



ASSEMBLY COMMITTEE ON
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JOINT OVERSIGHT HEARING
Accountability and Administrative Review
Water, Parks and Wildlife
Budget Subcommittee No. 3 on Resources and Transportation

Wednesday, May 9, 2018

BACKGROUND

State Water Overview

California's water system is marked by a vast network of storage and conveyance facilities to deliver water from the wetter parts of the state to population and farming centers in the Bay Area, the San Joaquin Valley, and Southern California. The watershed of the San Francisco Bay/Sacramento-San Joaquin Delta (Delta), in particular, is a critical component of the water supply for much of California. It provides water to more than 25 million Californians and three million acres of farmland; is home to more than 500,000 people; and, provides water for fish, wildlife, and other public trust uses within and upstream of the Delta.

Water originating in the watersheds above the Delta is delivered to areas within (and through) the Delta, and to areas in the south and west parts of the state. The current system relies on moving water through channels to pumps in the southern Delta that deliver water to cities and farms. However, aging infrastructure and the declining health of the Delta ecosystem threaten to disrupt the existing water diversion system. As a result, a number of restrictions have been placed on the management of water exports from the Delta since 1991, with restrictions being in place continuously since 2008.

California WaterFix

To address supply reliability, the Administration has put forward a plan, known as California WaterFix (WaterFix), a project managed by the Department of Water Resources (DWR). WaterFix calls for building three new intakes in the northern Delta and two 40-foot wide tunnels located about 150 feet below ground to move the water under the Delta to pumps. According to DWR, the new conveyance is intended to give water project operators flexibility to move water

into storage when flows are high while reducing the harmful impacts of the existing infrastructure. DWR estimates WaterFix will cost about \$15.7 billion (in 2014 dollars).

Project Support and Opposition

The project has raised several concerns, especially related to impacts on the Delta. While supporters contend the project is needed in light of the state's aging water infrastructure, opponents support alternative approaches.

WaterFix Supporters contend the project:

- Increases the reliability of the water supply and conveyance
- Increases efficiency to capture and store water
- Protects fish, wildlife and the environment
- Responds to potential seismic and climate change concerns, including sea level rise

WaterFix Opponents contend the project:

- Continues an over-reliance on Delta water
- Harms fish, wildlife and the environment
- Harms Delta communities
- Fails to consider cost-effective alternatives
- Fails to invest in local water supply and development

Recent Developments: Metropolitan Water District of Southern California (MWD)

Roughly 30% of the water used by Southern California flows through the Delta. MWD delivers water to 26 member public agencies, including 14 cities, 11 municipal water districts, and one county water authority. These agencies, in turn, provide water to 19 million people in Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Ventura counties. MWD is governed by a 38-member Board of Directors who represent their respective member agencies.

On April 10, 2018, the MWD Board voted to provide funding for the construction of WaterFix. Specifically, the Board authorized \$10.8 billion for the project. This covers nearly 65% of the full project's cost, which MWD estimates at about \$17 billion. MWD notes that this action makes the agency the primary investor in the project and is more than double its initially planned investment of about \$4.3 billion.

MWD indicates that it will work to form a Joint Powers Authority (JPA) for the financing of the project and another JPA to design and construct it.

According to MWD, its funding portion of WaterFix is expected to cost households in its 5,200-square-mile service area on average up to \$4.80 per month. Although, MWD explains that ratepayer costs could be less, as the agency expects to recoup some of its investment by selling

or leasing capacity in WaterFix to allow water deliveries or exchanges to other parties, including the agricultural sector.

Role of the State Water Resources Control Board (Board)

The Board regulates both the quality of water in the Delta and diversions of water from the Delta to ensure the reasonable protection of beneficial uses of water in the Delta

Additionally, the Delta Reform Act of 2009 prohibits DWR from constructing any diversion, conveyance, or other facility to divert from the Sacramento River to the south Delta until the Board issues an order approving the change. It also directs the Board to include appropriate Delta flow criteria in any approval for new conveyance.

In August 2015, DWR and the federal Bureau of Reclamation submitted a petition for a change to the water rights needed to implement key components of WaterFix. The petition specifically requests the Board's approval to add points of diversion and rediversion to the existing water right permits (and existing diversion authorization) held by DWR and the Bureau of Reclamation.

