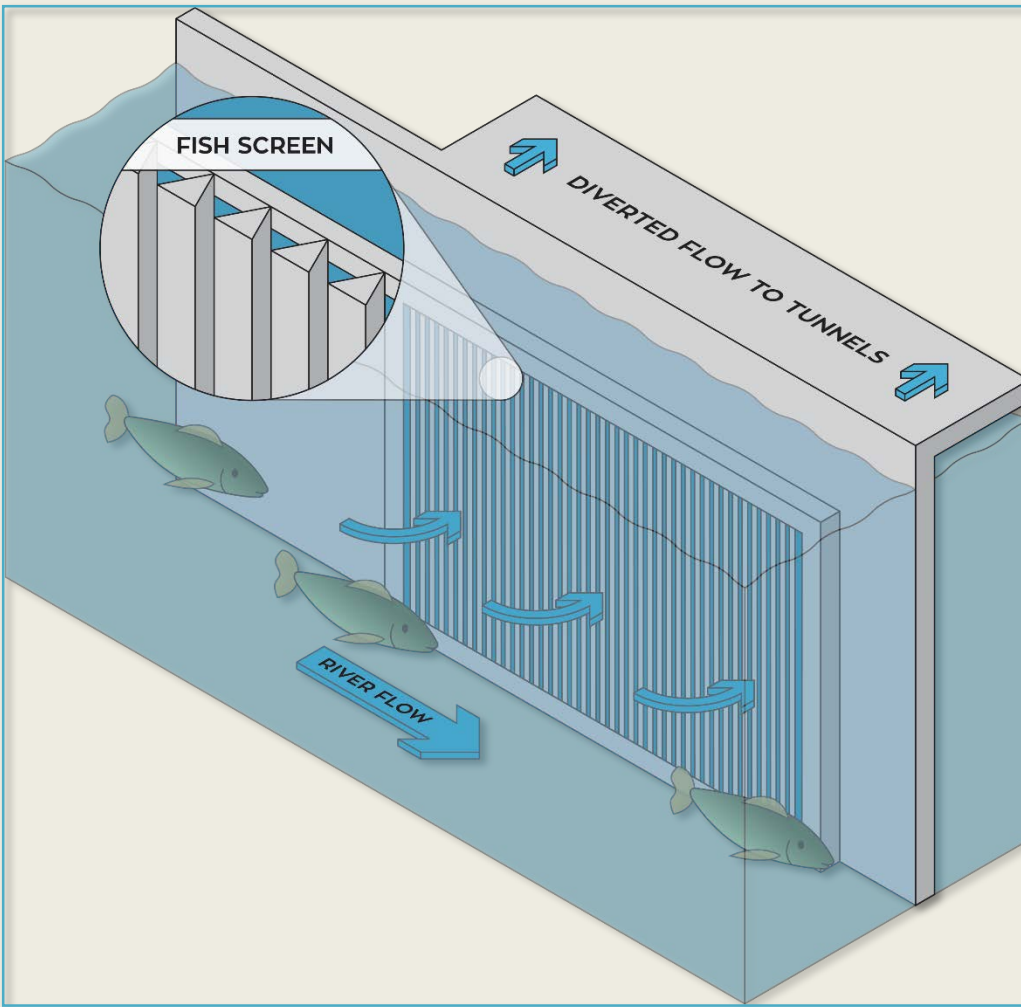




# WaterFix will upgrade aging infrastructure to protect Silicon Valley's water supply



# WaterFix improves flows patterns to protect fish and wildlife in the Delta, and thus protects Silicon Valley's water supplies





- ❖ Safeguards against rising seas
- ❖ Improves water quality



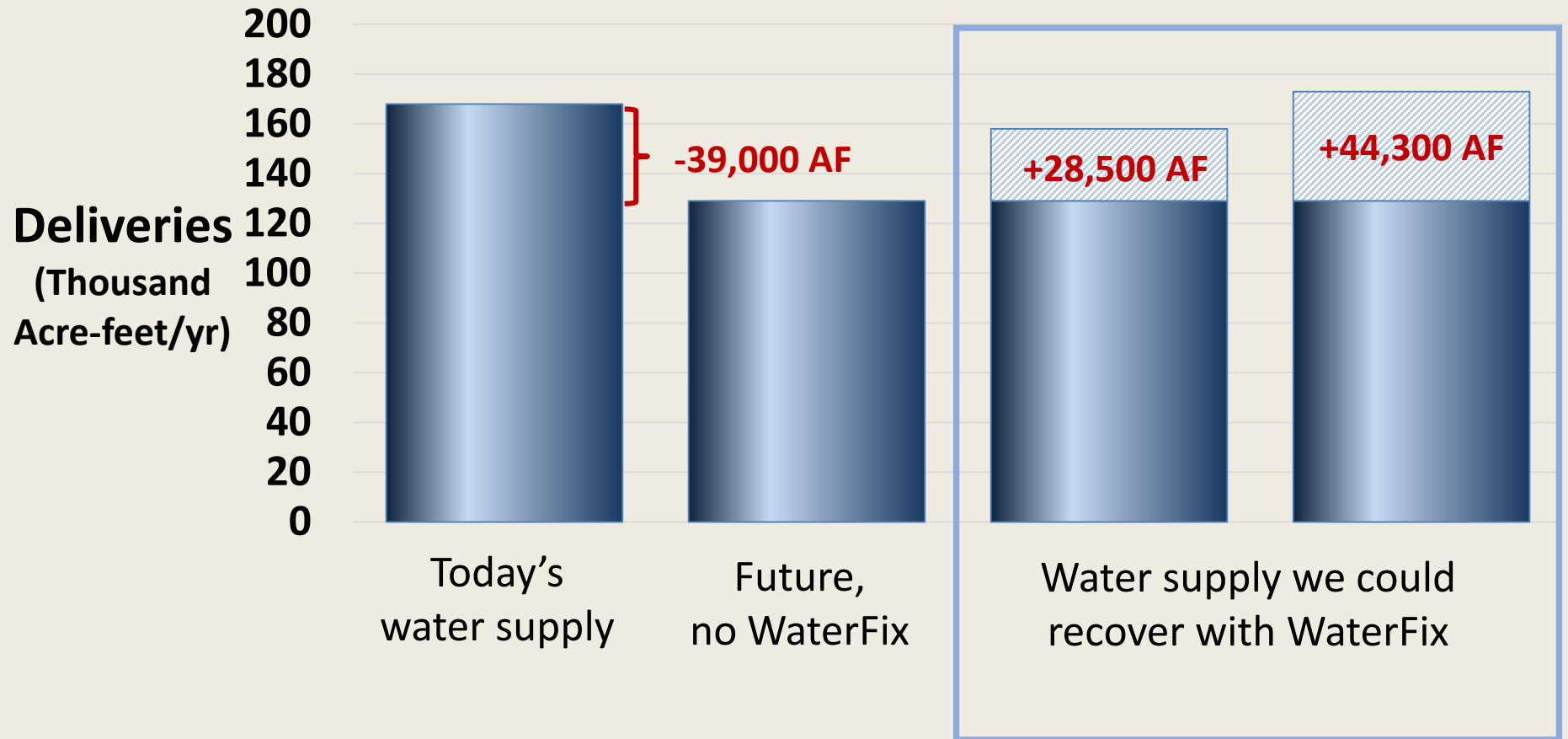
# Silicon Valley needs sufficient water to thrive

- ❖ If we don't participate, water that would come to Silicon Valley becomes available to other agencies to purchase.



# Water supply benefits vary based on level of participation

## Modeled Long-Term Average



# WaterFix capital and annual operation and maintenance costs (2017 dollars)

## **TOTAL Project Costs**

**Capital Costs** **\$16.7 Billion**

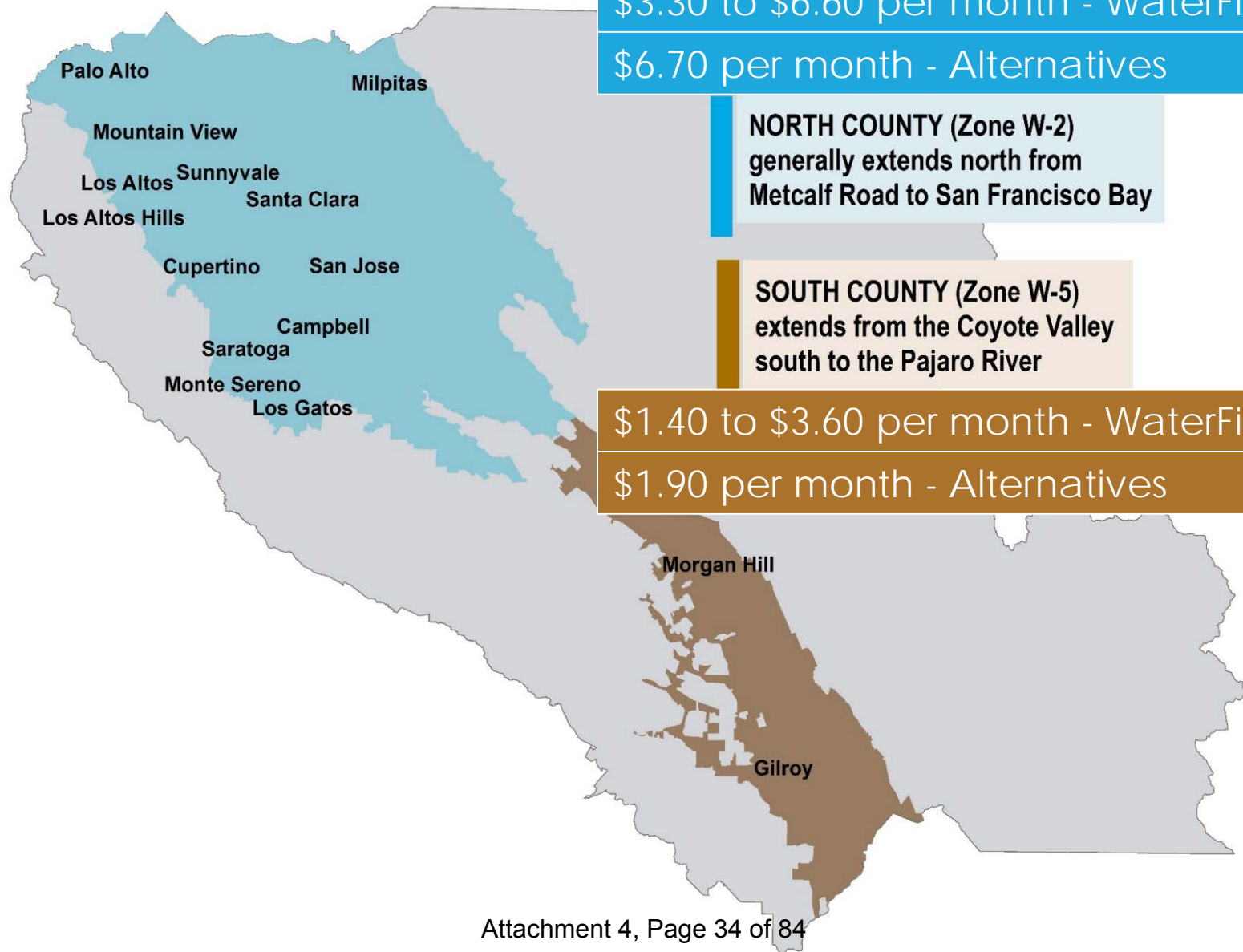
**Operations and Maintenance Costs** **\$64.4 Million/Yr**

## **DISTRICT Share of Project Costs**

**Capital Costs** **\$420 – 650 Million**

**Operations and Maintenance Costs** **\$1.6 - \$2.5 Million/Yr**

# Average monthly household cost of WaterFix (FY 2027)



# The project has significant uncertainties

- ❖ Cost uncertainty
- ❖ Financing
- ❖ Validation action
- ❖ Permitting delays and additional regulatory constraints
- ❖ Uncertain federal involvement
- ❖ Other participant decisions
- ❖ Litigation

- ❖ Two channels of participation (State and Federal)
- ❖ Reducing uncertainties through agreements
- ❖ Some uncertainties will be resolved in the first two years
- ❖ Continued planning for alternative projects

# Board communication & decision schedule

- ❖ 28 open, public Board meetings and workshops since 2011
- ❖ 19 open, public Bay Delta Conservation Plan Ad Hoc Committee meetings between 2013 and 2016
- ❖ Numerous presentations to District advisory committees

Date	Topic
Sep. 12 (Today)	<b>WaterFix update, including water supply analysis, cost, and financing</b>
Sept. 19	Workshop on Water Supply Master Plan
Oct. 3	Workshop to review draft agreements, term sheets, including financing and governance
Oct. 10	Board decisions on involvement with and/or participation in the WaterFix



Imported water is important to Silicon Valley:

- ❖ Has **seen us through droughts**
- ❖ **Protects Silicon Valley's infrastructure** from massive damage
- ❖ Supports Silicon Valley's **world-leading economy**

WaterFix is **one of the least expensive solutions** to sustain existing supplies. It plans to:

- ❖ **Upgrade aging infrastructure**
- ❖ **Protect the environment**, fish and wildlife
- ❖ Keep our water **clean, safe and healthy**

However, there are **significant uncertainties** to be resolved



# Current Status of the Delta



Guest speaker: Conditions in the Delta related to the environment, earthquake risk, and other aspects.

## **Curt Schmutte, Consulting Engineer**

- ❖ 30 years of experience working on Bay-Delta issues
- ❖ 20 years at the Department of Water Resources (DWR) working on levee improvement programs, land subsidence research, economic risk analyses, seismic flood risk mitigation strategies, and habitat restoration projects.
- ❖ Managed several Bay-Delta habitat restoration projects for DWR and the State and Federal Contractors Water Agency



# California WaterFix Update: Water Supply and Cost Analysis Supporting Information SCVWD Board Meeting September 12, 2017



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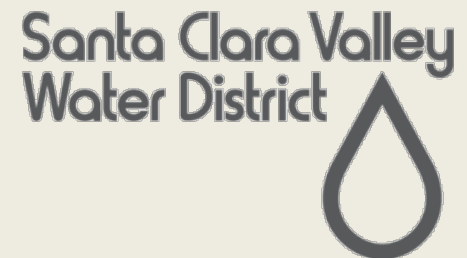


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# Water Supply Analysis



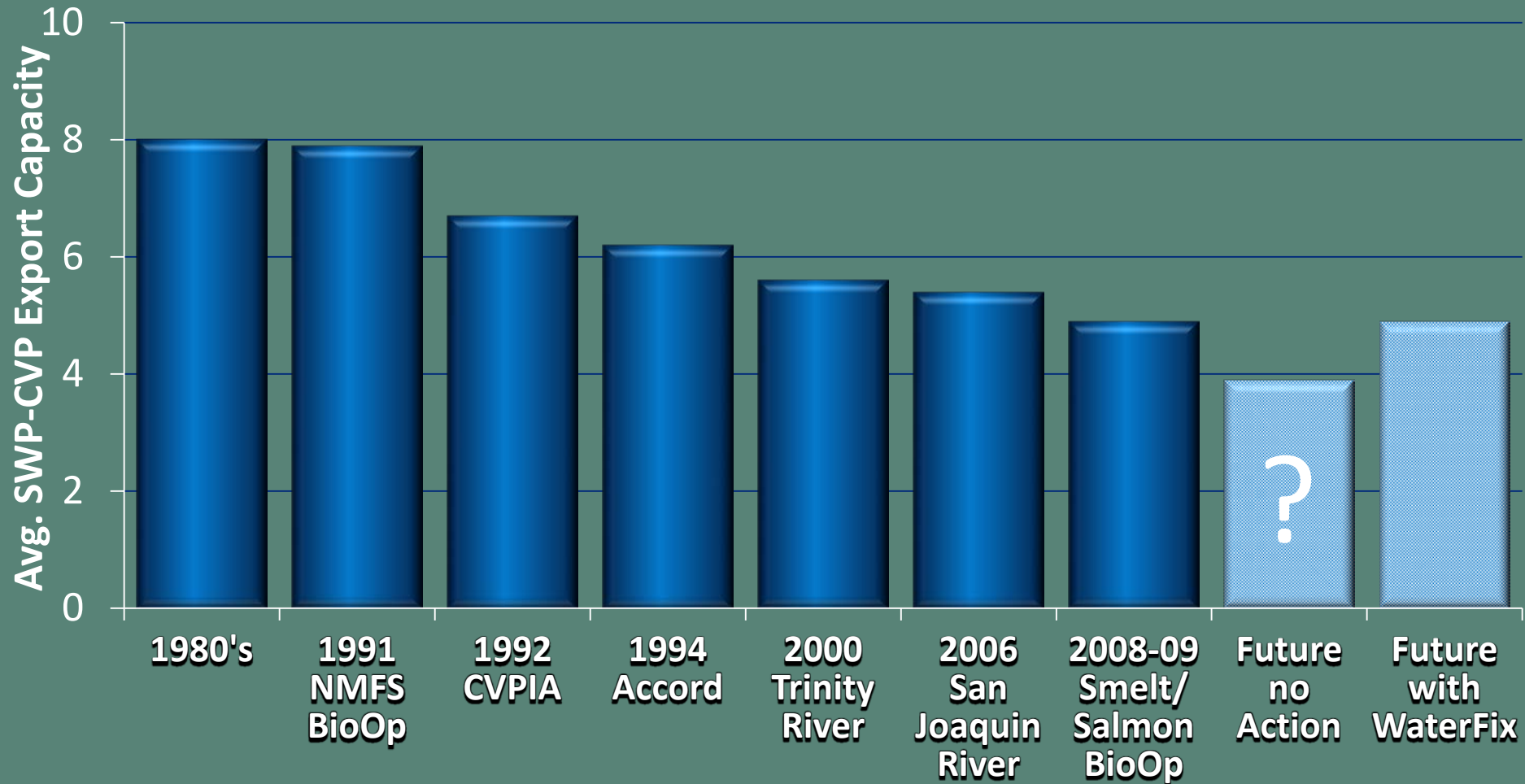
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WaterFix is intended to protect Santa Clara County's existing water supplies; it does not create new water supplies

Modeled long-term average SWP/CVP exports (million acre-ft/yr)



Participation scenarios evaluated:

1. **Balanced Participation** - 2.5% SWP and 2.5% CVP
2. **Higher Central Valley Project** - 2.5% SWP and 5% CVP
3. **Higher State Water Project** - 5% SWP and 2.5% CVP

