File No.: 17-0375

Agenda Date: 10/17/2017
Item No.: 2.5.

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

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 Yield** (AFY)	**District Lifecycle Cost**[1] (present value, 2017) ($ million)	**Unit Cost**[1] (2017 dollars) (per AF)	**Monthly Water Cost per Average North County Household, FY43**[1] (cost/month)	**Monthly Water Cost per Average South County Household, FY43**[1] (cost/month)
Los Vaqueros Reservoir[2]	3,000	$40	$400	$0.48	$0.24
California WaterFix	**41,000**	**$620**	**$600**	**$9.51**	**$4.55**
Water Contract Purchase	12,000	$360	$800	$3.03	$1.41
Sites Reservoir[2]	8,000	$170	$800	$2.62	$1.24
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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
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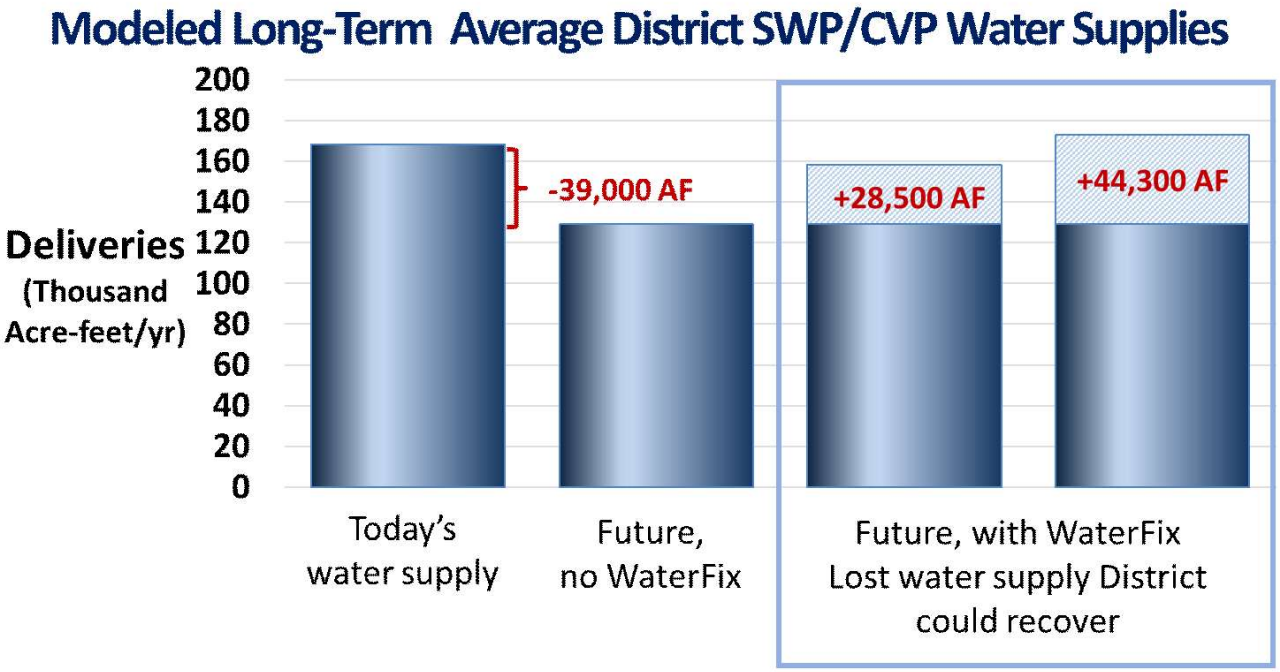
Pacheco Reservoir[2]	6,000	$450	$2,700	$15.36	$5.54
Groundwater Recharge	1,000-2,000	$20-50	$400-$1,300	$1.41	$1.21

[1] 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.



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 in is 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