The Board is currently conducting public hearings to receive information on whether it should approve the change petition, subject to terms and conditions, or disapprove the petition. Due to the size and complexity of WaterFix, the Board has decided to conduct the hearings in two parts: Part 1 addresses the effects of the project on agricultural and municipal uses and associated legal users of water; and Part 2 addresses the effects of the project on fish and wildlife, including what appropriate Delta flow criteria should be included in any approval of the change petition.

State Water Project (SWP) Background and Financing

WaterFix is proposed as part of the SWP. Various forms of conveyance have been proposed and planned for as part of the SWP.

SWP facilities, which include reservoirs, aqueducts, power plants, and pumping plants, have been mostly financed by general obligation bonds and revenue bonds. Repayment of these funds as well as the operation, maintenance, power and replacement costs associated with water supply are paid by the 29 agencies and districts that have long-term contracts with DWR for SWP water delivery.

DWR releases and posts online an annual report titled "Management of the California State Water Project," which includes information about project costs and financing, water supply planning, power operations, and significant events that impact the SWP. The most recent report, released in June, 2017, includes information from the 2015 calendar year.

During that year, the SWP had about \$1 billion in revenues with nearly all of it from water contract payments. Its expenses were about \$1 billion, with approximately 64% directed toward

project operation, maintenance, power, and replacement while 30% paid bond principal and interest, and 5% was deposited into reserves.

WaterFix and the Future of the Delta

A January 2018 paper by the Public Policy Institute of California describes the vulnerability of the Delta and need to take prompt and thoughtful action. It states:

"The next year will be critical for the Delta's future. The state will decide whether to go forward with WaterFix - a decision that will, in turn, help determine the way forward for ecosystems and levees. WaterFix is costly and entails many uncertainties, but failing to resolve the Delta's problems will also be costly.

If the state decides not to go forward, whether as a matter of policy or as a result of litigation, it will need to develop another management plan for the Delta that mitigates the continued decline in water supply reliability and quality, levee integrity, and ecosystem health. If the state does choose to move ahead with WaterFix, it must address uncertainties about governance, financing, environmental benefits, and mitigation for Delta residents and landowners along the way."

Policy Questions to Consider

- 1) What are the roles and powers of state agencies and water contractors in financing, constructing, and operating WaterFix?
- 2) Do alternatives exist that would increase reliability of water supply while alleviating potential environmental and other impacts?
- 3) What are the appropriate roles of state agencies and the Legislature in overseeing the project?
- 4) What opportunities exist for stakeholder and public participation?

The Delta is dying. The planet is warming. Is California too focused on the tunnels?

BY THE SACRAMENTO BEE EDITORIAL BOARD

April 06, 2018 07:00 AM

Updated April 07, 2018 02:17 PM

For far too long, too many leaders in California have had tunnel vision – Gov. Jerry Brown, local elected officials, water district executives.

The epic battle over the Delta tunnels – how many, how big, who pays – has consumed this state, in one form or another, for generations. It has occupied legions of scientists and armies of lawyers – “a million hours” of study, as the governor once put it. The most recent environmental impact report has 90,000 pages of findings in it.

It’s a reasonable idea, but it has diverted attention from other ways to reliably supply the world’s sixth largest economy with water, to the point that we’ve lost sight of the most important question, just as climate change is raising the stakes.

It isn’t whether to build the tunnels. Rather, we should be asking: What is the best strategy to secure California’s water future? And, beyond that, how can we stem the ecological collapse of the largest and most important estuary in the Western United States?

Let’s be frank. Even if all goes smoothly, construction on the current one-tunnel plan wouldn’t start until next year and would take at least 10 years to finish. That’s if all the financing for the \$11 billion project falls into place quickly – and not counting the inevitable lawsuits, which will bring further delays.

In the meantime, there are billions of dollars worth of other good ways to quench California’s thirst and make the Sacramento-San Joaquin Delta healthier for fish and humans. Tunnel or not, the state should accelerate work on replenishing groundwater, recycling wastewater, capturing stormwater, and expanding reservoirs and desalination, where it makes financial sense and has community backing. The state is already making substantial investments in some of these other projects, including through Proposition 1, the \$7.5 billion bond issue approved by voters in 2014.