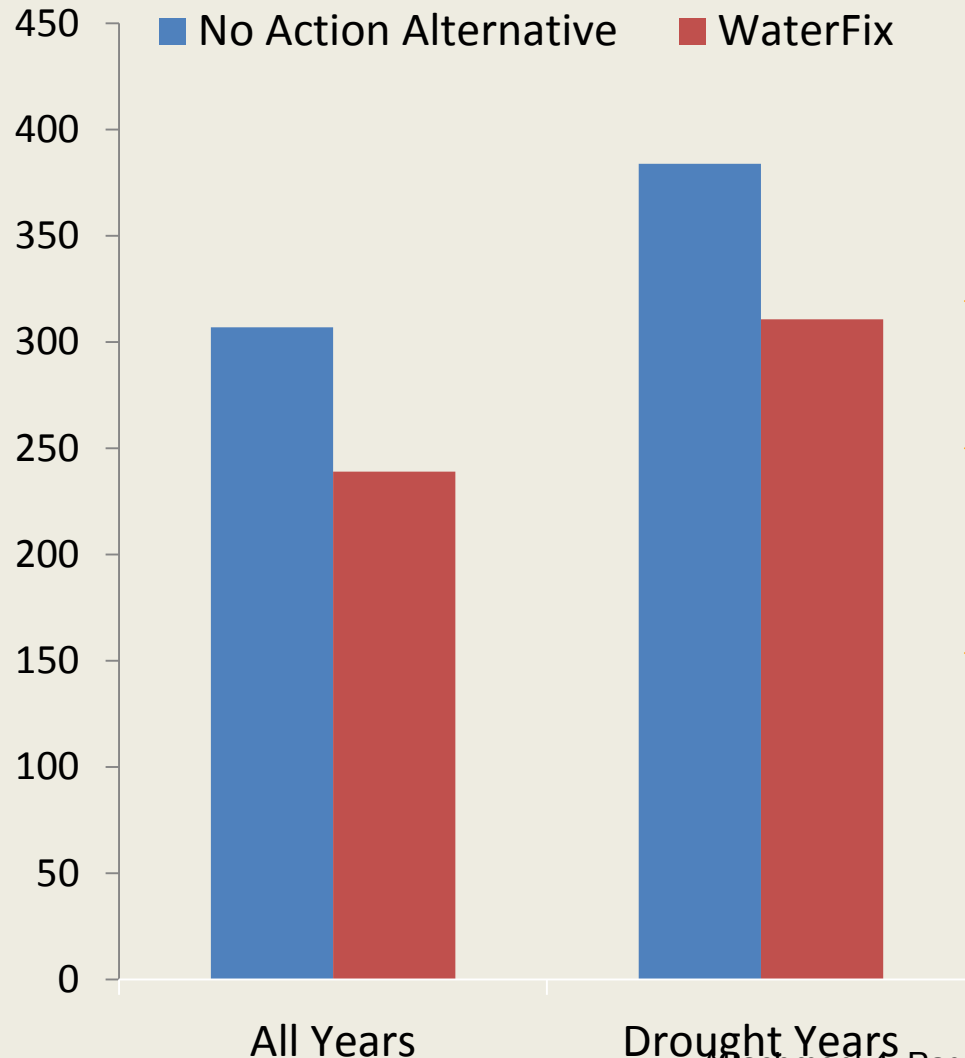
**Base Case** – more restricted future operations, no WaterFix

Water supply assumptions include:

- ❖ Completion of dam seismic retrofits
- ❖ Retailers continue development of non-potable recycled water, cumulatively 32,000 acre-feet per year by 2040
- ❖ Conservation savings continue on track to 99,000 acre-feet by 2040
- ❖ Implementation of “No Regrets” actions
  - Includes graywater, leak repair, advanced metering infrastructure, stormwater recharge, ag land recharge, rain gardens, rain barrels

# Significant improvement in the District's imported water quality is expected

Total Dissolved Solids (milligrams per liter)



❖ 19-22% reduction in salt in District's SWP/CVP imported water

❖ 18% reduction in total salt load to groundwater in northern Santa Clara County

❖ Statewide \$1.8 billion benefit to urban and agricultural users

(Source: Bay Delta Conservation Plan Public Draft, November 2013, Appendix 9.A *Economic Benefits of the BDCP and Take Alternatives*)



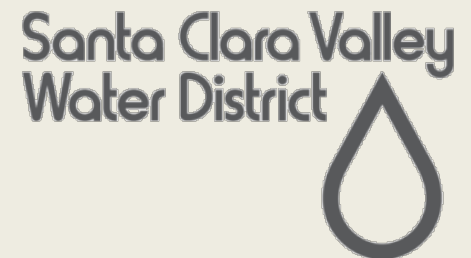
❖ Analyses indicate that WaterFix participation scenarios would

- Increase local groundwater storage
- Increase Semitropic reserves
- Reduce frequency and magnitude of shortages

# WaterFix Costs



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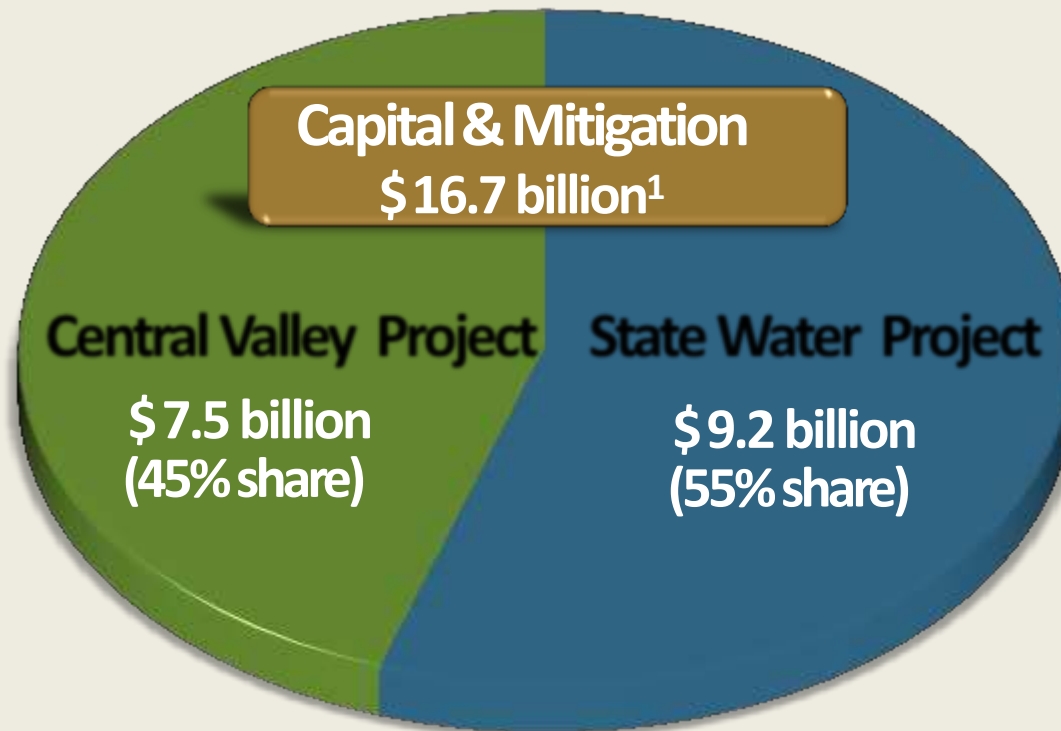
# WaterFix capital costs are estimated to be \$16.7 billion

<b>WaterFix Capital Costs</b>	<b>2014 (\$Billions)</b>	<b>2017 (\$Billions)</b>
<b>Conveyance Facility</b>		
Construction	9.5	10.4
Contingency (36%)	3.4	3.7
Program Management/Construction Management/Engineering	1.9	2.1
Land Acquisition (includes 20% contingency)	.15	.16
<b>Sub-Total</b>	<b>14.9</b>	<b>16.3</b>
<b>Mitigation</b>	<b>.37</b>	<b>.40</b>
<b>Total</b>	<b>\$15.3 B</b>	<b>\$16.7 B</b>

WaterFix annual operations and maintenance costs are estimated to be \$64.4 million

<b>WaterFix Operations and Maintenance Costs</b>	<b>2014 (\$M/yr.)</b>	<b>2017 (\$M/yr.)</b>
Conveyance Facility Operations and Maintenance	20.0	21.9
Power	6.6	7.2
Capital Replacement	13.7	15.0
Sub-Total	40.3	44.1
<b>Mitigation</b>	18.6	20.3
<b>Total \$58.9M/yr.</b>		<b>\$64.4M/yr.</b>

## WaterFix Capital Cost Share



1. In 2017 dollars

- ❖ District's share of capital costs is \$345M - \$535M (2017 dollars) depending on level of participation
- ❖ Capital costs are financed through annual issuances of fixed rate bonds; each with a 30-year amortization
- ❖ Estimates subject to bond structure, inflation and interest rates
- ❖ SCVWD's annual share of operations and maintenance costs is \$1.6 million - 2.5 million (2017 dollars)
- ❖ Operations and maintenance costs assume 100 years of operation beginning in 2033
- ❖ Operations and maintenance costs are paid as incurred

# A conservative set of financing assumptions was used to estimate the District's share of WaterFix costs

## Financing technical assumptions:

- ❖ Capital costs are financed through annual issuances of fixed rate bonds; each with a 30-year amortization
- ❖ Fixed rate based on the AAA MMD<sup>1</sup> scale as of July 11, 2017 plus an additional spread of 1.65%
- ❖ Present value analysis assumes an escalation rate of 3% and a discount rate of 5.5%

<sup>1</sup> Thomson Reuters Municipal Market Data AAA yield curve (AAA-MMD) represents the market benchmark yield for AAA rated state general obligation bonds.

# WaterFix costs to Santa Clara County could vary based on participation decisions

Participation Scenario	Total Water Facility and Mitigation Capital Costs		
	Construction Costs (2017 \$M)	Undiscounted Financed (\$M)	Present Value Financed (\$M)
WaterFix total capital costs <sup>1</sup>	16,730	40,150	13,850
WaterFix - SCVWD share:			
• Balanced Participation (2.5% SWP/2.5% CVP)	420	1,005	345
• Higher CVP (2.5%SWP/5% CVP)	605	1,455	500
• Higher SWP (5%SWP/2.5%CVP)	650	1,555	535

1. Total annual WaterFix operations and maintenance costs are \$64.4 M/yr in 2017 dollars. The District's share would range from \$1.6 M/yr to \$2.5 M/yr.



## Levelized unit cost estimate in constant 2017 dollars

Participation Scenario	Levelized Unit Cost <sup>1</sup> (2017 \$/AF)
Balanced Participation	600
Higher CVP	600
Higher SWP	600

<sup>1</sup> Levelized unit cost = unit cost that, when assigned to every unit of water produced over a 100 year operating period, will equal the present value cost of the project. Expressed in constant 2017 dollars.

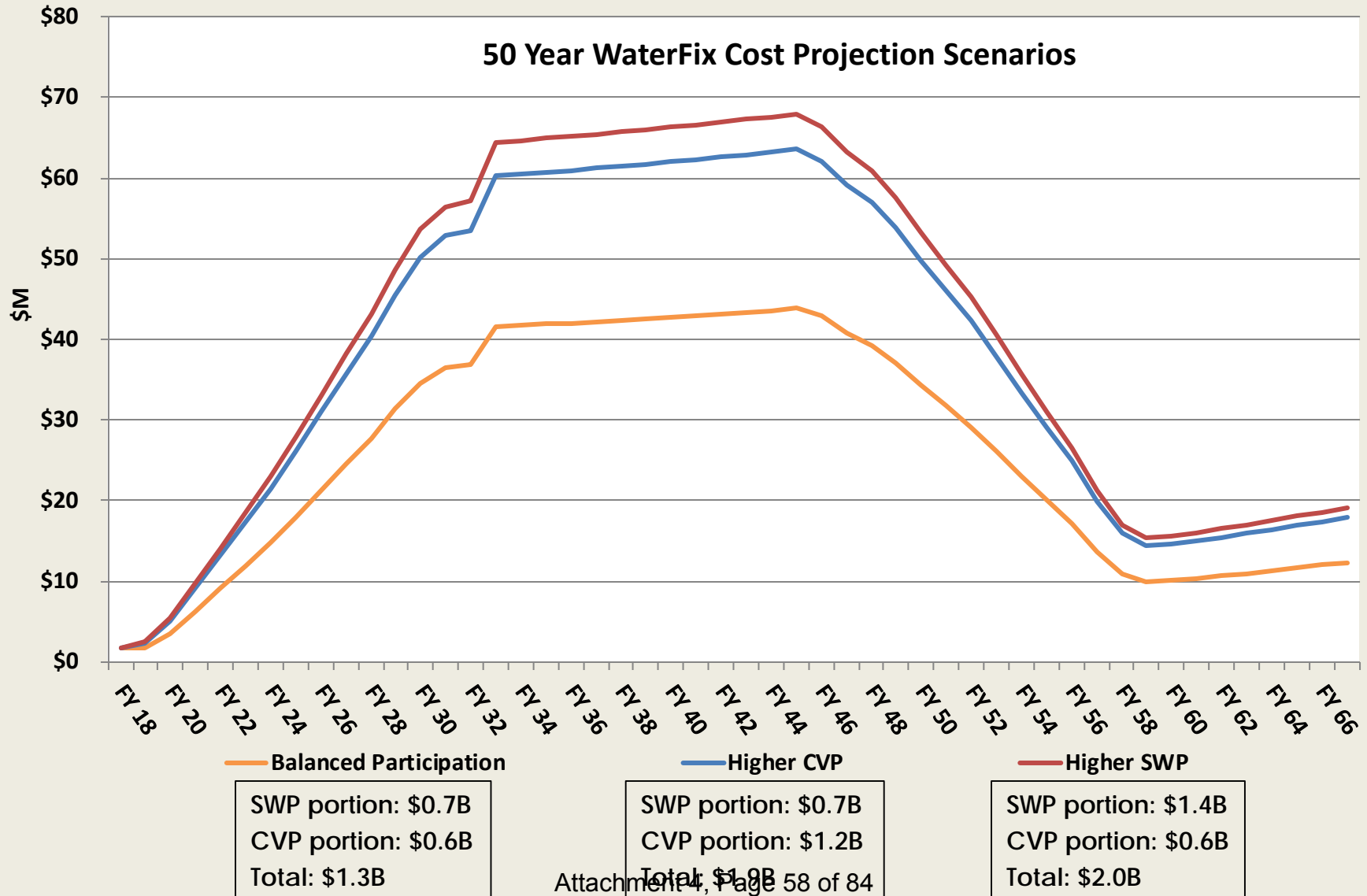
# Ratepayer impacts without use of the State Water Project Tax (FY 2027)

	Incremental Cost Increase		
	WaterFix Scenarios		
	Balanced Participation	Higher CVP	Higher SWP
<b>M&amp;I groundwater charge increase (\$/AF)</b>			
north county	<b>\$109</b>	<b>\$165</b>	<b>\$192</b>
south county	<b>\$40</b>	<b>\$81</b>	<b>\$40</b>
<b>Total increase per average household (\$/month)</b>			
north county	<b>\$3.80</b>	<b>\$5.70</b>	<b>\$6.60</b>
south county	<b>\$1.40</b>	<b>\$2.80</b>	<b>\$1.40</b>

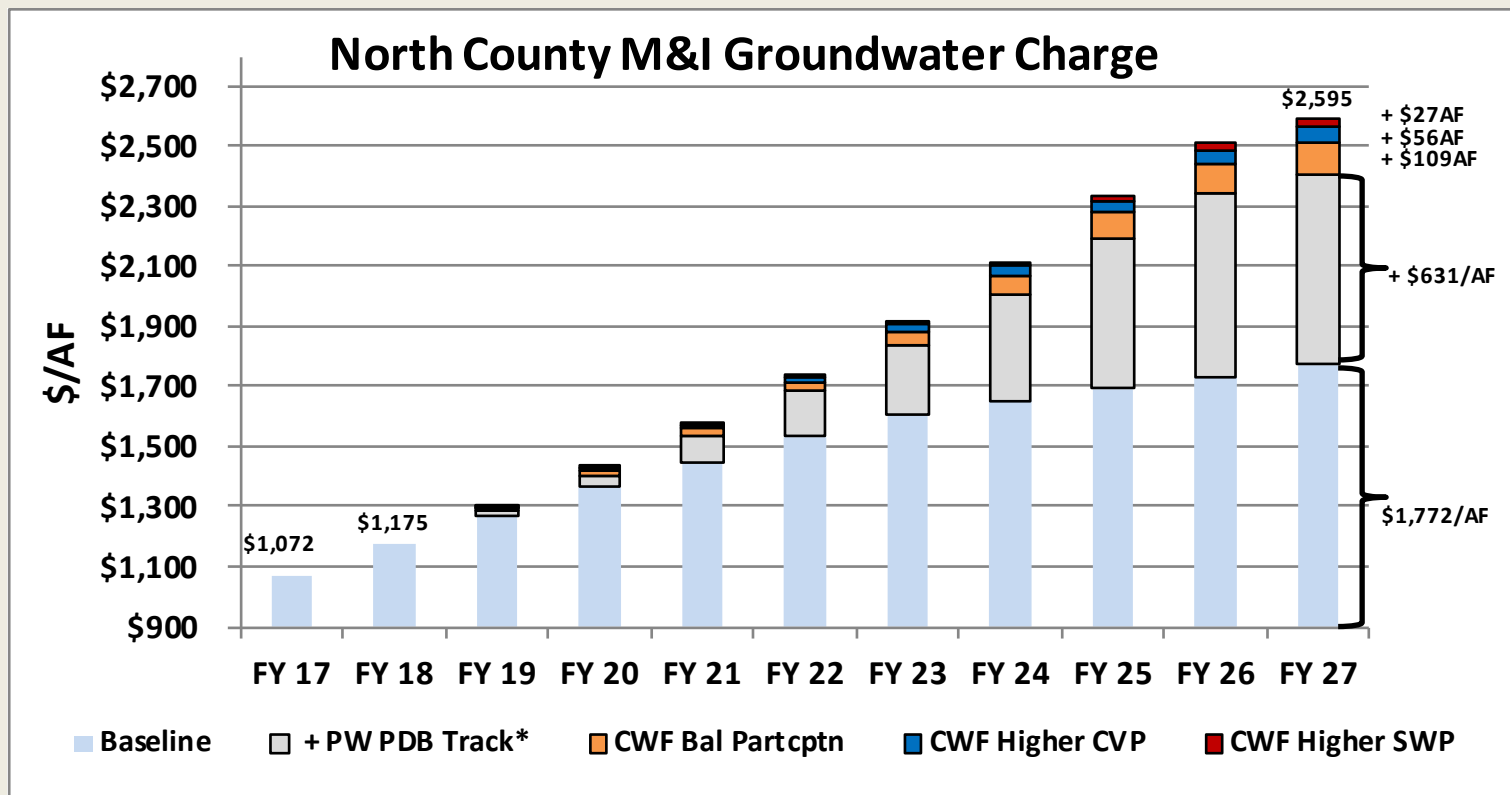
# Ratepayer impacts with use of the State Water Project Tax (FY 2027)

	Incremental Cost Increase		
	WaterFix Scenarios		
	Balanced Participation	Higher CVP	Higher SWP
<b>M&amp;I groundwater charge increase (\$/AF)</b>			
north county	<b>\$47</b>	<b>\$87</b>	<b>\$47</b>
south county	<b>\$24</b>	<b>\$68</b>	<b>\$12</b>
<b>SWP tax increase per average single family (\$/yr)</b>			
north county	<b>\$19.90</b>	<b>\$19.90</b>	<b>\$39.80</b>
south county	<b>\$15.30</b>	<b>\$15.30</b>	<b>\$30.60</b>
<b>Total increase per average household (\$/month)</b>			
north county	<b>\$3.30</b>	<b>\$4.70</b>	<b>\$4.90</b>
south county	<b>\$2.10</b>	<b>\$3.60</b>	<b>\$3.00</b>

WaterFix scenarios result in peak annual costs ranging from approximately \$44 million to \$66 million