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

Santa Clara Valley Water District

Recommendation

A. Adopt a resolution expressing conditional support for the SWP WaterFix participation approach.

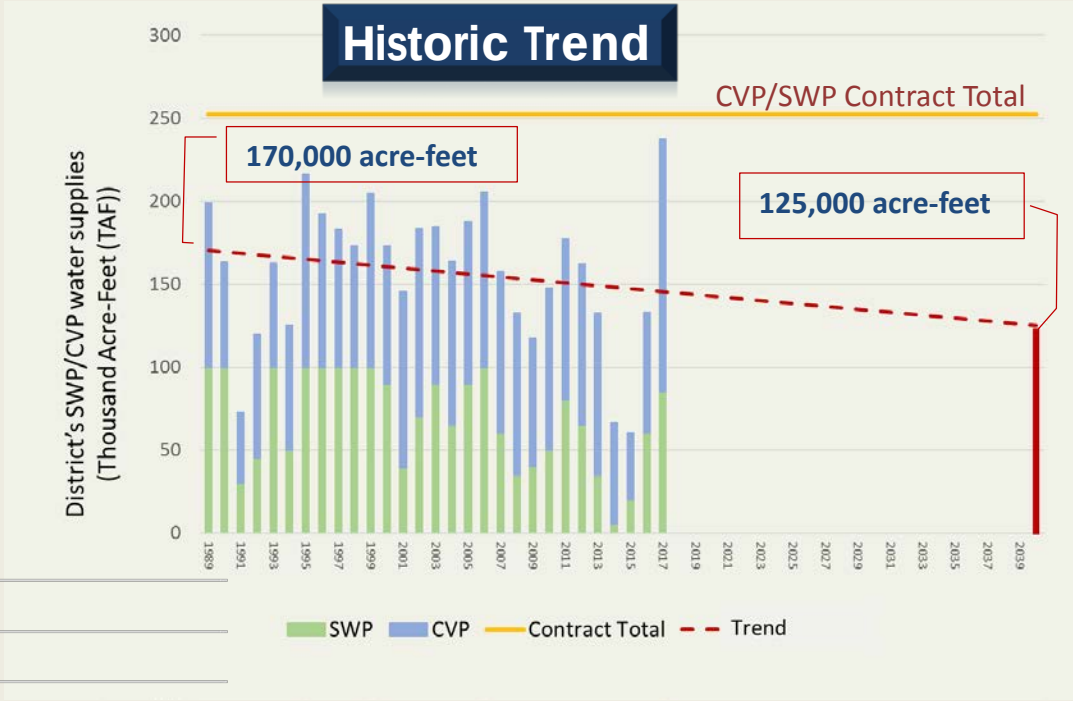
B. Authorize the CEO to continue participating in WaterFix planning discussions to further define the project, and to develop agreements to secure the conditions needed for the District's support.

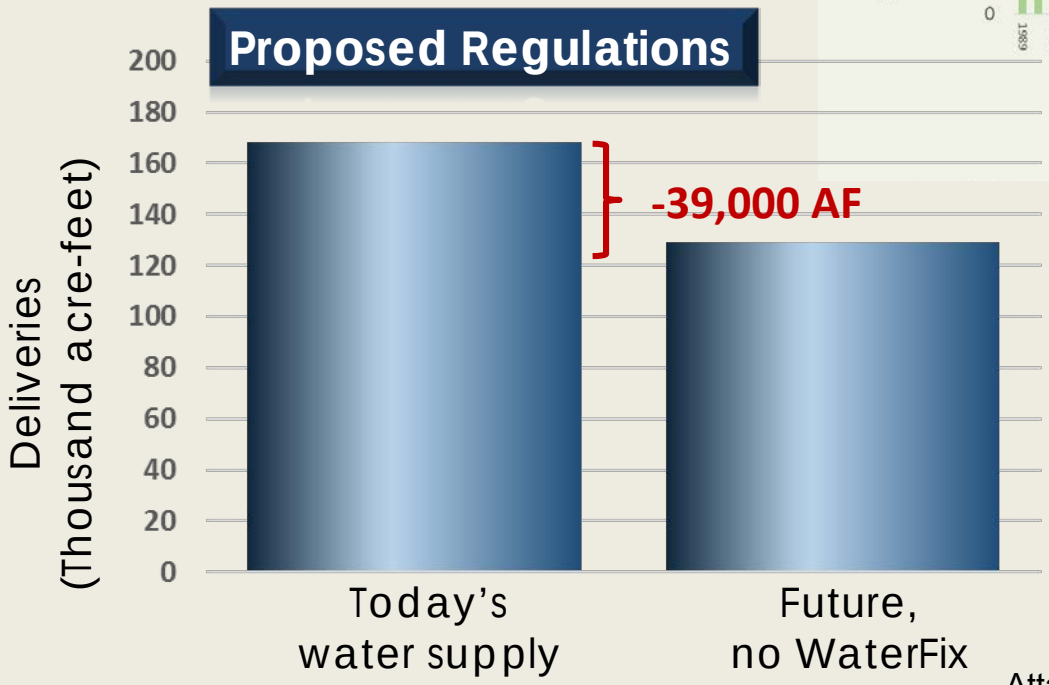
Recommendation is consistent with Board Principles

- 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. WateFix will protect supplies, restore flows and decrease impacts on fish