Framing the tunnels and other projects as an “either-or” misses the point on a “more or less” issue like water. Water customers may pay for one and taxpayers for the other, but global warming has ramped up the uncertainty in the whole debate. With predictions of more rain instead of snow in Northern California, drier conditions in Southern California and drought or deluge weather patterns, “all-of-the-above” has to be California’s approach. Sure, we must shore up our plumbing, but we must also capture and conserve and store water closer to where we live.

The Delta Counties Coalition – representing Contra Costa, Sacramento, San Joaquin, Solano and Yolo counties – and the Brown administration absolutely disagree on the tunnel project. But they actually agree on many other key components of a broader water strategy.

That became clear in recent meetings The Sacramento Bee editorial board held with four county commissioners in the coalition and with Karla Nemeth, the new director of the state Department of Water Resources and Brown’s point person on the tunnels. Surprising as it may be, given the bitterness of California’s water wars, those areas of agreement are promising.

For instance, both sides complain about the vast amounts of water that flow unused into the Pacific Ocean after “atmospheric river” rainstorms, like the one this weekend. Tunnel opponents say this points to the dire need for more reservoirs to store that water for when it’s needed. Nemeth says it shows the tunnel project’s importance: During the 2016 winter storms, she notes, the project could have pumped 480,000 acre-feet south, enough to supply 3.6 million Californians for a year.

Both sides are right. Dams are massively overpriced now compared to conservation and groundwater storage. But if done right, something like the proposed Sites Reservoir in Colusa County – which would be nearly twice the size of Folsom Lake and has bipartisan backing – could be a valuable place to park a downpour.

And though Southern California puts the north state to shame in saving water, Los Angeles still gets about 30 percent of its water from the Delta. That won’t end overnight, though L.A. has some ambitious and innovative ideas about becoming more self-sufficient. Neither will the need for infusions of fresh water to sustain endangered fish, keep saltwater at bay and hold the tragically over-engineered Delta ecosystem together.

So a tunnel has advantages, too, which is why the plan keeps being resurrected. The idea – to divert water from the Sacramento River and take it 40 miles to federal and state pumping stations at the southern end of the Delta – dates at least to the peripheral canal, rejected by California voters in 1982.

Supporters say tunneling would move water more efficiently to Central Valley farms and SoCal suburbs, help the ecological health of the Delta, and be indispensable in case of a major earthquake or levee failure. Opponents fear – incorrectly, we think – that it’s a water grab.

Environmental groups are concerned that the Brown administration delinked the tunnels from restoration. Behind the idyllic scenery – the century-old towns, the island farms – the Delta’s natural tides and marshlands are as critical to the West Coast as the Chesapeake Bay is to the East Coast. But 150 years of human manipulation are turning it into a dead sea.

But Nemeth says the delinking was to avoid holding habitat restoration hostage to the fate of the tunnels, and that the state will meet its goal of restoring 30,000 acres by the end of 2018. Important work also is going on with local water districts to restore habitat on tributaries that feed into the American, Sacramento and San Joaquin rivers before they reach the Delta, upstream.

Brown and Southern California water interests pursued a \$17 billion plan for two tunnels; that was all but nixed last September, when the Westlands Water District – which represents 600 San Joaquin Valley farm owners and is the nation’s largest agricultural water district – decided it couldn’t or wouldn’t pay its share.

The current plan, called California WaterFix, calls for moving ahead with one tunnel now and a possible second tunnel later. The Metropolitan Water District of Southern California, which has 19 million customers, had been considering whether to provide up-front financing for the two-tunnel plan, but backed off on Monday. But Friday, it reversed course again; the district board plans to vote Tuesday on either spending about \$5 billion on the one-tunnel plan *or* nearly \$11 billion on the twin-tunnel proposal.

If MWD’s ratepayers want to ante up, and can inspire others to chip in, we’ll welcome this scaled-down piece of the solution, though distrust and history may have hardened the political divide beyond hope.

But letting debate over the Delta tunnel drown out all else can no longer be an option. While we wait, policymakers and elected officials need to pull their heads out of the tunnels, find some common ground and start thinking in terms of “all of the above” to make sure California has enough water for generations to come.