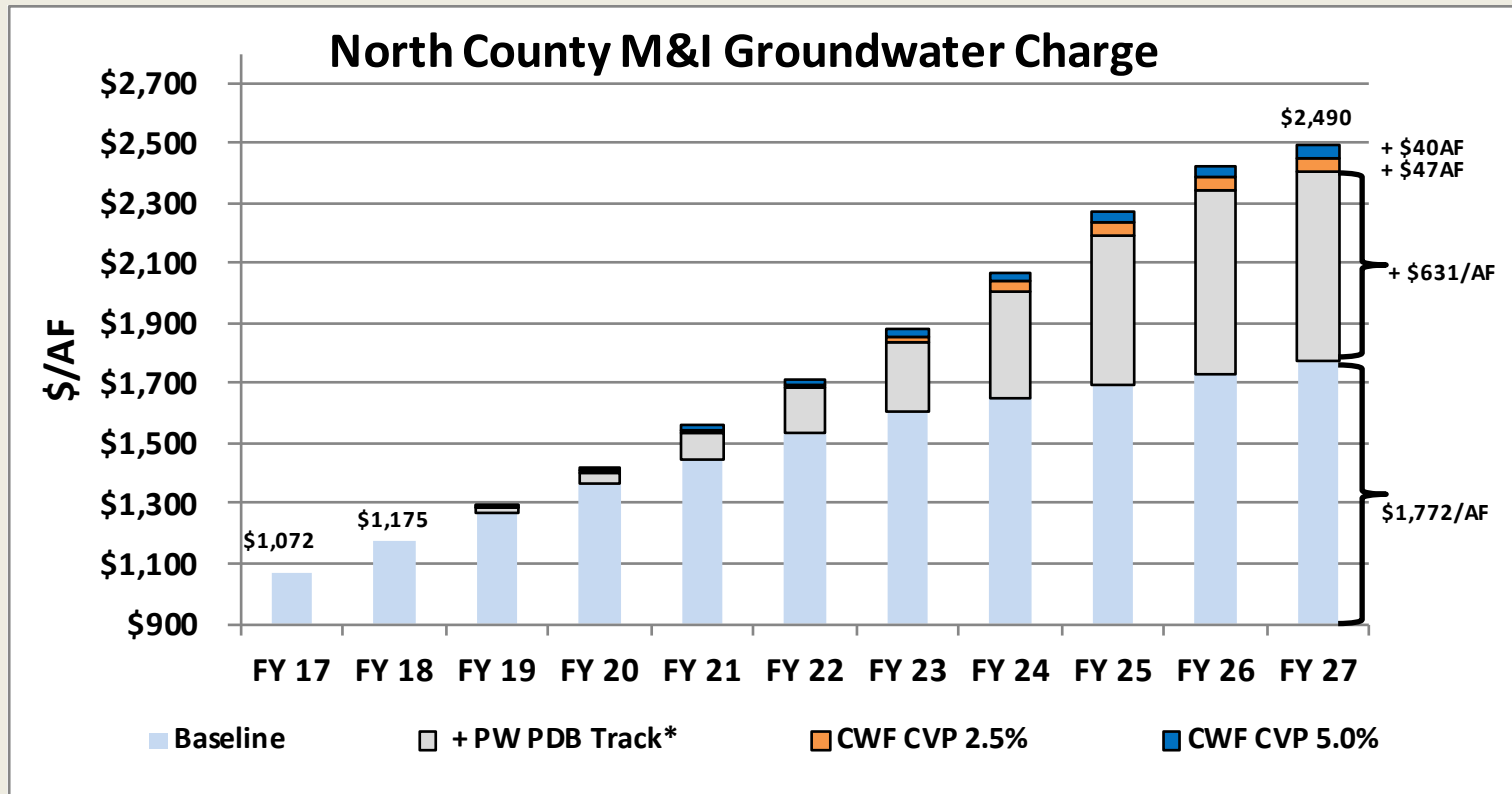


# 10-year rate projection assuming no State Water Project tax used for WaterFix (CWF)



Annual % Increase	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27
Baseline	8.1%	7.6%	6.1%	5.9%	4.5%	3.1%	2.5%	2.3%	2.3%
+ PW PDB Track*	9.4%	9.4%	9.4%	9.4%	9.3%	9.3%	9.2%	6.6%	2.7%
CWF Bal Partcptn	9.9%	9.9%	9.9%	9.9%	9.9%	9.9%	9.9%	7.2%	2.9%
CWF Higher CVP	10.2%	10.2%	10.2%	10.2%	10.2%	10.2%	10.2%	7.4%	3.2%
CWF Higher SWP	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%	7.8%	3.2%

# 10-year rate projection assuming State Water Project tax is used for WaterFix (CWF)

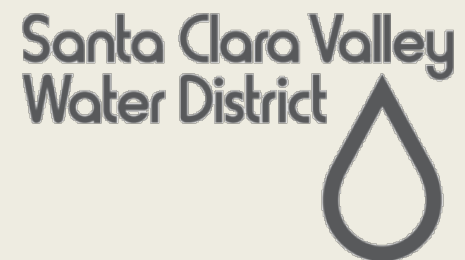


Annual % Increase	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27
Baseline	8.1%	7.6%	6.1%	5.9%	4.5%	3.1%	2.5%	2.3%	2.3%
+ PW PDB Track*	9.4%	9.4%	9.4%	9.4%	9.3%	9.3%	9.2%	6.6%	2.7%
CWF CVP 2.5%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%	6.8%	2.7%
CWF CVP 5.0%	9.9%	9.9%	9.9%	9.9%	9.9%	9.9%	9.9%	6.6%	2.7%

# Financing Approach

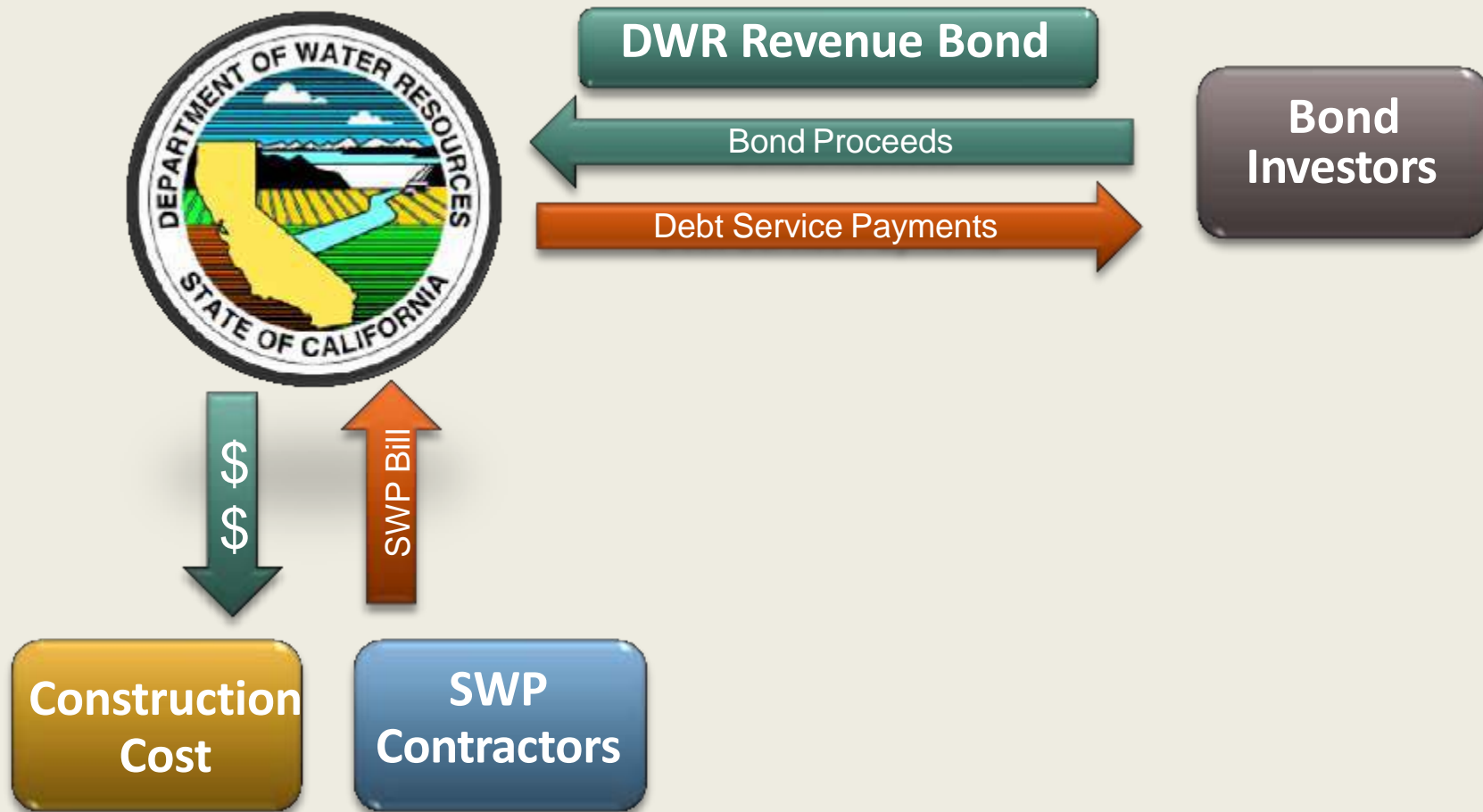


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# Existing State Water Project Financing Approach

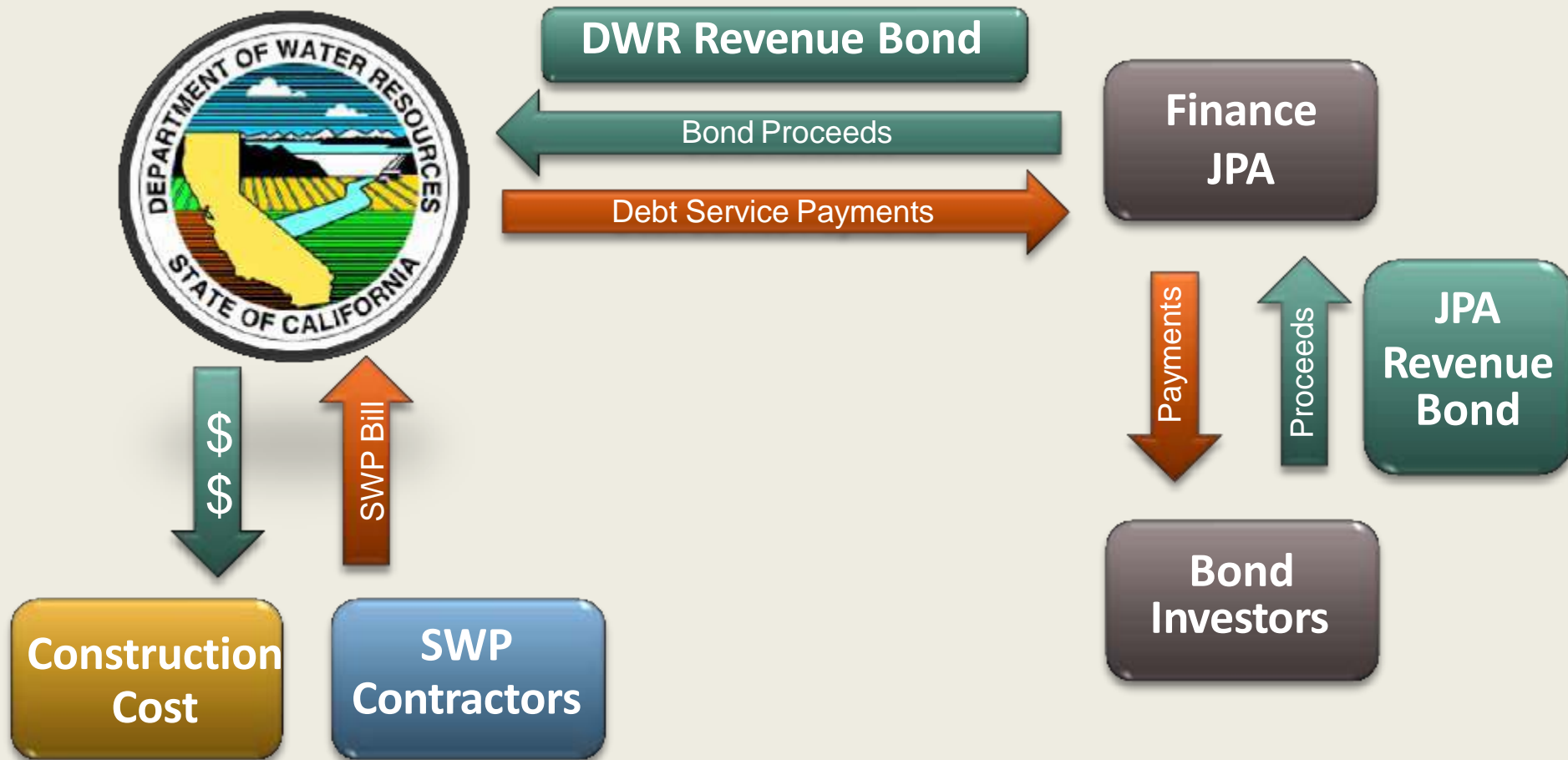




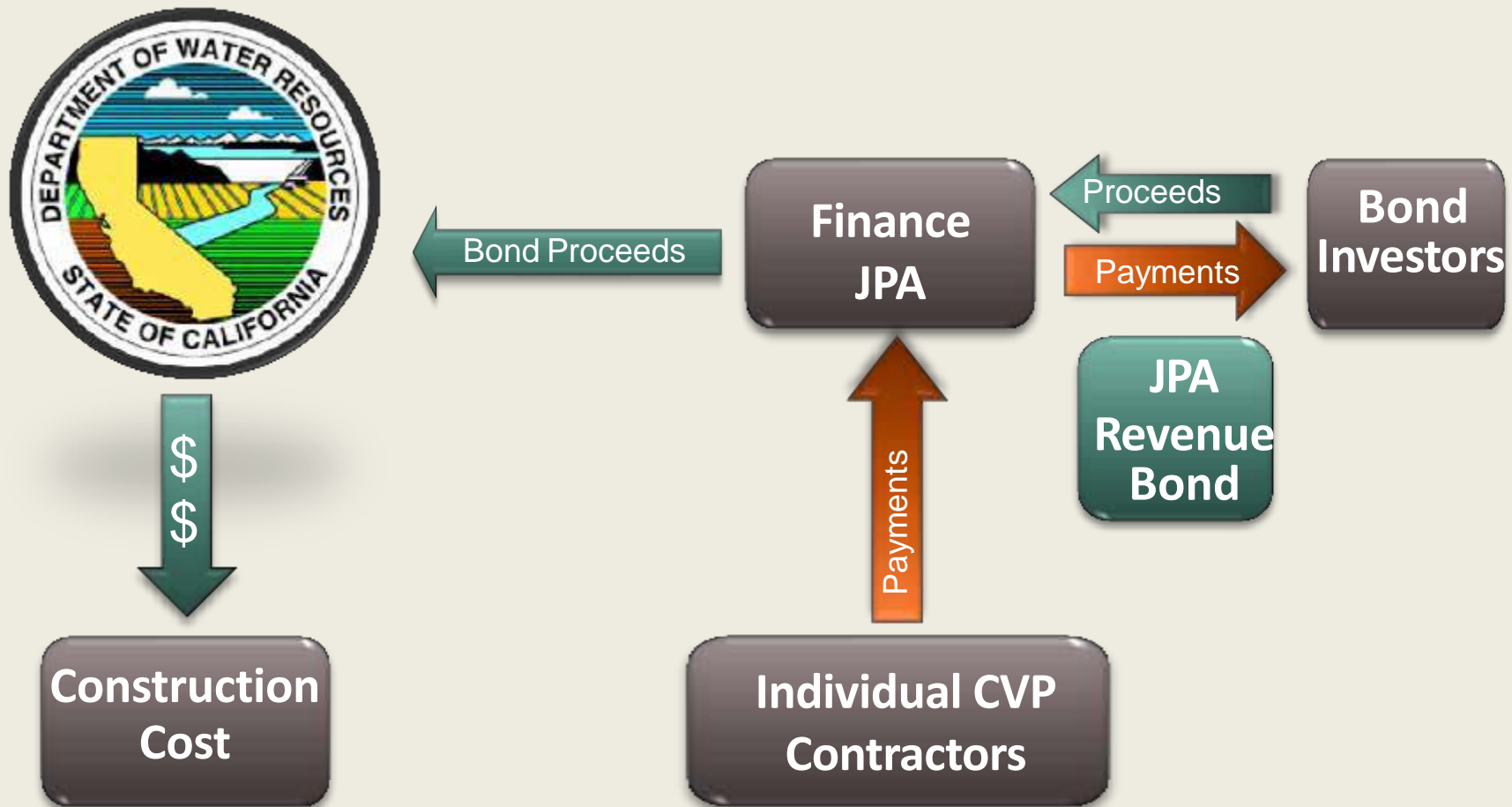
# The Department of Water Resources' validation action will impact the financing structure and timing of debt issuance

- ❖ Judicial proceeding to affirm authority to issue bonds
- ❖ DWR filed for validation determination with Sacramento County Superior Court regarding authority to issue revenue bonds for WaterFix
- ❖ Ability to issue bonds is affected until validation question is resolved

# State Water Project financing approach before resolution of validation action



# Central Valley Project financing approach



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## **Information in Response to Questions Raised During the August 22, 2017 Board Meeting**

- A. Permanent impacts of the WaterFix in the following areas:  
water quality, fisheries, water elevation, and visual
- B. Likelihood of a Delta levee failure event
- C. Pros and cons of upgrading all Delta levees
- D. Benefits of operational flexibility afforded by the WaterFix
- E. Pros and cons of smaller tunnel

## **A: Permanent impacts of the WaterFix in the following areas: water quality, fisheries, water elevation, and visual**

### ❖ Water quality:

- Water quality will be maintained at or below State Water Board water quality criteria.
- Small changes in salinity, both positive and negative, will be undetectable to recreational uses of the Delta
- No significant changes to aquatic vegetation expected.