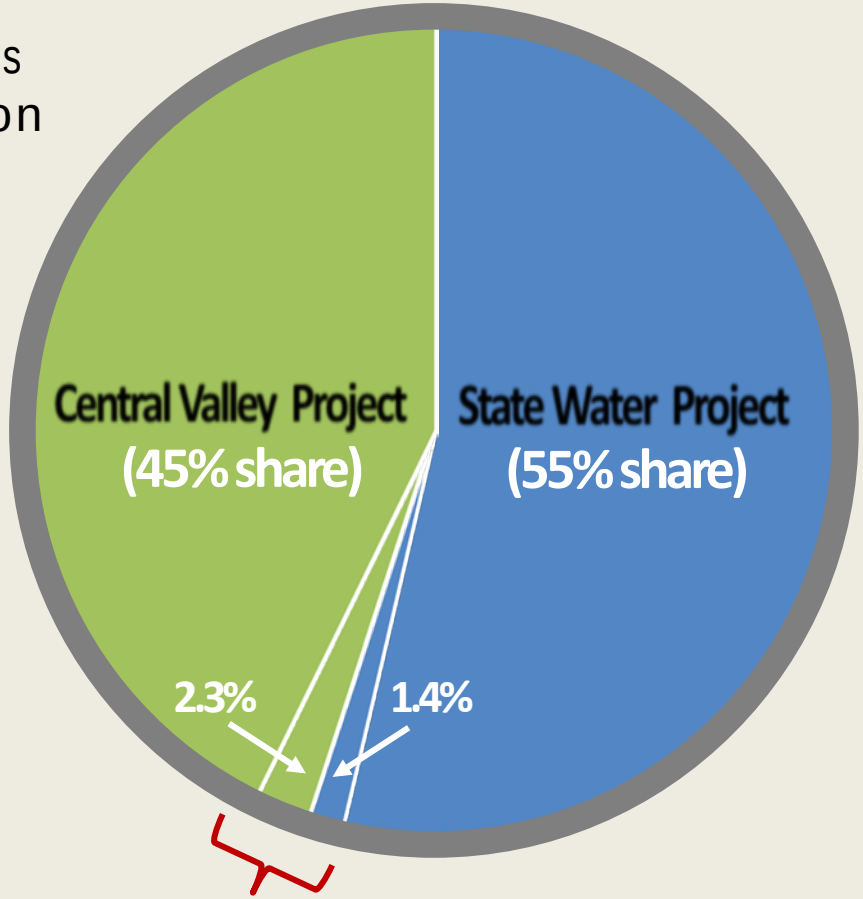
40% of Santa Clara County's water supplies are conveyed through the Delta