The delta tunnels plan is costly, risky and unfair to L.A. It's also the right thing to do

By THE TIMES EDITORIAL BOARD

APR 12, 2018 | 4:10 AM

In voting Tuesday to pay two-thirds of the cost of building two tunnels to divert river water around the Sacramento-San Joaquin River Delta and direct it southward, the Southern California Metropolitan Water District's board bought into a plan that's costly, risky, uncertain and unfair. And it is taking its ratepayers with it, because they will have to shoulder the costs on their water bills.

But it was the right move nevertheless — for the ratepayers as well as for the agency. Despite the costs, the risks and all the rest, the California WaterFix, as the tunnel project is known, remains the cheapest and least speculative option for Southern California to secure a continuing water supply as the combined effects of climate change, environmental restoration mandates and increasing demands by other states and nations slow the flow of imported water to the region.

It is a shame that the project will not unify the state the way its designers originally envisioned: as an integrated plan serving and supported by cities, agriculture, the north and the south. Large San Joaquin Valley agricultural districts rejected participation late last year, leading the state and the MWD to consider a single-tunnel alternative to reduce costs. But a scaled-back project would also severely reduce benefits.

So the MWD moved forward with the two-tunnel option — even though Los Angeles and San Diego, the state's two largest cities and urban water users, voted in vain against the proposal at Tuesday's meeting, each for its own reasons.

In fact, the reasoning behind Los Angeles' stance — its desire to rely less on imports from distant mountains and rivers and more on water that is recaptured and reused locally — is wise and properly motivated. Mayor Eric Garcetti has set an ambitious and laudable goal to obtain half of the city's water locally, from stormwater runoff and wastewater recycling, by 2035.

But despite the new approach, the city is woefully behind in developing its local water capability. It was deterred for too long by the foolish "toilet-to-tap" pushback of the 1990s, in which politicians exploited residents' unfounded fears that recycling would feed sewage into our faucets, showers and swimming pools. And the city's Department of Water and Power, in that era, was only too happy to keep its vision laser-focused on importing mountain water. It's good that such thinking has faded, and that real effort and money are going into local storage and reuse.

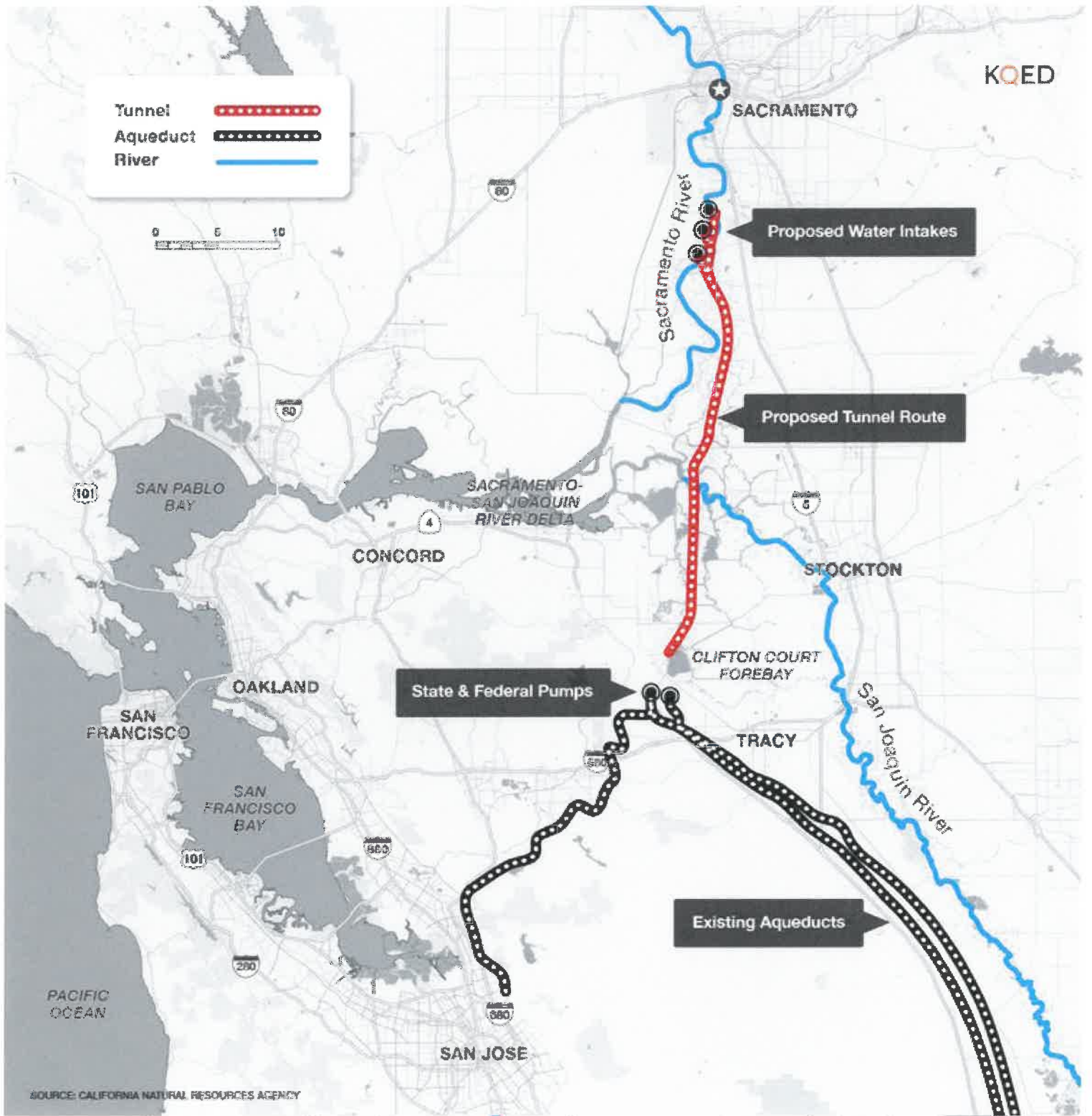
For the present, though, Los Angeles' water portfolio is divided up pretty much the same way it has been for decades, with less than 20% of water acquired locally, only a trifle recycled, and the vast majority of it imported. In fact, imports by the Metropolitan Water District have increased, as the city has taken less from its own Eastern Sierra aqueducts to repair the environmental damage the city had been causing in Mono Lake and the Owens Valley.