### ❖ Fisheries impacts:

- Fish and wildlife agencies found both positive and negative impacts to fish species. Negative impacts will be mitigated or minimized per permit requirements.
- Operational flexibility, real-time operations, and adaptive management will ensure WaterFix, on balance, improves conditions for listed fish species over existing conditions

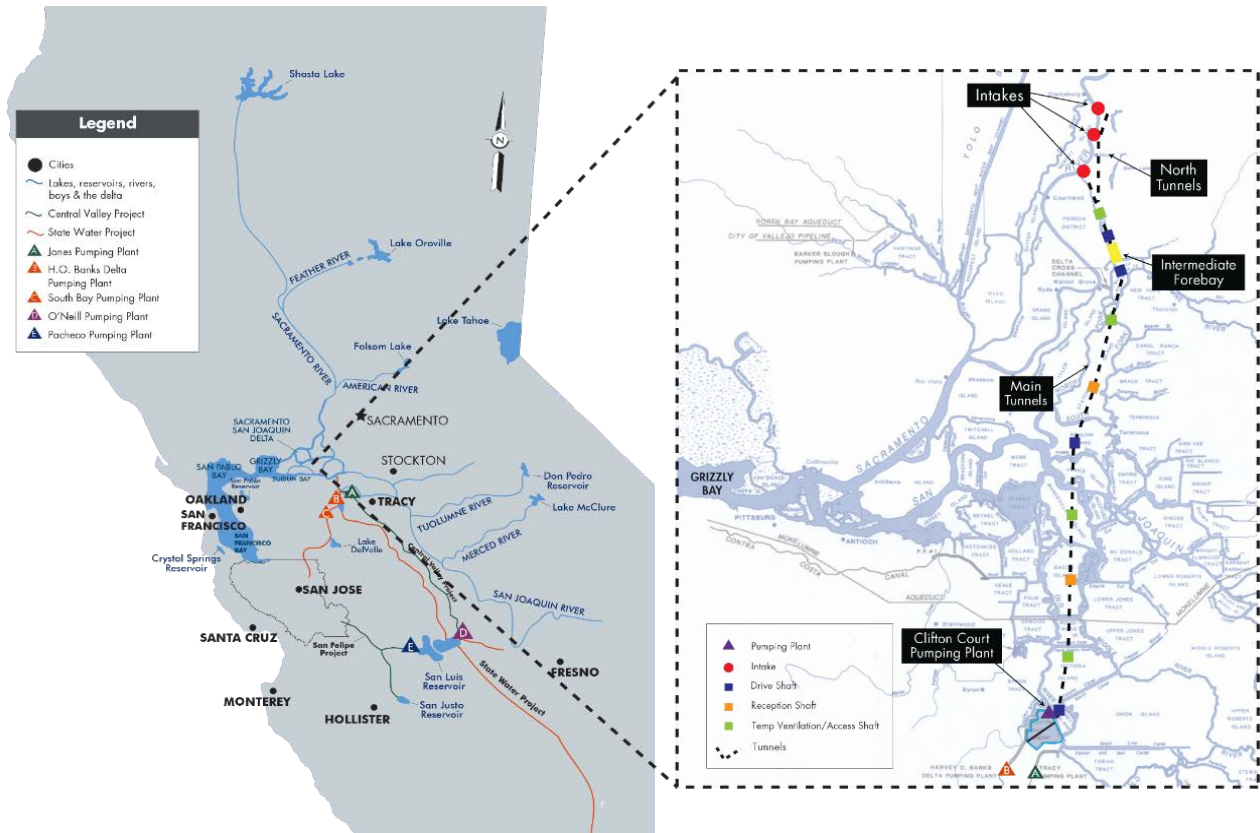
### ❖ Water elevation:

- No impacts to navigation from changes in elevation caused by construction or operation of WaterFix

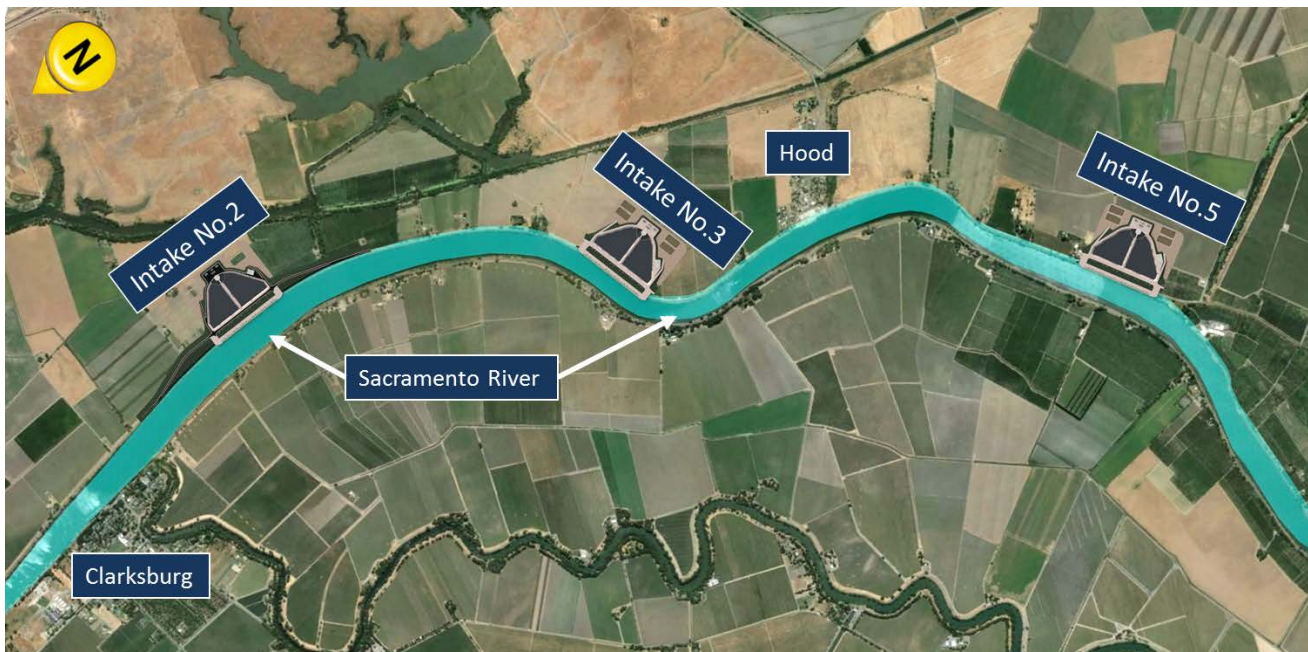
### ❖ Visual impacts:

- Three permanent intake structures on the Sacramento River
- A permanent 40 acre intermediate forebay
- 2 permanent shafts 40 ft in diameter at each of three locations: Bouldin, Staten, and Bacon islands (6 shafts total)
- Enlarged Clifton Court Forebay with new pumping plant facilities adjacent
- New operable barrier with boat lock at the head of Old River
- Permanent overhead transmission lines to and around Clifton Court Forebay
- Permanent access roads on Bouldin and Bacon Islands and around Clifton Court Forebay
- Reusable tunnel material sites until materials are reused

**Figure 1:** Location of WaterFix facilities within the Delta and in relation to Santa Clara County



**Figure 2:** Sacramento River intake sites located near towns of Hood and Clarksburg





*Figure 3: Sacramento River intake facilities*



*Figure 4: Intermediate Forebay facilities*

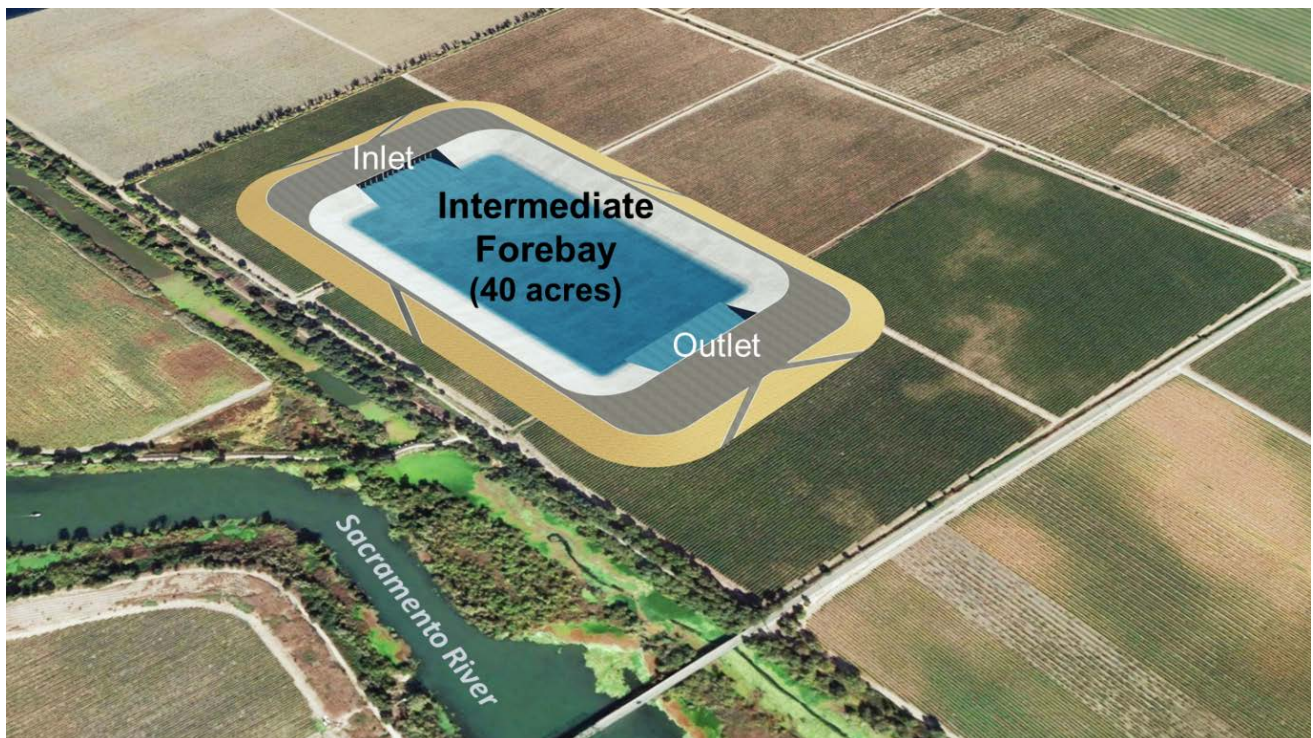




Figure 5: Clifton Court Forebay configuration

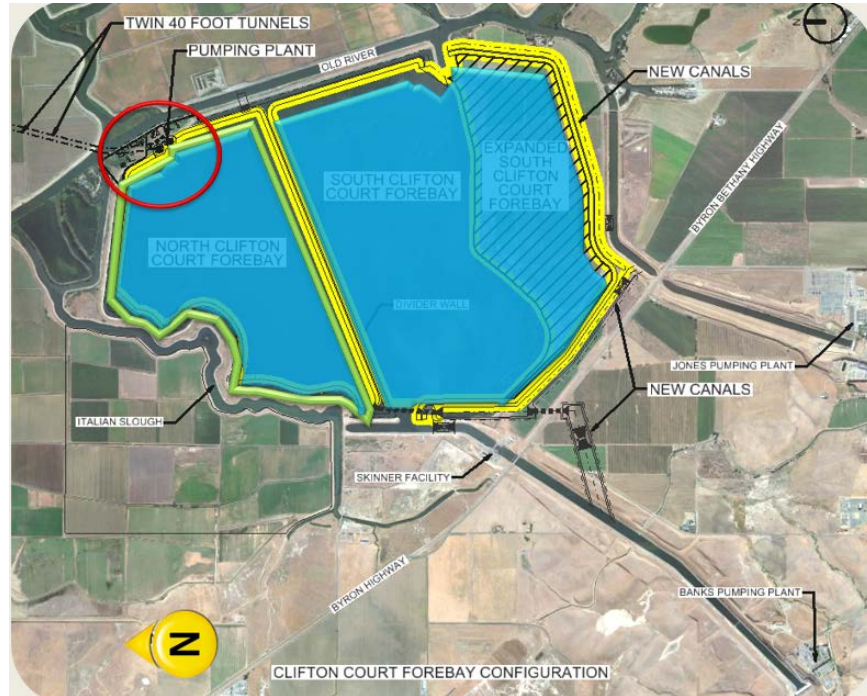


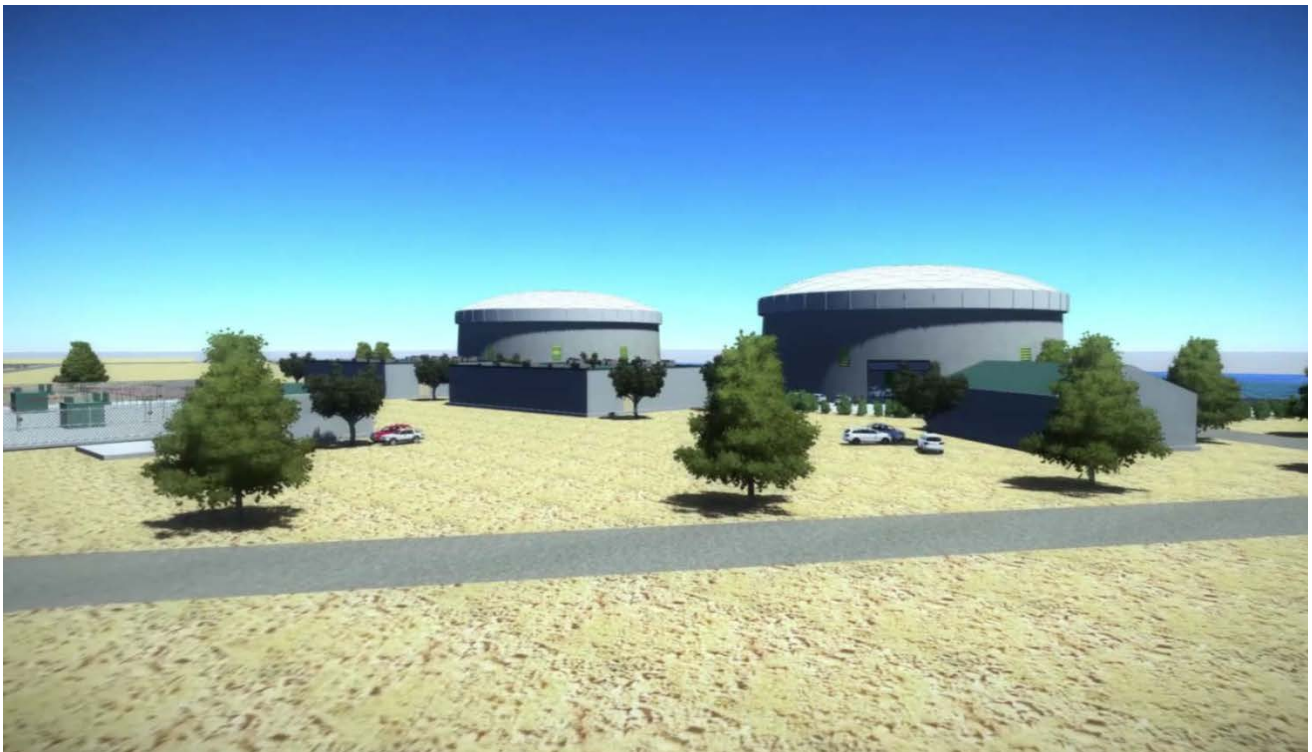
Figure 6: New pumping plant facilities at Clifton Court Forebay



*Figure 7: New pumping plant facilities at Clifton Court Forebay*



*Figure 8: New pumping plant facilities at Clifton Court Forebay*

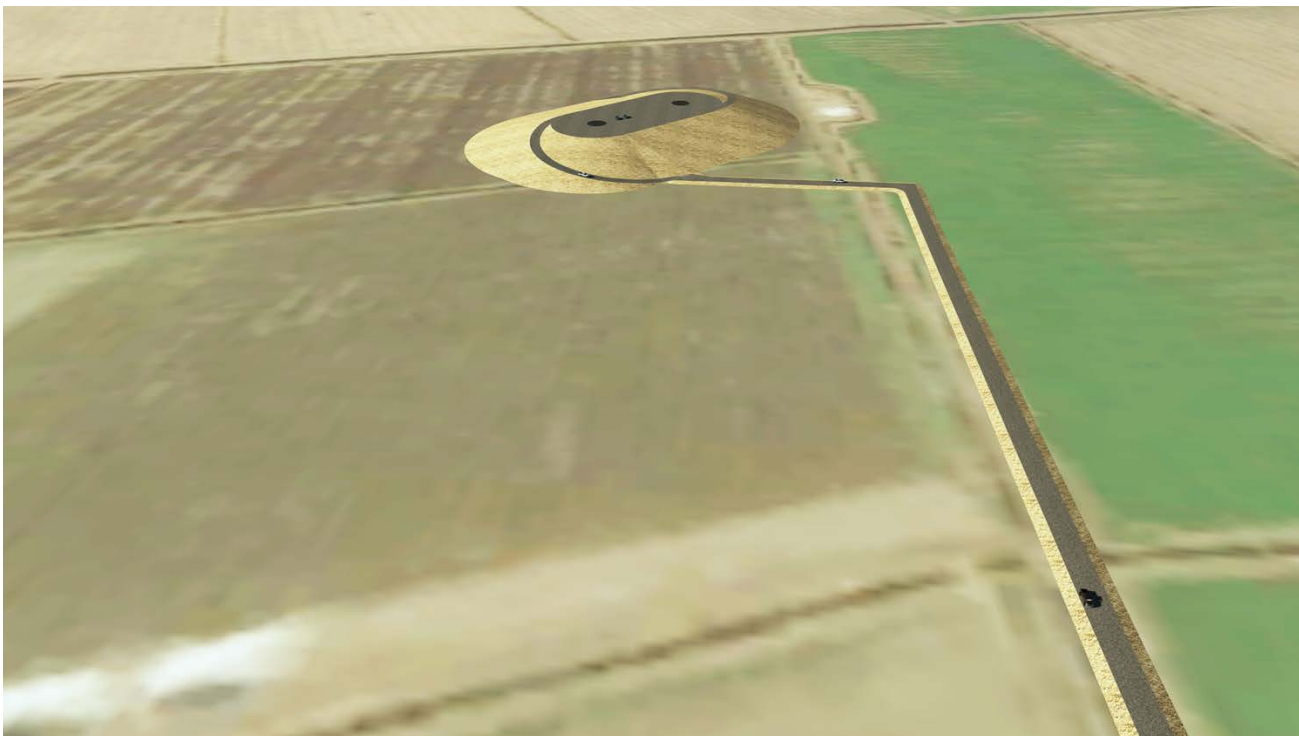




**Figure 9:** Access road and tunnel access pad on Bouldin Island



**Figure 10:** Tunnel access pad on Bouldin Island



## **B: Likelihood of a Delta levee failure event**

- ❖ USGS scientist Dr. David Schwartz: In the next 100 years there will be strong shaking in the Delta from an East Bay earthquake that could lead to wide-scale levee failure.
- ❖ 2008 Delta Risk Management Study: 40 percent chance of a major earthquake causing levee failure and simultaneous flooding of 27 islands, leading to an interruption in exports
- ❖ UCLA researchers: Agree that liquefaction of sand below levees poses significant risk to levee stability and have found that peat soils amplify earthquake motions
- ❖ Public Policy Institute of California: "The combined effects of continued land subsidence, sea level rise, increasing seismic risk, and worsening winter floods make continued reliance on weak Delta levees imprudent and unworkable over the long term."