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

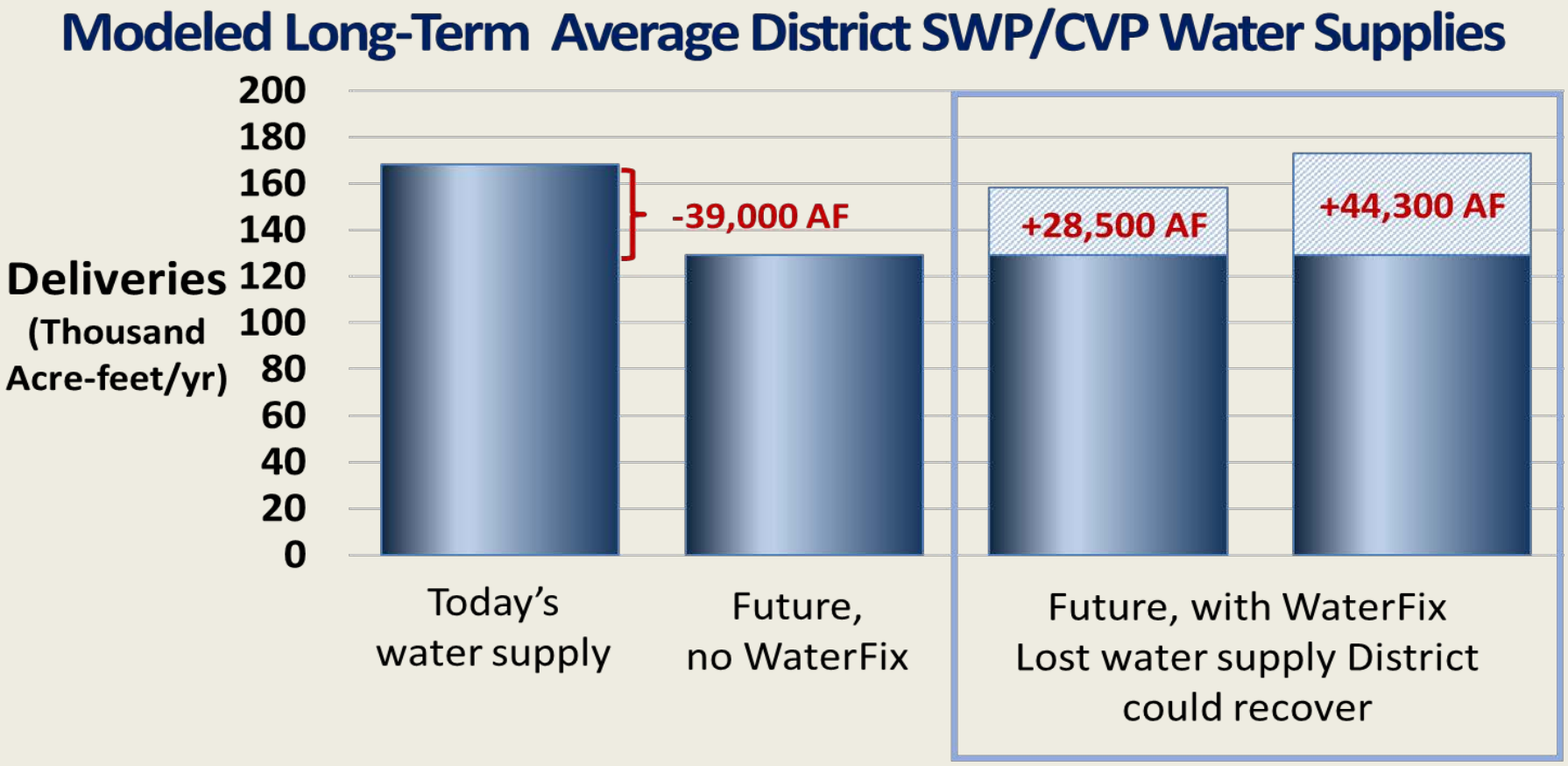


Total District share: 41,000 AF*

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



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[1] (present value, 2017) ($ million)	Unit Cost[1] 2017 dollars (per AF)	Monthly Water Cost per Average North County Household, FY43[1] (cost/month)	Monthly Water Cost per Average South County Household, FY43[1] (cost/month)
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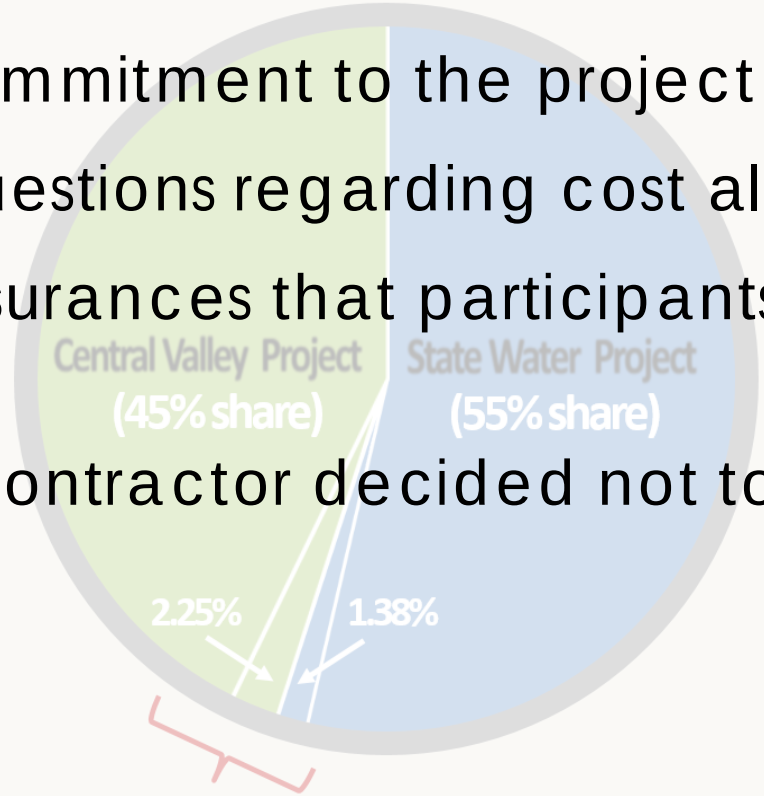
Groundwater Recharge	1,000-2,000	$20-50	$400-$1,300	$1.41	$1.21

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

[2] 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

*Participation level modeled in Water Supply Master Plan analyses

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 Gorgonio 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

Next steps

- 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
Oct. 17 (Today)	**Special Board Workshop on California WaterFix**
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

Schedule and topics subject to change

Recommendation

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.