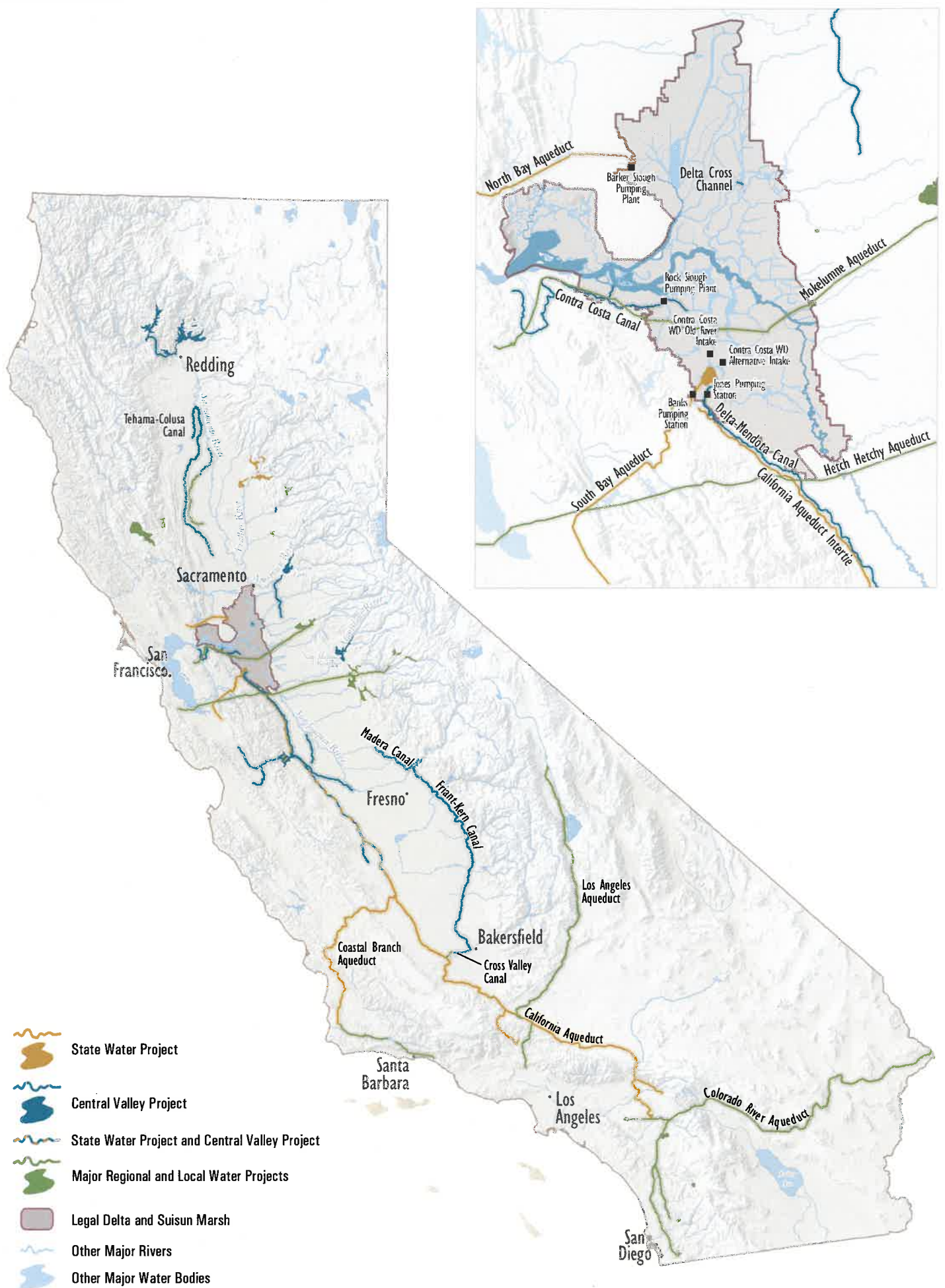
Reducing imports over the long term is the right goal. But imported water from the delta will always be part of the mix. Even if we use more locally acquired water, the region will still have to contend with a shrinking supply from the diminished Colorado River, which also is affected by climate change and is being increasingly tapped by other Western states that have rights to it. We're also leaving more water in place in the Owens Valley (except for deluge years like 2017).