## **C: Pros and cons of upgrading all Delta levees**

### **PROS:**

- ❖ Increases resistance of Delta levees to failure from earthquakes and floods
- ❖ Protects Delta residences and businesses
- ❖ Some levee upgrades are needed anyway for multiple reasons

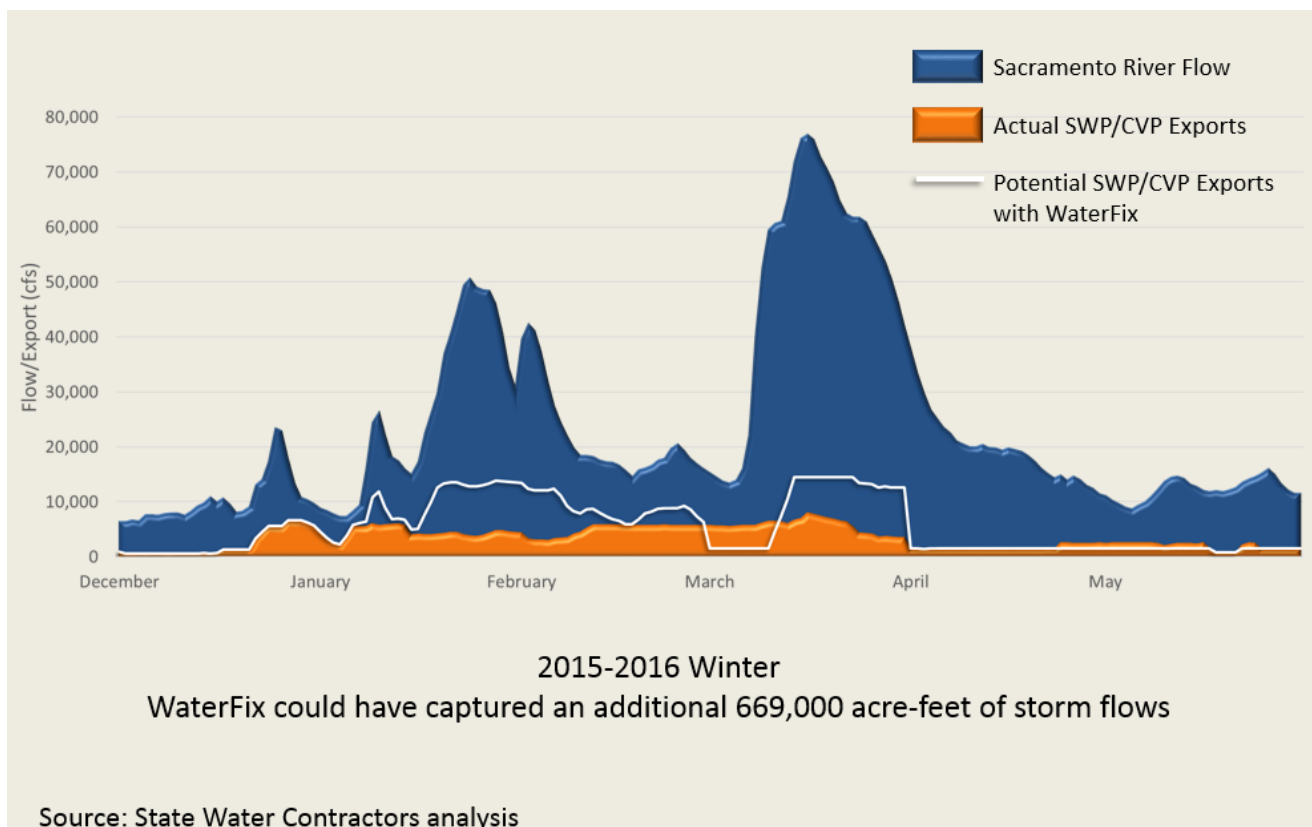
### **CONS:**

- ❖ Would not provide an environmental benefit and could impede restoration efforts in the Delta
- ❖ Does not protect against salinity intrusion from sea level rise
- ❖ Cost of levee repair in many cases exceeds value of land
- ❖ Ongoing maintenance required

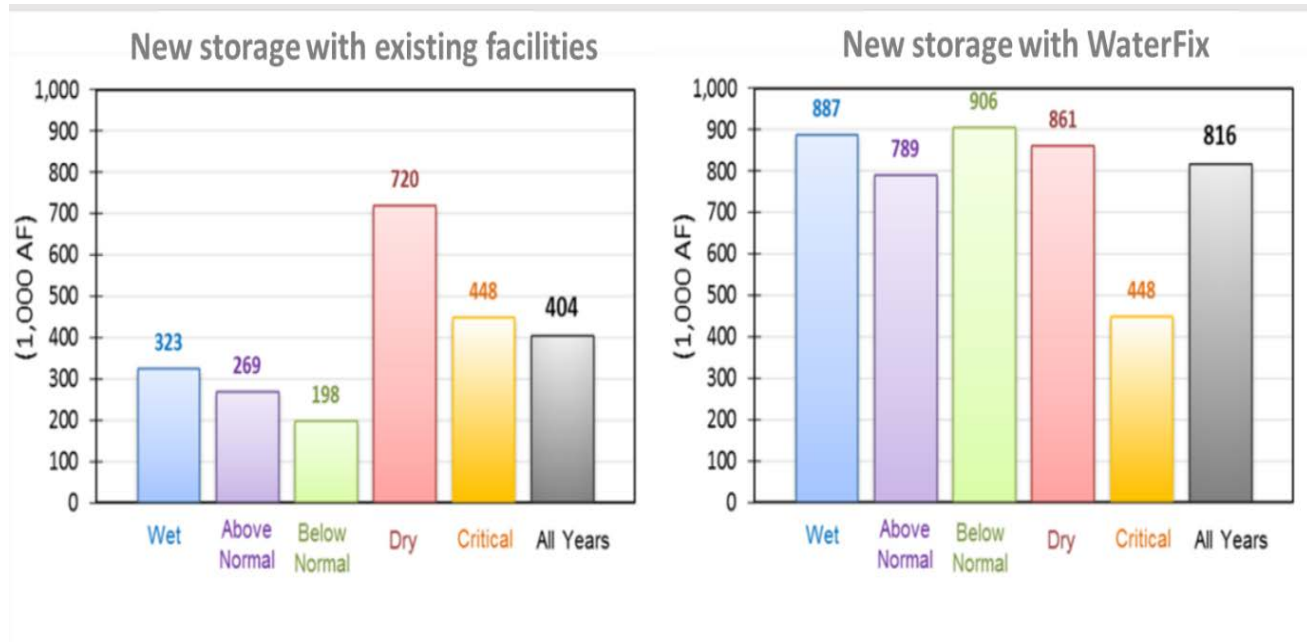
## D: Benefits of operational flexibility afforded by the WaterFix

- ❖ Improves ability to respond to real-time environmental conditions
- ❖ Significantly improves ability to transfer water
- ❖ Provides for storm flow capture
- ❖ Improves benefits of storage projects if integrated into SWP/CVP operations

**Figure 11:** Flexible operations with the WaterFix allows for increased diversions during storms, with less diversions during dry conditions



**Figure 12:** Average annual changes in SWP/CVP deliveries with new storage and existing facilities (left) and with new storage and WaterFix (right) by water year type. Source: Association of California Water Agencies, 2017.



## E: Pros and cons of smaller tunnel

### PROS:

- ❖ Reduced cost
- ❖ Less opposition

### CONS:

- ❖ Less improvement in south Delta flow patterns
- ❖ Reduction in tunnel size does not result in a proportional reduction in cost. Available studies indicate that the cost for a 3,000 cfs tunnel is 60-75% of the cost for a 9,000 cfs tunnel.
- ❖ More vulnerability to salt water intrusion from levee failures and sea level rise
- ❖ Less operational flexibility

## Board Meetings and Workshops Related to Bay Delta Conservation Plan and California WaterFix

DATE	EVENT	TOPICS	GUESTS
August 25, 2017	Special Board meeting	Delta Counties Coalition presentation on alternatives to CA WaterFix	Don Nottoli (Supervisor, Sacramento Cnty) Chuck Winn (Supervisor, San Joaquin Cnty) Katherine Miller (Supervisor, San Joaquin Cnty) Diane Burgis (Supervisor, Contra Costa Cnty) Dr. Jeffrey Michael (Univ. of the Pacific)
August 22, 2017	Board Agenda item	Staff described the multi-agency proposed framework for design and construction management and governance for the WaterFix as well as proposed operations and adaptive management of the project	
August 22, 2017	Board Agenda item	Staff presentation on the status of the Delta ecosystem and factors impacting the District's imported water supplies as well as potential consequences of maintaining the status quo	
July 11, 2017	Board Agenda Item	Update on key elements of California WaterFix planning and development and the criteria by which staff is evaluating each consistent with District Board Policy and WaterFix Principles	
May 25, 2017	Board Workshop	A workshop to answer specific questions related to project cost estimation, risk assessment and management, and cost control - with reference to other large tunneling projects constructed in the US and elsewhere.	Chuck Gardener (BDCP Prg Manager) Bob Goodfellow (Aldea Services LLC) John Bednarski (Metropolitan Water District) Pat Pettiette (5RMK Int.)
March 14, 2017	Board Agenda Item	Board discussion of proposed principles to guide the District's participation in discussions, negotiations, and messaging regarding the California WaterFix (CWF)	
November 8, 2016	Board Agenda Item	BDCP AdHoc Committee disbanded	
July 12, 2016	Board Agenda Item	Staff provided an updated business case analysis and a draft District policy statement for the State Water Board hearing on the petition to change the point of diversion for the SWP and CVP	
April 15, 2016	Board Agenda Item	Staff provided an overview of imported water and current issues	
January 26, 2016 (3hr)	Board Workshop	A panel of guests provided updated information and resource agency perspectives on the California WaterFix and California EcoRestore.	Mark Cowin (CA Dept of Water Resources) David Okita (CA EcoRestore) Chuck Bonham (CA Dept of Fish & Wildlife)
October 27, 2015 (3hr)	Board Agenda Item	Staff provided an update on the BDCP and the re-circulated draft environmental documents including draft staff comments on the re-circulated documents.	
May 26, 2015	Board Agenda Item	Staff provided an update on the BDCP and described the new approach proposed by the State to separately develop California WaterFix and EcoRestore.	

## Board Meetings and Workshops Related to Bay Delta Conservation Plan and California WaterFix

DATE	EVENT	TOPICS	GUESTS
<b>January 22, 2015 (3hr)</b>	Board Workshop	Staff and a panel of invited guests described the BDCP adaptive management strategy and the current scientific understanding of habitat restoration in general as well as with respect to BDCP restoration actions.	Mike Chotkowski (US Fish & Wildlife Service) Jon Burau (US Geological Survey) Chris Earle (BDCP consultant, ecologist)
<b>September 23, 2014</b>	Board Agenda Item	Staff responded to questions and concerns raised by Board Members and the League of Women Voters of California with various aspects of the BDCP.	
<b>July 22, 2014</b>	Board Agenda Item	Staff presented draft District comments on the Public Review Draft BDCP and its EIR/EIS and on the draft BDCP Implementing Agreement for Board review for consistency with Board Policy. Staff also presented an update on the BDCP and responses to additional Board questions.	
<b>May 27, 2014</b>	Board Agenda Item	Following the five 2013–2014 District Board Workshops on BDCP, staff provided an update on Bay Delta Conservation Plan, a summary of the workshops, and responses to Board questions raised during and after the workshops.	
<b>January 27, 2014 (4hr)</b>	Board Workshop	Former Director of the San Francisco Public Utilities Commission's Water System Improvement Program, Julie Labonte, and President and CEO of Hallmark Group Capital Program Management, Chuck Gardner, described implementation of large water supply infrastructure construction projects.	Julie LaBonte (San Francisco PUC) Chuck Gardner (BDCP Prg Manager)
<b>December 9, 2013 (4hr)</b>	Board Workshop	Secretary of California Natural Resources Agency, John Laird and other invited guests provided perspectives on the importance of BDCP to the State, County and economy of Silicon Valley. Staff provided a preliminary analysis of BDCP benefits and costs to Santa Clara County.	John Laird (CA Natural Resources Agency) Casey Beyer (Silicon Valley Leadership Grp) Mark Ebbin (BDCP legal consultant)
<b>November 14, 2013 (3hr)</b>	Board Workshop	Director of Department of Fish and Wildlife Chuck Bonham, technical experts in Delta risks, and BDCP project managers discussed Delta risks, the relevance of BDCP to Delta fisheries, and plan components and analysis.	Chuck Bonham (CA Dept of Fish & Wildlife) Curt Schmutte (Consulting Engineer) Martin McCann (Jack R. Benjamin & Assoc.) Jennifer Pierre (BDCP Consultant) David Zippin (BDCP Consultant)
<b>November 8, 2013 (2.5 hr)</b>	Board Workshop	California Department of Fish and Wildlife staff and several representatives of environmental and in-Delta interests discussed habitat restoration and conservation in the Delta and the perspectives of in-Delta users.	Carl Wilcox (CA Dept of Fish & Wildlife) Leo Winternitz (The Nature Conservancy) John Cain (American Rivers) Russell van Loben Sels (Delta Farmer)
<b>October 11, 2013 (2hr)</b>	Board Workshop	Director of California Department of Water Resources, Mark Cowin, Undersecretary of California Department of Food and Agriculture, Sandra Schubert, and Economist David Sunding provided an overview of BDCP in relation to other State planning efforts and discussed the statewide economic impacts and perspective on BDCP.	Mark Cowin (Dept of Water Resources) Sandra Schubert (CA Dept of Food and Ag) David Sunding (UC Berkeley)



## Board Meetings and Workshops Related to Bay Delta Conservation Plan and California WaterFix

DATE	EVENT	TOPICS	GUESTS
February 26, 2013	Board Agenda Item	Prior to the release of the second Administrative Draft of the BDCP, staff provided an update on the BDCP and established a Board Ad Hoc Committee to assist the Board with developing policies relating to the District's engagement in the BDCP.	
August 7, 2012	Board Agenda Item	Following the July 25 <sup>th</sup> announcement by the Governor and Obama Administration on key elements of the BDCP proposed project, staff provided an update on the Bay Delta Conservation Plan and results of an opinion survey.	
May 15,	Board Agenda Item	Staff prepared a BDCP update following release of the preliminary administrative draft of the BDCP.	
March 28, 2012 (3hr)	Board Workshop	Several elected officials and residents of Delta counties discussed the in-Delta perspective on BDCP, along with perspectives from Senior Policy Fellow at the Public Policy Institute of California, Ellen Hanak.	Ellen Hanak (Public Policy Institute of CA) Mary Nejedly Piepho (Supervisor, Contra Costa Cnty) Russell van Loben Sels (Delta Farmer) Don Nottoli (Supervisor, Sacramento County) Michael Hardesty (Reclamation District 2068)
October 14, 2011 (4hr)	Board Workshop	Deputy Secretary of the California Natural Resources Agency, Gerald Meral, and several general managers of California water agencies discussed the water supply reliability goal of the BDCP.	Jerry Meral (CA Natural Resources Agency) Jill Duerig (Zone 7 Water Agency) Jeff Kightlinger (Metropolitan Water District) Jason Peltier (Westlands Water District) Curt Schmutte (Consulting Engineer)
August 26, 2011 (3hr)	Board Workshop	Secretary of California Natural Resources Agency, John Laird, and several representatives of environmental groups discussed the ecosystem restoration goal of the BDCP.	John Laird (CA Natural Resources Agency) Campbell Ingram (Delta Conservancy) Sprek Rosenkrans (Environmental Defense Fund) Richard Roos Collins (Water & Power Law Grp)
May 10, 2011	Board Agenda Item	Overview of Delta Issues	

## Bay Delta Conservation Plan Ad Hoc Committee Meetings

Date	Event	Topics	Guests
<b>October 25, 2016</b>	Ad Hoc Mtg	Status of the California WaterFix, EcoRestore, and other Delta planning efforts as well as Board member participation in California WaterFix negotiations	
<b>June 21, 2016</b>	Ad Hoc Mtg	Update on California WaterFix and the status of the Design Construction Enterprise and related agreements	
<b>February 22, 2016</b>	Ad Hoc Mtg	Nomination and appointment of new Vice Chair as well as the California WaterFix business case, status of the Design Construction Enterprise and related agreements, and draft policy statement for the State Water Board proceedings	
<b>November 24, 2015</b>	Ad Hoc Mtg	Update on the California WaterFix business case	
<b>October 13, 2015</b>	Ad Hoc Mtg	Update on the Bay Delta Conservation Plan and preliminary staff review of the recirculated draft environmental documents, a draft outline for a cost benefit analysis for Santa Clara County, staff response to questions raised by Board Members between 10/22/14 - 5/26/15, and a proposed schedule for future Board communications	
<b>May 13, 2015</b>	Ad Hoc Mtg	Update and discussion on the Bay Delta Conservation Plan	
<b>April 1, 2015</b>	Ad Hoc Mtg	CANCELLED	
<b>September 9, 2014</b>	Ad Hoc Mtg	Staff responses to Board member questions on the Bay Delta Conservation Plan, draft staff responses to the comment letter from the League of Women Voters of CA, and a proposed schedule for the Board communication on Bay Delta Conservation Plan	
<b>July 10, 2014</b>	Ad Hoc Mtg	Draft District comments on the Public Draft Bay Delta Conservation Plan and draft environmental review documents, and on the Implementing Agreement, and staff responses to additional board questions	
<b>June 3, 2014</b>	Ad Hoc Mtg	Draft District comments on the Public Draft Bay Delta Conservation Plan, draft environmental review documents and draft Implementing Agreement, as well as the Design Construction Enterprise, and Interim Funding Agreements	
<b>January 24, 2014</b>	Ad Hoc Mtg	Bay-Delta problem statement for Santa Clara County, Board governance policies related to Bay Delta Conservation Plan, and staff comparison of Bay Delta Conservation Plan to Natural Resource Defense Council et.al. proposal and no project	
<b>January 13, 2014</b>	Ad Hoc Mtg	Draft Bay-Delta problem statement for Santa Clara County, Board governance policies related to Bay Delta Conservation Plan, a staff comparison of the Bay Delta Conservation Plan to a Natural Resource Defense Council et. al. proposal and no project, and a list of Board Member issues raised at recent Bay Delta Conservation Plan workshops	

## Bay Delta Conservation Plan Ad Hoc Committee Meetings

Date	Event	Topics	Guests
<b>December 17, 2013</b>	Ad Hoc Mtg	2013 Board Workshops on the Bay Delta Conservation Plan, potential 2014 Board items, and next steps for public outreach and engagement	
<b>October 9, 2013</b>	Ad Hoc Mtg	Update on Bay Delta Conservation Plan including Conservation Measure 1 Optimization, a statewide Economic Impact Report, and an Independent Panel Review of the Bay Delta Conservation Plan	
<b>August 22, 2013</b>	Ad Hoc Mtg	Presentations by Restore the Delta and Sierra Club as well as the role of science in Delta planning and the schedule for Bay Delta issues and Board Communications	Michael Frost (Restore the Delta) Katja Irvin (Sierra Club)
<b>June 25, 2013</b>	Ad Hoc Mtg	Presenation by the Natural Resources Defense Council as well as an overview of Chapters 8-10 and Board member communication and outreach	Doug Obegi (NRDC)
<b>May 28, 2013</b>	Ad Hoc Mtg	Bay Delta Conservation Plan Environmental Impact Report/Environmental Impact Statement Alternatives, the construction management structure for Conservation Measure 1, the Delta Dialogues – Discussion Group, and BDCP and Board Workshops schedule	
<b>April 22, 2013</b>	Ad Hoc Mtg	Overview of Bay Delta Conservation Plan Chapters 1-4 (Continued from 4/9/13), and Chapters 5-7 as well as the Natural Resource Defense Council's proposed portfolio-based alternative (Continued from 4/9/13)	
<b>April 9, 2013</b>	Ad Hoc Mtg	Scope and Purpose of the Ad Hoc Committee, the Delta Stewardship Council's Delta Plan, Bay Delta Conservation Plan, Chapters 1-4, and the Natural Resource Defense Council's proposed portfolio-based Alternative	
<b>March 18, 2013</b>	Ad Hoc Mtg	Bay Delta Conservation Plan Ad Hoc Committee's Purpose and Intended Outcome	

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## **Attachment 5: WaterFix Financial Risks**

The purpose for this attachment is to describe the potential financial risks associated with the California WaterFix Project (Project) and the impact to the District of the Department of Water Resources (DWR) validation action filed on July 21, 2017, with the Sacramento County Superior Court.

### **Background**

As stated in the Board memorandum, DWR has begun the legal procedures to obtain judicial validation on its authority to issue revenue bonds, among other things, for the Project. This legal process may take several years to resolve depending on many factors, including but not limited to the scope and extent of any responses or appeals filed by parties who may be opposed to the Project. In order to proceed with the Project prior to the conclusion of the validation action, DWR, in conjunction with State Water Project (SWP) and Central Valley Project (CVP) contractors are proposing an alternative financing framework so that bonds may be issued through a Finance Joint Powers Authority (Finance JPA) to fund the construction costs of the Project. Depending on whether DWR receives validation of its authority related to the Project, the following potential financial risks associated with the Project are presented for Board consideration.

### **District's Participation on the Finance JPA**

The District will have the opportunity to join the Finance JPA as a SWP and CVP contractor, or as a CVP contractor only. To participate in the WaterFix on the SWP side, the District is not required to participate on the Finance JPA as a SWP contractor, as the District would be participating through paying its share of the SWP costs through the State Water Supply Contract. The District, however, may choose to join the Finance JPA as a SWP contractor. In doing so, the District would take on the risk of having to back a portion of the SWP share of the bonds issued by the Finance JPA should DWR not be able to proceed with the WaterFix. The District would in return be in a position of owning a certain interest in the state portion of the WaterFix should the facilities be transferred to the Finance JPA. If the District does not join the Finance JPA as a SWP contractor, and DWR's authority is invalidated and the Project is transferred to the Finance JPA, the District will not have an ownership interest in the state portion of the WaterFix project, despite paying its share of the SWP project costs through the State Water Supply Contract.

To participate in the WaterFix on the CVP side, the District must join the Finance JPA as a CVP contractor. This is because the Finance JPA will be the vehicle for providing the CVP share of the WaterFix's costs to DWR.

### **DWR Authority Validated**

Should DWR successfully receive judicial validation of its authority related to the Project, DWR would issue long-term revenue bonds to the public capital markets to refund outstanding Finance JPA bonds initially issued on behalf of the SWP contractors. The CVP contractors would continue to pay for a proportion of the costs in accordance with the capacity interest each CVP contractor receives. If the validation event occurs prior to the construction completion of

## **Attachment 5: WaterFix Financial Risks**

the Project, then DWR would assume financing the balance of the Project costs going forward, and the Finance JPA would be terminated after DWR has refunded all outstanding debt obligations of the Finance JPA. There would be no additional financial risks under this scenario, apart from the normal range of Capital Project Financing Risks that are typical to financing capital projects of this size and nature, such risks may include but are not limited to the following: e.g. schedule delays, cost over-runs, interest rate risks, market access risks, construction risks, environmental risks, stranded asset risks, force majeure risks.

### **DWR Authority Invalidated**

Should DWR's authority to issue revenue bonds to fund the WaterFix be invalidated a potential approach that may be taken is to continue to participate in the Finance JPA with the expectation of eventually resolving any legal challenges either through legislative remedies or contractual arrangements, to construct and operate the Project. The terms of such arrangements will be prescribed in the Finance JPA and related agreements, and will be intended to allow the remaining parties to move forward with the Project. The District's financial risks may vary depending on the District's level of participation. An example of the financial exposure the District may face with this alternative path is that a portion of the costs up to the full construction costs of the Project may have been expended, but the Project is not operable or is significantly delayed due to protracted legal proceedings, in addition to the typical Capital Project Financing risks discussed above. Assuming the Higher CVP scenario with an estimated total District debt obligation of approximately \$747 million (including costs of issuance) issued over multiple bond series over time with 30 years maturity, the District's annual debt service payments could range from \$2 million to \$52.5 million until the outstanding bonds are fully repaid in 2060 for a total debt service payment of up to \$1.46 billion.

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**File No.:** 17-0375

**Agenda Date:** 10/17/2017

**Item No.:** 2.5.

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## BOARD AGENDA MEMORANDUM

### **SUBJECT:**

Special Board Work Study on California WaterFix.

### **RECOMMENDATION:**

- A. Adopt the Resolution, **CONDITIONAL SUPPORT FOR CALIFORNIA WATERFIX**, that expresses support, subject to the conditions listed below, for the State Water Project WaterFix participation approach, which would allocate the benefits and costs of the WaterFix to the District in proportion to its current 2.5% level of participation in the State Water Project, or 1.4% of the total WaterFix project. The conditions are:
- i. Participation in the WaterFix sustains the District's existing State Water Project (SWP) and Central Valley Project (CVP) deliveries and provides insurance against future uncertainties;
  - ii. The District's Central Valley Project water supplies as well as its State Water Project water supplies are protected; and
  - iii. The cost per acre-foot remains similar to the current estimate; and
- B. Authorize the Chief Executive Officer to continue participating in WaterFix planning discussions with State and federal agencies as well as other prospective WaterFix participants, to further define the project and to develop agreements to secure the conditions needed for the District's support.

### **SUMMARY:**

This agenda item provides an opportunity for the Board and the public to receive information on the State's proposed California WaterFix (WaterFix) project, which is intended to help restore the health of the Delta ecosystem and to ensure the long-term reliability of water supplies conveyed through the Delta. Because Santa Clara County relies on State Water Project (SWP) and Central Valley Project (CVP) water supplies conveyed through the Delta to meet 40 percent, on average, of its water supply needs, the District has an interest in the development of the WaterFix as a potential cost-effective project that could improve the reliability of the District's imported water supplies.

As described during Board meetings on September 12 and 19, 2017, WaterFix is potentially one of the most cost-effective water supply options available to the District, with total capital costs ranging

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from \$420 million to \$650 million (2017 dollars), a unit cost of roughly \$600/AF (2017 dollars), and a peak monthly increase per average household in Santa Clara County of about \$9.50 (FY43). Analysis of the project as currently defined indicates that it could sustain existing levels of imported State Water Project and Central Valley Project supplies, protecting Santa Clara County from a 39,000 acre-foot decline in water supply that is projected to occur if no action is taken.

The State Water Project component of the WaterFix is relatively well-defined and will likely provide significant benefits. However, the CVP component of the WaterFix, as currently defined, may not be viable because the U.S. Bureau of Reclamation (Reclamation) proposed a participation approach that may limit realization of WaterFix benefits for CVP participants. In addition, the largest Central Valley Project contractor south of the Delta, Westlands Water District, voted on September 19 not to participate in the WaterFix as currently defined. At this time, staff recommends that the Board authorize execution of a resolution of conditional support for participation in the SWP component of the WaterFix that requires the protection and sustainability of both the District's SWP and CVP supplies.

The ultimate configuration, cost, financing approach, and governance structure of the WaterFix will depend on which water agencies support the project and their decisions regarding level of investment. Several SWP contractors have expressed support for the project, and several more are scheduled to request a decision from their boards in October. At future Board meetings, staff will bring updates to the Board regarding project refinements, benefits, and costs, and possibly will request Board approval of additional project funding.

## **A. BACKGROUND**

### *A.1 California WaterFix*

The currently proposed WaterFix project includes dual tunnels under the Delta that would provide an alternative conveyance pathway for moving up to 9,000 cubic feet per second (cfs) of water from the north Delta to the existing pumping plants in the south Delta. The addition of three state-of-the-art intakes in the north Delta would minimize fish entrainment and allow the SWP and CVP to adjust operations in response to environmental conditions and climate change effects, protect exports from the threat of salinity intrusion from levee failures and sea level rise, improve access to transfer supplies, improve water quality, and enhance the benefit of storage projects. The WaterFix is also expected to improve flow patterns in the Delta and reduce fish entrainment. Bypass flow criteria would be imposed on diversions from the Sacramento River into the tunnels to ensure adequate flows remain in the river to protect fish; consequently, diversions into the tunnels primarily occur during higher river flow periods on the Sacramento River.

As described during Board meetings on September 12 and 19, 2017, the WaterFix is identified as one of the least expensive per-acre-foot water supply options available to the District to meet current and future water supply needs. Staff evaluated three approaches to participate in both the State Water Project and Central Valley Project components of the WaterFix. Estimated costs ranged between \$420 and 650 million for capital costs and \$1.6-2.5 million per year in operation and maintenance costs (2017 dollars). These costs equate to a monthly cost increase per average household in the portion of Santa Clara County north of Metcalf Road, San Jose, of about \$9.50 in



fiscal year 2043 for a fully financed project. The table below shows how WaterFix compares to other potential water supply options that staff is evaluating in the 2017 Water Supply Master Plan update. Fiscal Year 2043 marks the 25-year point in the rate projection and also approximates the peak increase in the incremental cost per average household for the WaterFix (and for most of the other large projects evaluated).

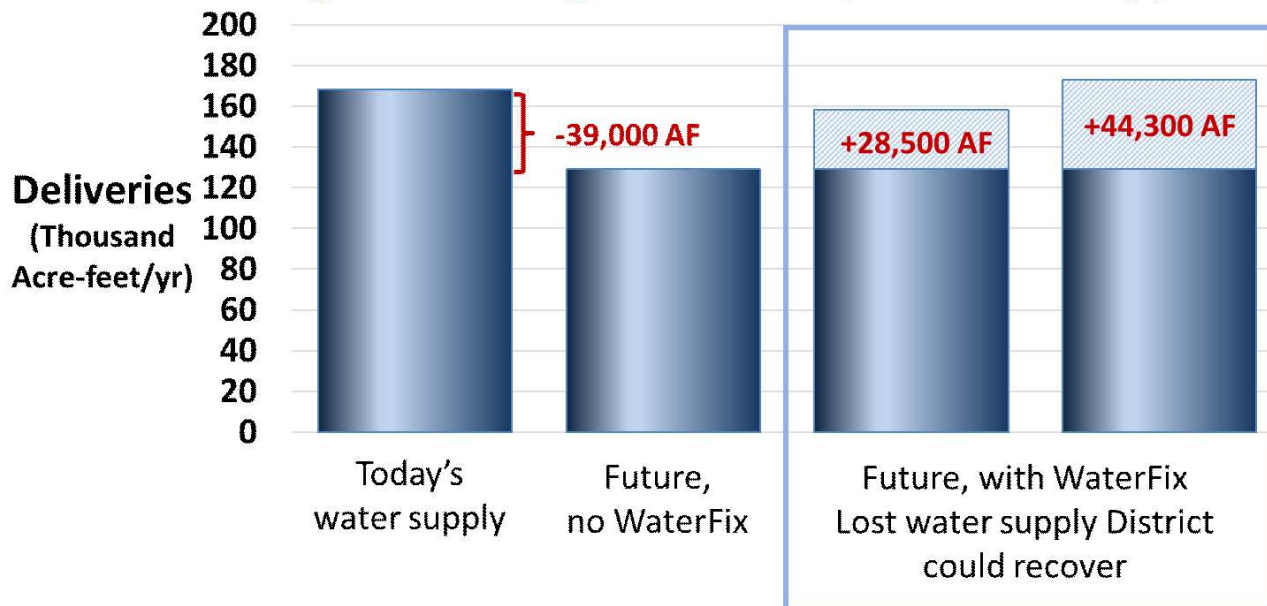
**Table 1. Preliminary cost estimates for water supply options**

Water Supply Option	Average Annual District Yield (AFY)	District Lifecycle Cost <sup>1</sup> (2017 dollars) (present value, (per AF) 2017) (\$ million)	Unit Cost <sup>1</sup> (per AF)	Monthly Water Cost per Average North County Household, FY43 <sup>1</sup> (cost/month)	Monthly Water Cost per Average South County Household, FY43 <sup>1</sup> (cost/month)
Los Vaqueros Reservoir <sup>2</sup>	3,000	\$40	\$400	\$0.48	\$0.24
<b>California WaterFix</b>	<b>41,000</b>	<b>\$620</b>	<b>\$600</b>	<b>\$9.51</b>	<b>\$4.55</b>
Water Contract Purchase	12,000	\$360	\$800	\$3.03	\$1.41
Sites Reservoir <sup>2</sup>	8,000	\$170	\$800	\$2.62	\$1.24
Lexington Pipeline	3,000	\$90	\$1,000	\$2.89	\$0.00
Groundwater Banking	2,000	\$60	\$1,300	\$0.83	\$0.38
Dry Year Options/Transfers	2,000	\$100	\$1,400	\$0.90	\$0.41
Potable Reuse - Los Gatos	19,000	\$990	\$1,700	\$20.01	\$0.00
<b>Ponds</b>					
Potable Reuse - Injection Wells	5,000-15,000	\$290-\$860	\$2,000	\$14.36	\$0.00
Potable Reuse - Ford Pond	3,000	\$190	\$2,500	\$4.10	\$0.00
Pacheco Reservoir <sup>2</sup>	6,000	\$450	\$2,700	\$15.36	\$5.54
Groundwater Recharge	1,000-2,000	\$20-50	\$400-\$1,300	\$1.41	\$1.21

<sup>1</sup> Costs are for a fully financed project using the financing assumptions described in agenda item 2.1 of the Sept Investment Program funding. Costs would roughly double without funding.

The State's long-term modeling analysis predicts that the WaterFix will prevent the degradation of Delta exports over time. The existing long-term average SWP/CVP water deliveries to the District are about 170,000 acre-feet per year (AF/Y). If no action is taken to improve the existing Delta conveyance approach, the District's SWP/CVP deliveries could drop by about 39,000 AF/Y in response to a set of regulatory constraints, often referred to as the "High Outflow Scenario", which have been considered but not currently adopted by the resource agencies. Available modeling analysis indicates that the WaterFix as currently proposed could prevent the degradation of the District's imported supplies by between 28,500 and 44,300 AF/Y depending on the District's level of participation.

## Modeled Long-Term Average District SWP/CVP Water Supplies



While the current WaterFix project proposal is not the comprehensive package that was originally envisioned as a Habitat Conservation Plan, many of the elements of the Habitat Conservation Plan are now being addressed through other processes including: California EcoRestore, the California Department of Fish and Wildlife's Delta Conservation Framework, the Delta Smelt Resiliency Strategy, and the Sacramento Valley Salmon Resiliency Strategy.

### B. RECENT DEVELOPMENTS

It has been anticipated that both SWP and CVP contractors would participate in the WaterFix project, with a 55/45 percentage split between the projects, respectively. However, on September 19, 2017, the largest CVP contractor and one of the primary beneficiaries of the WaterFix, Westlands Water District, voted 7-1 to not participate in the project as currently defined. Without Westlands' participation, the earlier assumed 55/45 percentage split would alter considerably, driven by a currently unknown but likely much smaller level of participation by CVP contractors.

The Westland's lack of support was due to the cost of the project and the uncertainty that calculated benefits would be realized. A significant factor in this assessment was Reclamation's current participation approach, which stated that Reclamation would not participate in the project, did not confirm that project benefits would be realized by CVP participants, and was unclear regarding cost allocation approaches. In District staff's judgment, Reclamation's current participation approach does not provide sufficient assurances that those CVP contractors who pay for the project will receive their anticipated benefits from the project.

Signaling the State's commitment to continue pursuing the WaterFix despite Westlands' vote, California Secretary for Natural Resources, John Laird, made the following statement on September

20:

*“Yesterday’s vote by Westlands does not change the fact that 25 million people rely on an increasingly unreliable water system and the Delta’s ecosystem is in serious decline. There is broad agreement that water deliveries will continue to decline without upgraded infrastructure in the Delta. The state is not going to walk away from its obligation to advance this critical upgrade. While it’s too soon to speculate on potential changes to the project, the state will continue to consider how best to meet the needs of the agencies that want to participate in the project.”*

The State is continuing to propose a participation approach that incorporates the WaterFix into the State Water Project and allocates costs and benefits to State Water Project contractors through the existing State Water Project contracts. Of the 29 water agencies that contract with the Department of Water Resources (DWR) for supplies from the State Water Project, five agencies are located north of the Delta. The State has provided verbal assurances that these agencies will not be required to pay for the WaterFix. Another 24 agencies located south of the Delta are positioned to receive benefits from the project.

Key SWP contractors are continuing to move forward with defining their desired level of participation in the WaterFix as currently defined, adopting resolutions of support and California Environmental Quality Act (CEQA) determinations, and authorizing participation in the development of governance and financing agreements. To date, eleven State Water Project contractors have taken board action to support the WaterFix, including the largest SWP contractor, Metropolitan Water District of Southern California, and the second largest SWP contractor and the largest agricultural water agency in the SWP, Kern County Water Agency, who approved support for about half of its proportionate share, or 6.5 % of the total project. Once key participants have determined their level of participation, the State will assess if the WaterFix project should be refined to optimize costs and benefits.

Another recent development was the October 5, 2017 release of the California State Auditor’s report on DWR’s management of the planning efforts for the WaterFix in which it issued findings related to WaterFix funding and provided recommendations to DWR and other State agencies regarding large and complex infrastructure projects. DWR’s response to the report is provided as Attachment 1.

## **C. RECOMMENDATION**

The cost and benefit analyses presented to the Board on September 12 and 19 indicate that the WaterFix is consistent with District Principles (Attachment 2). It has the potential to be a cost-effective and reliable solution to meet the water supply, water supply reliability, and water quality needs of Santa Clara County, and that the costs and benefits of the project compare favorably to those of other water supply alternatives. The project has undergone extensive public review and in response has been significantly modified to minimize impacts and balance beneficial uses. In addition, analysis indicates it could reduce impacts of existing SWP/CVP operations on the Delta ecosystem by improving flow patterns, reducing entrainment of fish, and providing operational flexibility to respond to fish, water quality and water supply needs.

However, while the State Water Project component of the WaterFix is relatively well defined and

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available information indicates this component will likely provide significant benefits, Reclamation's participation approach and the decision of Westlands Water District call into question the viability of the Central Valley Project component of the project. Therefore, staff does not recommend at this time that the District participate in the Central Valley Project component of the WaterFix based on the approach defined in Reclamation's letter (Attachment 3). Staff recommends instead that the District continue to pursue alternative approaches for participation that will include providing security for its Central Valley Project water supplies, and that the Board's approval of participation in the WaterFix be conditioned on the District's ability to protect and sustain both its State Water Project and Central Valley Project supplies.

Therefore, staff recommends the following:

- A. Adopt a resolution that expresses support, subject to the conditions listed below, for the State Water Project WaterFix participation approach, which would allocate the benefits and costs of the WaterFix to the District in proportion to its current 2.5% level of participation in the State Water Project, or 1.4% of the total WaterFix project. The conditions are:
  - 1. Participation in the WaterFix sustains the District's existing SWP and CVP deliveries and provides insurance against future uncertainties;
  - 2. The District's Central Valley Project water supplies as well as its State Water Project water supplies are protected;
  - 3. The cost per acre-foot remains similar to the current estimate.
- B. Authorize the CEO to continue participating in WaterFix planning discussions with State and federal agencies as well as other prospective WaterFix participants, to further define the project and to develop agreements to secure the conditions needed for the District's support.