It is telling that, while Los Angeles board members were voting "no" on the delta tunnels, Orange County — the state's leader in wastewater recycling and reuse — was voting "yes." Its representatives recognize the need for a reliable import system alongside a modern local-water program. The same is true for other parts of Southern California that are leaps and bounds ahead of L.A. on stormwater capture. It is good that Los Angeles is trying to catch up, but it should learn from the experience of its neighbors.

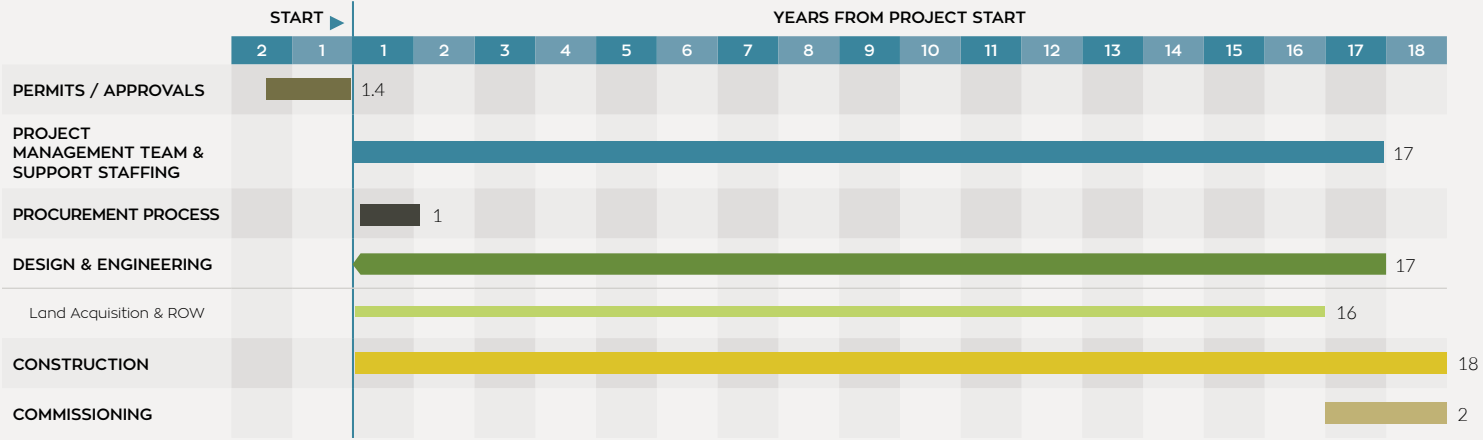
And part of that experience is that the tunnels project, despite the \$4.80 that Met predicts it will add to the monthly bill of Southern California ratepayers, is less expensive than recycling, desalination and other local projects.