#### **D. NEXT STEPS**

The ultimate configuration, cost, financing approach, and governance structure of the WaterFix will depend on which water agencies support the project and their decisions regarding level of investment. By necessity, the decision-making process will be iterative. Staff will bring updates to the Board regarding project refinements, benefits, and costs. Beginning in 2018, the State will need additional funding for continued planning studies. If a path is defined to meet the recommended conditions of approval for the District's support of the WaterFix, staff will bring relevant agreements back to the Board for review and potential approval.

#### **E. SCHEDULE**

To help prepare the Board for future decisions on involvement with and participation in WaterFix, staff planned a series of agenda items describing major elements of the project. At the May 25, 2017 Special Board Meeting, a panel of experts presented detailed information describing the physical aspects of the project, estimated costs, methods for cost control, and construction risk management.

At its July 11, 2017 meeting, the Board received an update on several planning and permit related activities for the WaterFix. At its August 22, 2017 meeting, the Board received an update on WaterFix design and construction management and governance, anticipated operations, and adaptive management program. At its September 12, 2017 meeting staff described project financing, cost and water allocations, and updated water supply analyses. And at a special Board workshop on September 19, 2017, staff presented the 2017 update to the Water Supply Master Plan which evaluated WaterFix along with several other water supply alternatives.

Date	Topic
May 25 2017	Cost estimation, risk assessment and management, and cost control for the WaterFix
July 11, 2017	Update on WaterFix
August 22, 2017	(1) Issues facing the District's imported water supply and the Delta ecosystem (2) WaterFix update including proposed design and construction management and governance, operations, and adaptive management.
September 12, 2017	WaterFix update, including water supply analysis, cost and water allocation, and financing
September 19, 2017	Workshop on Water Supply Master Plan
October 17, 2017 (Today)	Update on WaterFix and potential Board action
Mid-November 2017 (Tentative)	Update on WaterFix
December 19, 2017 (Tentative)	Possible agenda: Board decisions on adoption of CEQA findings and authorization to execute certain agreements to participate in the WaterFix project.

Staff intends to provide the Board with an update on the WaterFix in November that describes any decisions by the State on whether or how the project should be refined to optimize costs and benefits, as well as potential terms and conditions of key agreements. Assuming project participation and potential project refinements have been sufficiently defined, staff may on December 19, 2017 request that the Board approve a resolution adopting CEQA findings as a Responsible Agency for WaterFix, as well as discuss and approve key participation and funding agreements, including (1) the Joint Powers Agreement Forming the Delta Conveyance Design and Construction Joint Powers Authority, (2) the Joint Powers Agreement Forming the Delta Conveyance Financing Joint Powers Authority, and (3) the Agreement for Implementation of an Adaptive Management Program for Project Operations. These agreements were described broadly during Board Agenda item 2.8 on August 22, 2017 and Agenda item 2.1 on September 12, 2017.

**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:**

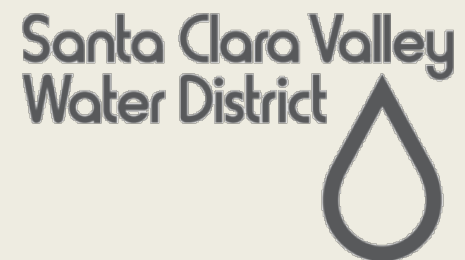
- Attachment 1: Letter - DWR Response to Audit
- Attachment 2: District Principles Related to WaterFix
- Attachment 3: Letter - CVP Participation Approach
- Attachment 4: Resolution
- Attachment 5: PowerPoint

**UNCLASSIFIED MANAGER:**

Garth Hall, 408-630-2750



# California WaterFix Special Board Workshop October 17, 2017



- A. Adopt a resolution expressing conditional support for the SWP WaterFix participation approach.
- B. Authorize the CEO to continue participating in WaterFix planning discussions to further define the project, and to develop agreements to secure the conditions needed for the District's support.



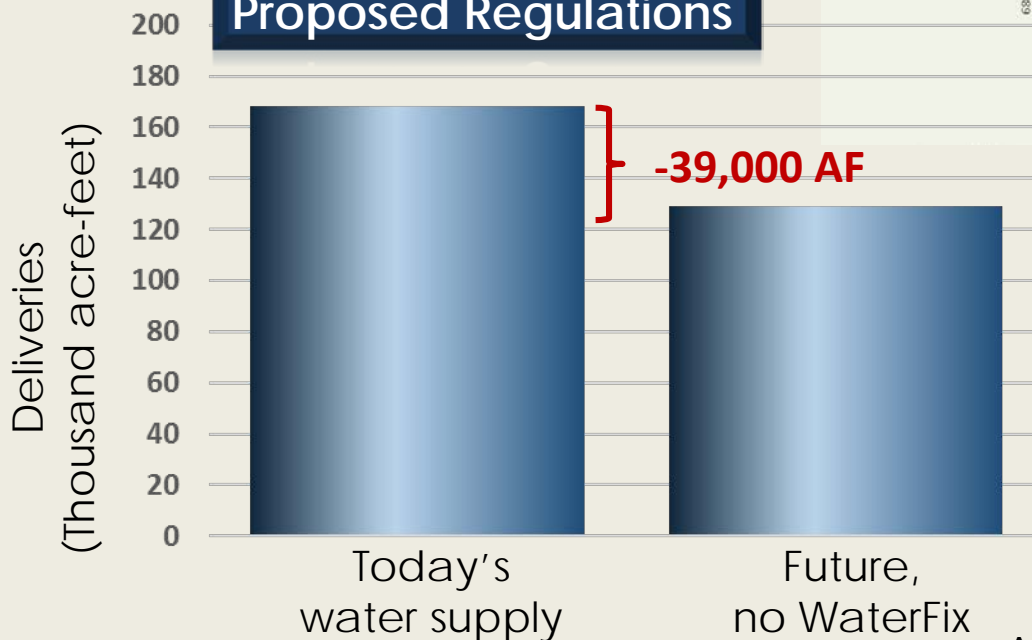
## Recommendation is consistent with Board Principles

- ❖ Cost-effective, long-term solution for the Delta that meets the water supply, water supply reliability, and water quality needs of Santa Clara County
- ❖ Ability to protect the value of the District's imported water assets, including water supply and banking contracts
- ❖ Balance of the CWF's costs and benefits weighs in favor of the District's customers and ratepayers
- ❖ Existing system of through-Delta conveyance is not sustainable
- ❖ Allocations of cost based on incremental benefits

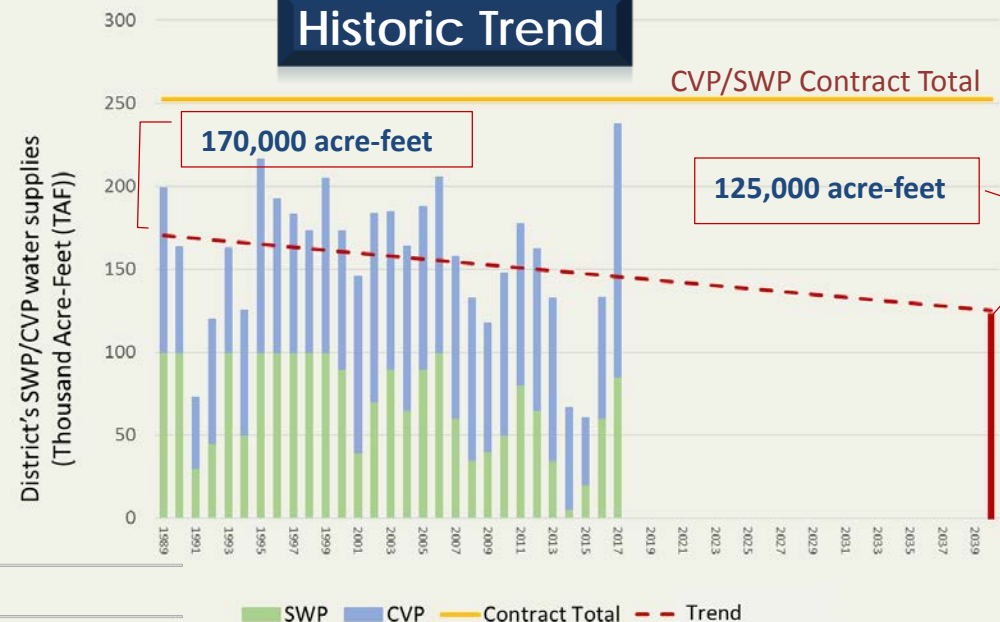
# Continued impact on Delta ecosystem leads to less water in the future. WaterFix will protect supplies, restore flows and decrease impacts on fish

40% of Santa Clara County's water supplies are conveyed through the Delta

## Proposed Regulations

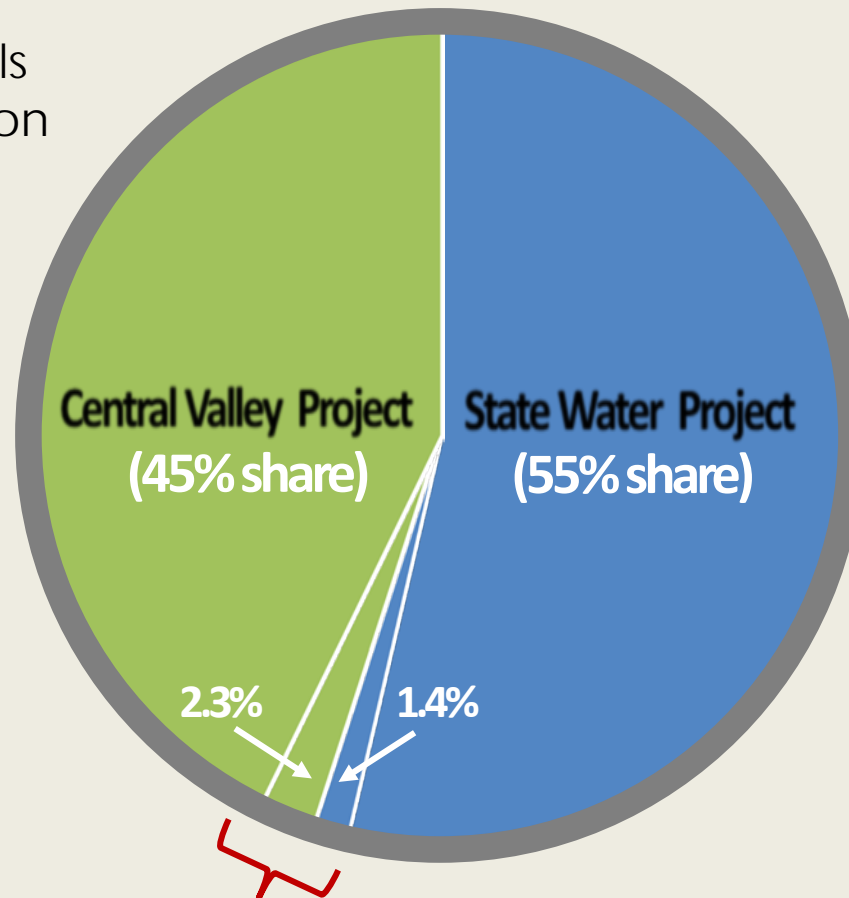


## Historic Trend



# Current proposal: WaterFix water supplies to be shared between the State Water Project and Central Valley Project

9,000 cfs twin tunnels  
Prevents degradation  
of over 1 million AF



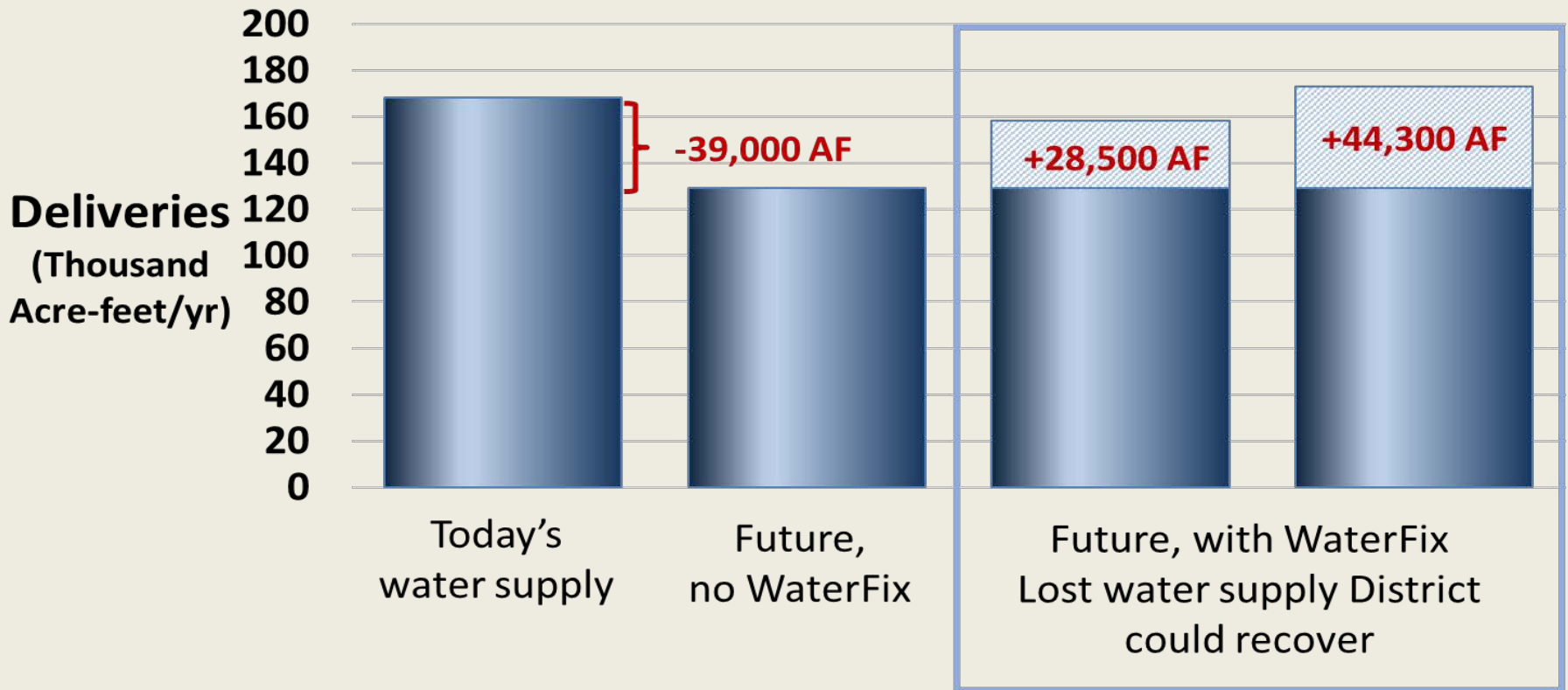
Total District share: 41,000 AF\*

2.5% of SWP share or 1.4% of total project: 15,500 AF  
5% of CVP share or 2.3% of total project: 25,500 AF

\*Participation level modeled in Water Supply Master Plan analyses

# WaterFix helps stabilize and protect supplies from risk of earthquakes, sea-level rise and aging infrastructure

## Modeled Long-Term Average District SWP/CVP Water Supplies



# WaterFix capital and annual operation and maintenance costs (2017 dollars)

## **TOTAL Project Costs**

**Capital Costs** **\$16.7 Billion**

**Operations and Maintenance Costs** **\$64.4 Million/Yr**

## **DISTRICT Share of Project Costs**

**Capital Costs** **\$420 – 650 Million**

**Operations and Maintenance Costs** **\$1.6 - \$2.5 Million/Yr**

# California WaterFix is one of our least expensive supply options

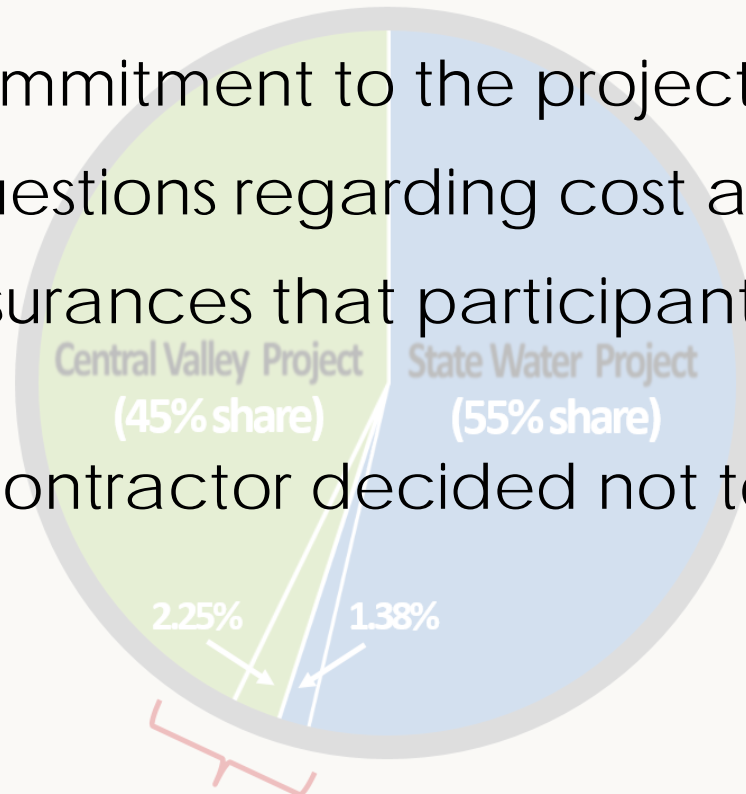
Water Supply Option	Average Annual Yield (AFY)	District Lifecycle Cost <sup>1</sup> (present value, 2017) (\$ million)	Unit Cost <sup>1</sup> 2017 dollars (per AF)	Monthly Water Cost per Average North County Household, FY43 <sup>1</sup> (cost/month)	Monthly Water Cost per Average South County Household, FY43 <sup>1</sup> (cost/month)
Los Vaqueros Reservoir <sup>2</sup>	3,000	\$40	\$400	\$0.48	\$0.24
<b>California WaterFix</b>	<b>41,000</b>	<b>\$620</b>	<b>\$600</b>	<b>\$9.51</b>	<b>\$4.55</b>
Water Contract Purchase	12,000	\$360	\$800	\$3.03	\$1.41
Sites Reservoir <sup>2</sup>	8,000	\$170	\$800	\$2.62	\$1.24
Lexington Pipeline	3,000	\$90	\$1,000	\$2.89	\$0.00
Groundwater Banking	2,000	\$60	\$1,300	\$0.83	\$0.38
Dry Year Options/Transfers	2,000	\$100	\$1,400	\$0.90	\$0.41
Potable Reuse – Los Gatos Ponds	19,000	\$990	\$1,700	\$20.01	\$0.00
Potable Reuse – Injection Wells	5,000-15,000	\$290-\$860	\$2,000	\$14.36	\$0.00
Potable Reuse - Ford Pond	3,000	\$190	\$2,500	\$4.10	\$0.00
Pacheco Reservoir <sup>2</sup>	6,000	\$450	\$2,700	\$15.36	\$5.54
Groundwater Recharge	1,000-2,000	\$20-50	\$400-\$1,300	\$1.41	\$1.21

<sup>1</sup> Costs are for a fully financed project using the financing assumptions described in agenda item 2.1 of the September 12, 2017 Board Meeting

<sup>2</sup> Assumes Prop 1 Water Storage Investment Program funding. Costs would roughly double without funding.

# Viability of current CVP participation approach is unsettled

- ❖ No federal commitment to the project
- ❖ Unresolved questions regarding cost allocations
- ❖ Insufficient assurances that participants will receive benefits
- ❖ Largest CVP contractor decided not to participate



District Share: 41,000 AF\*

2.5% of SWP: 15,500 AF

5% of CVP: 25,500 AF

Attachment 5, Page 17 of 22

\*Participation level modeled in Water Supply Master Plan analyses

Attachment 5, Page 9 of 14

# State Water Project contractors continue to make decisions regarding participation, many of them positive

Decisions that have been made to date have expressed support

- ✓ Metropolitan Water District of Southern California
- ✓ Zone 7 Water Agency
- ✓ Alameda County Water District
- ✓ Castaic Lake Water Agency
- ✓ Coachella Valley Water District
- ✓ Crestline-Lake Arrowhead Water Agency
- ✓ Desert Water Agency
- ✓ Kern County Water Agency
- ✓ Mojave Water Agency
- ✓ San Bernardino Valley Municipal Water District
- ✓ San Geronio Pass Water Agency

Other agency decisions are pending



# WaterFix must provide opportunity to protect District's CVP supplies as well as SWP supplies

Recommended conditions to support SWP WaterFix participation approach:

- ❖ Participation in WaterFix sustains District's existing SWP and CVP deliveries and provides insurance against future uncertainties
- ❖ The District's CVP supplies as well as its SWP supplies are protected
- ❖ Cost per acre-foot remains similar to current estimates.

Next steps:

- ❖ Work with State and Reclamation to develop approach to secure water and protect District's CVP supplies

- ❖ Continue to work with State, Reclamation, and other water agencies
  - Evaluate opportunities to secure sufficient supplies and protect CVP supplies
  - Assess how project should be refined to optimize costs and benefits
  - Develop agreements
- ❖ Bring updates and further recommendations to the Board

## Board communication & decision schedule, if Board authorizes continued participation in WaterFix planning discussions

- ❖ 30 open, public Board meetings and workshops since 2011
- ❖ 19 open, public Bay Delta Conservation Plan Ad Hoc Committee meetings between 2013 and 2016
- ❖ Numerous presentations to District advisory committees

Date	Topic
<b>Oct. 17 (Today)</b>	<b>Special Board Workshop on California WaterFix</b>
Mid-Nov. (Tentative)	Update on WaterFix
Dec. 19 (Tentative)	Board decisions on adoption of CEQA findings and authorization to execute certain agreements to participate in the WaterFix project

- A. Adopt a resolution expressing conditional support for the SWP WaterFix participation approach.
- B. Authorize the CEO to continue participating in WaterFix planning discussions to further define the project, and to develop agreements to secure the conditions needed for the District's support.

## ATTACHMENT 6

### Evaluation of Board's Guiding Principles for Participation in the California WaterFix

***Guiding Principle 1: “Santa Clara County needs are the primary drivers in all our decisions involving the WaterFix Project”***

Principle Element	How Principle is Addressed	Satisfied?
<b>Safe water for Santa Clara County</b>	Participation reduces vulnerability to seismic events and climate change; project conveys water across the Delta in a manner safer for the environment.	Yes, achieved with reliability and flexibility of WaterFix
<b>Clean water for Santa Clara County</b>	Participation would reduce salinity of imported water by approximately 20% which will improve groundwater quality in Santa Clara County.	Yes, achieved through water quality benefits.
<b>Affordable water for Santa Clara County</b>	Staff recommendation includes participation in SWP and an option for District's Central Valley Project (CVP) supplies to minimize near-term expenses. At this level of participation, staff analysis indicates WaterFix is among the most cost-effective options available to Santa Clara County.	Yes, still one of the least expensive supplies.

***Guiding Principle 2: “We will not allow Silicon Valley values and priorities to be placed at a disadvantage relative to Central Valley agriculture or Southern California”***

Principle Element	How Principle is Addressed	Satisfied?
<b>Pay Fair Share</b>	All State Water Project (SWP) and Central Valley Project (CVP) participants will pay their fair share. Central Valley agriculture and Southern California will pay their fair share.	Yes, achieved with beneficiary pays approach
<b>No Subsidies</b>	Agreements and finance structure will ensure District does not pay other project participants' costs.	Yes, will be achieved through agreements
<b>Receive All Benefits “me too”</b>	SWP – receive identical benefits based on contracts with Department of Water Resources (DWR). CVP – capacity interest option agreement to provide for purchase with “me too” provisions.	Yes, achieved through SWP contract and option agreement

*Guiding Principle 3: “We are advocating for a flexible approach that addresses Silicon Valley stakeholder and community input”*

Principle Element	How Principle is Addressed	Satisfied?
<b>Lower-Cost, Scaled-Down, and Staged Project Consistent with Existing EIR</b>	The State proposed and analyzed staged project; Governor ultimately decided full project is best and urged MWD to support the full project consistent with existing EIR. MWD decision reduces financing risks and increases District participation options.	Changed conditions. Per Principle 3, this has been brought back to the Board for consideration
<b>SCVWD Strong Leadership Role in Governance</b>	Design and Construction Authority (DCA) includes District as governing board member, specifically as Chair and Vice Chair in governance structure during rotating terms. District also secured role of Chair/Vice Chair of Environmental Compliance & Mitigation Committee.	Yes, per authority agreements
<b>Less Impacts to Fisheries and Environment</b>	District championed and won the inclusion of Environmental Compliance & Mitigation Committee within the DCA. WaterFix design and operation reduces entrainment and produces more natural flows.	Yes, as a power of the DCA and the design of the Project

*Guiding Principle 4: “As water is a human right, we must make investments to make sure our water supply meets future needs at a cost affordable by everyone”*

Principle Element	How Principle is Addressed	Satisfied?
<b>“All-of-the-Above Approach”</b>	District continues to pursue a portfolio of water investments including highly purified (drinkable) water, recycled water, storm water capture, rain water capture, and grey water.	Yes, per District’s Water Supply Master Plan and CIP
<b>Cost of Water is an Economic Justice Issue</b>	Lower cost and higher water yield of WaterFix relative to local water supply alternatives helps keep Santa Clara County’s water supply portfolio costs down.	Yes, per District’s Water Supply Master Plan
<b>WaterFix Per Acre-Foot Costs Remain Similar to Current Estimates</b>	The per acre-foot costs for a 6,000 cfs staged and 9,000 cfs are similar at approximately \$600 per acre foot.	Yes, unit cost is still one of the lowest cost water supplies

*Guiding Principle 5: “Equity and costs are important”*

Principle Element	How Principle is Addressed	Satisfied?
<b>Communities Receiving 85% of Water Supply from Sources other than District Receive Funds Back</b>	Staff has budgeted funds in FY 2019-2024 in the form of additional water programs for those communities with a 20% match required.	In progress, per budget and future adoption

*Guiding Principle 6: “Any final arrangement must provide flexibility to acquire supplemental water by taking advantage of future wet years to ensure residents have a reliable water supply, no matter what extreme weather the changing climate brings”*

Principle Element	How Principle is Addressed	Satisfied?
<b>Support Participation at 2.5% SWP</b>	Staff has brought forward a recommendation to participate in 2.5% of SWP share.	Yes, attached resolution
<b>Ensure District’s CVP Reliability through WaterFix</b>	CVP Option Agreement will secure a spot for District’s CVP participation in project.	Yes, per option agreement
<b>Secure Enough Supplies to withstand Climate Change and other Uncertainties</b>	Staff recommends pursuing long term water transfers and storage opportunities related to WaterFix to address climate change and other uncertainties, including CVP reliability.	Yes, per Board memo

*Guiding Principle 7: “Keep negotiating for the best deal for Santa Clara County”*

Principle Element	How Principle is Addressed	Satisfied?
<b>Keep Engaging with State and Federal Agencies</b>	Staff recommends participation in Design and Construction Authority (DCA) and continuing discussions with U.S. Bureau of Reclamation and DWR.	Yes, and ongoing
<b>Keep Engaging with Prospective WaterFix Participants</b>	SCVWD have been cooperatively working with a number of public water agencies.	Yes, and will continue
<b>Develop Agreements to Secure District’s Support</b>	See attached DCA agreement and CVP Option Agreement. Additional agreements forthcoming in the future.	Yes, per Board memo

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**BOARD OF DIRECTORS  
SANTA CLARA VALLEY WATER DISTRICT**

**RESOLUTION NO. 18 -**

**AUTHORIZING SUPPORT OF, AND PARTICIPATION IN, CALIFORNIA WATERFIX**

WHEREAS, our mission at the Santa Clara Valley Water District ("District") is to provide Silicon Valley with safe, clean water to support healthy lives, the environment, and economy; and

WHEREAS, The Board of Directors endeavor through our policies and actions to affirm to the residents of Silicon Valley that we are dependable stewards and that the District can be trusted to provide clean, safe, affordable water, and guarantee our water supply for the future; and

WHEREAS, the District has long been committed to sustained reliable water supplies as well as environmental stewardship; and

WHEREAS, Santa Clara County relies on State Water Project ("SWP") and Central Valley Project ("CVP") water conveyed through the Sacramento-San Joaquin Bay-Delta ("Delta") for 40 percent of its water supply on average; and

WHEREAS, substantial local investments in water use efficiency and conservation, recycled water and groundwater management are essential but cannot cost-effectively replace imported water; and

WHEREAS, imported water from the Delta and its watershed has played a significant role in meeting the County's water supply demands and allows for the recharging of the County's groundwater basin, protecting against further land subsidence, and providing for the well-being of the citizens of Santa Clara County; and

WHEREAS, if no action is taken, the District's SWP and CVP supplies will be vulnerable to risks from declining ecosystem conditions, increasing regulatory restrictions, seismic risks, climate change and sea level rise, resulting in reduced water supply reliability for Santa Clara County; and

WHEREAS, the California Department of Water Resources ("DWR") proposes to construct the California WaterFix ("Project" or "WaterFix"), a project that could potentially protect the District's water supply reliability by upgrading aging infrastructure, thereby reducing the vulnerability of SWP and CVP water supplies to seismic events in the Delta and climate change impacts; and

WHEREAS, the California WaterFix is a critical component of the California Water Action Plan, the State of California's blueprint for a "sustainable and resilient future"; and

WHEREAS, the Project has the potential to improve access to transfer supplies and increase storage project yield while conveying water across the Delta in a way that is safer for the environment; and

WHEREAS, in July 2017, DWR approved the Project after certifying the Project's final environmental impact report ("Final EIR"), making findings of fact including statement of overriding considerations, and adopting a Mitigation Monitoring and Reporting Program pursuant to the California Environmental Quality Act ("CEQA"); and

WHEREAS, on October 17, 2017, the District Board adopted Resolution 17-68 which declared the District's conditional support for the Project and adopted certain guiding principles to shape the District's participation in the evaluation and further development of the Project; and

WHEREAS, conditions that led to the adoption of the District's Guiding Principle 3 have changed, and all the other District guiding principles have been achieved or significant progress has been made toward achieving them, as documented in the Board Agenda Item for the May 2, 2018 District Board meeting; and

WHEREAS, the District supports the SWP WaterFix participation approach, which would allocate the benefits and costs of the Project to the District in proportion to its current 2.5% allocation in the SWP under the State Water Contracts (determined by reference to Table A of such State Water Contracts), and allow each SWP contractor to transfer its costs and benefits of the WaterFix to another willing SWP contractor; and

WHEREAS, approximately 67% of the capacity of the Project is currently subscribed by SWP contractors and approximately 33% of the capacity of the Project is currently unsubscribed (the unsubscribed portion of the capacity of the California WaterFix being referred to herein as the "CVP Share"); and

WHEREAS, on April 10, 2018, Metropolitan Water District of Southern California ("MWD") authorized and approved MWD entering into a series of transactions to finance and purchase the unsubscribed CVP Share and, among other actions, to enter into one or more purchase agreements (collectively, the "Capacity Interest Purchase Agreements") under which other water agencies would agree to purchase or make payments for the purchase of a capacity interest in the CVP Share and MWD would transfer to any such water agency all or a portion of the CVP Share; and

WHEREAS, it is critical that the WaterFix provide reliability for the District's CVP supplies as well as its SWP supplies and that both supplies can be moved through the WaterFix; and

WHEREAS, the District is interested in purchasing a portion of the CVP Share, up to 200 cubic feet per second (cfs) of capacity, in order to sustain and protect its CVP supplies; and

WHEREAS, in order for the District to sustain its CVP supplies through participation in the WaterFix, a number of approvals and agreements with the U.S. Bureau of Reclamation ("Reclamation") must be secured, and it is anticipated that a Capacity Interest Purchase Agreement must be executed between the District and MWD; and

WHEREAS, on May 2, 2018, the District Board adopted Resolution 18-\_\_ which made Responsible Agency findings pursuant to the CEQA to approve agreements relating to financing, construction, and operation of the Project.

NOW, THEREFORE BE IT RESOLVED that the Board of Directors of the Santa Clara Valley Water District does hereby find, determine, and order as follows:

1. The Board hereby authorizes and approves the District's participation in the WaterFix 1) as a SWP contractor, consistent with DWR's approach to allocate the costs and benefits of the SWP contractors' share of the Project in proportion to the Table A amount specified in their State Water Contracts, and 2) as a CVP contractor, to negotiate the purchase of up to 200

cfs of the CVP Share, along with the necessary approvals and agreements from Reclamation, to convey the District's CVP and/or non-CVP water.

PASSED AND ADOPTED by the Board of Directors of Santa Clara Valley Water District by the following vote on May 2, 2018:

AYES: Directors

NOES: Directors

ABSENT: Directors

ABSTAIN: Directors

SANTA CLARA VALLEY WATER DISTRICT

By: \_\_\_\_\_  
RICHARD P. SANTOS  
Chair/Board of Directors

ATTEST: MICHELE L. KING, CMC

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Clerk/Board of Directors

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**BOARD OF DIRECTORS  
SANTA CLARA VALLEY WATER DISTRICT**

**RESOLUTION NO. 18 -**

**MAKING RESPONSIBLE AGENCY FINDINGS PURSUANT TO THE CALIFORNIA  
ENVIRONMENTAL QUALITY ACT TO APPROVE AGREEMENTS RELATING THE  
CALIFORNIA WATERFIX PROJECT**

WHEREAS, Santa Clara County relies on State Water Project (SWP) and Central Valley Project (CVP) water conveyed through the Sacramento-San Joaquin Bay-Delta (Delta) for 40 percent of its water supply on average; and

WHEREAS, imported water from the Delta and its watershed has played a significant role in meeting the County's water supply demands and allows for the recharging of the County's groundwater basin, protecting against further land subsidence, and providing for the well-being of the citizens of Santa Clara County; and

WHEREAS, substantial local investments in water use efficiency and conservation, recycled water and groundwater management are essential but cannot cost-effectively replace imported water; and

WHEREAS, the Santa Clara Valley Water District (District) has long been committed to sustained reliable water supplies as well as environmental stewardship; and

WHEREAS, if no action is taken, the District's SWP and CVP supplies will be vulnerable to risks from declining ecosystem conditions, increasing regulatory restrictions, seismic risks, climate change and sea level rise, resulting in reduced water supply reliability for Santa Clara County; and

WHEREAS, the California Department of Water Resources (DWR) has proposed to construct the California WaterFix (Project), a project that could potentially protect the District's water supply reliability by upgrading aging infrastructure, thereby reducing the vulnerability of SWP and CVP water supplies to seismic events in the Delta and climate change impacts; and

WHEREAS, in July 2017, DWR approved the Project after certifying the Project's final environmental impact report (Final EIR), making findings of fact including statement of overriding considerations, and adopting a Mitigation Monitoring and Reporting Program pursuant to the California Environmental Quality Act (CEQA); and

WHEREAS, on October 17, 2017, the District Board adopted Resolution 17-68 which declared the District's conditional support for the Project and adopted certain guiding principles to shape the District's participation in the evaluation and further development of the Project; and

WHEREAS, various contractors of the California State Water Project ("Participating SWP Contractors") are considering to form a joint powers authority ("Construction JPA") by entering into a joint powers agreement ("Construction JPA Formation Agreement") for the purpose of undertaking activities required to complete the design and construction of the Project; and

WHEREAS, various Participating SWP Contractors are considering to form another joint powers authority ("Financing JPA") for the purpose of assisting DWR in the financing of the Project; and

WHEREAS, DWR is seeking additional funds from various Participating SWP Contractors to pay for the Project's preconstruction expenses through execution of a gap funding agreement; and

WHEREAS, the District is considering an option agreement with the Metropolitan Water District of Southern California to purchase CVP water supply capacity from the Project; and

WHEREAS, the District Board is considering approving the above-described agreements that have been provided to the Board for review; and

WHEREAS, other agreements relating to the Project may in the future be considered by the District Board or its designee as authorized by the Board; and

WHEREAS, since DWR's certification of the Final EIR, legal actions alleging that the Final EIR does not comply with CEQA have been filed but no injunction or similar relief has been granted; and

WHEREAS, pursuant to Public Resources Code section 21167.3(b), a CEQA responsible agency must assume the Final EIR complies with CEQA pending final determination of the legal actions; and

WHEREAS, a CEQA responsible agency includes any public agency other than the lead agency which has discretionary approval power over a project; and

WHEREAS, the District as a CEQA responsible agency must make certain findings pursuant to section 15096(h) of the CEQA Guidelines prior to taking action on the Project.

NOW, THEREFORE BE IT RESOLVED that the Board of Directors of the Santa Clara Valley Water District does hereby find, determine, and order as follows:

1. The Board has considered the Final EIR and its evaluation of environmental impacts of the Project and determined that the Final EIR is adequate for use by the District to take actions on the Project.
2. The Board adopts Department of Water Resources' California Water Fix CEQA Findings of Fact and Statement of Overriding Considerations, dated July 2017.
3. The Board adopts Department of Water Resources' Final Mitigation Monitoring and Reporting Program for the California Water Fix, dated December 2016.
4. The Chief Executive Officer is hereby authorized and directed, on behalf of the District's Board of Directors, to execute any such documents and to perform any such acts as may be deemed necessary or appropriate to accomplish the intent of this resolution.

PASSED AND ADOPTED by the Board of Directors of Santa Clara Valley Water District by the following vote on May 2, 2018:

AYES: Directors

NOES: Directors

ABSENT: Directors

ABSTAIN: Directors

SANTA CLARA VALLEY WATER DISTRICT

By: \_\_\_\_\_  
RICHARD P. SANTOS  
Chair/Board of Directors

ATTEST: MICHELE L. KING, CMC

\_\_\_\_\_  
Clerk/Board of Directors

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## NON-EXHIBIT ITEM

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### **SUBJECT:**

Update on the California WaterFix, Authorization to Execute Agreements, Designation of District Representative, and Adoption of CEQA Findings - Attachment 9: PowerPoint

### **NOTE:**

A copy of the PowerPoint, to be included as Attachment 9 to the May 2, 2018 Update on the California WaterFix, Authorization to Execute Agreements, Designation of District Representative, and Adoption of CEQA Findings, was not available at the time of Agenda publication.

Copies will be will be distributed and made available to the public at or prior to the meeting, in compliance with the Brown Act.