The unfairness is that a project that was supposed to be financed by many of the state's water users will now be paid for, if it moves forward, just by Southern California ratepayers. But that doesn't mean that it's not still the best deal for those same ratepayers. It's certainly better than merely standing by as their water connection to the rest of the state dries up.





PROJECT SCHEDULE



PERMITTING

Several regulatory and permitting actions still need to be completed before construction can begin. Most are expected in 2018.

- ▶ National Environmental Policy Act
RECORD OF DECISION

▶ National Historic Preservation Act
SECTION 106 COMPLIANCE

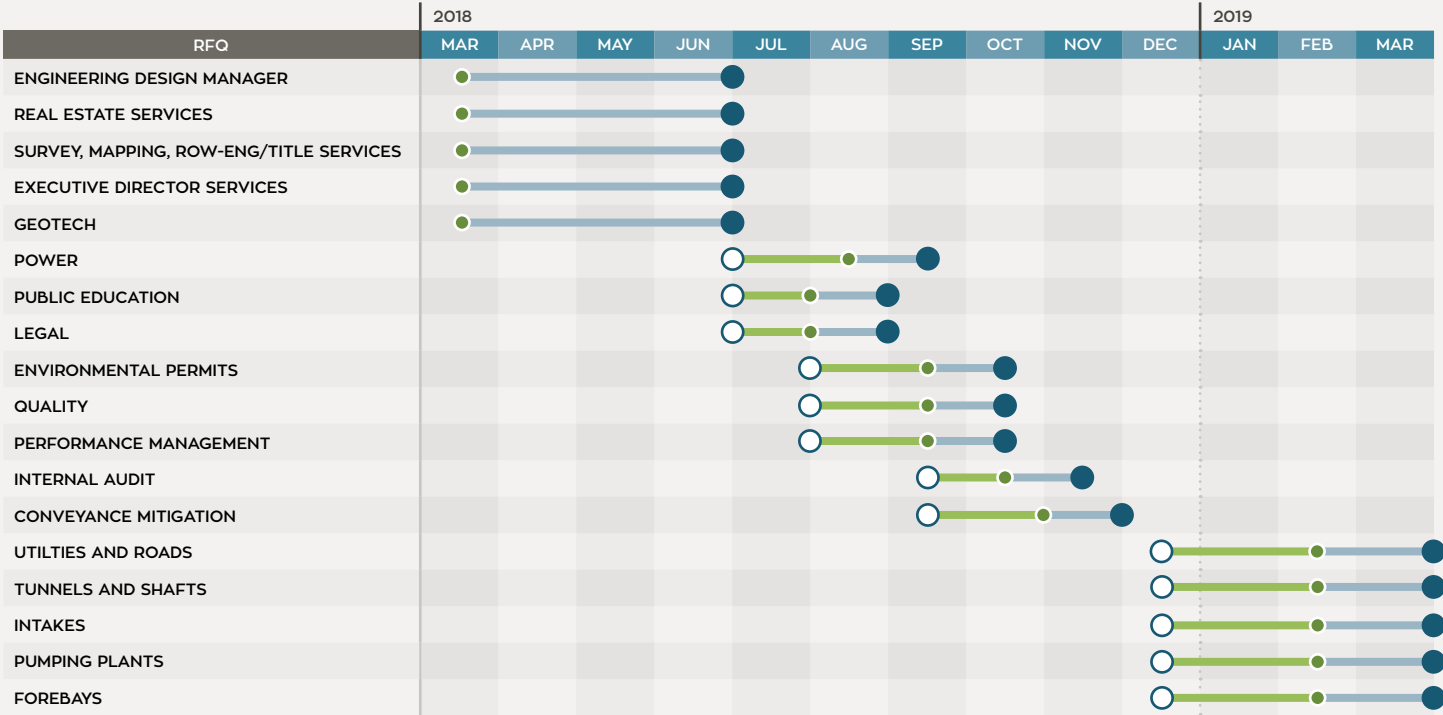
▶ Clean Water Act Water Quality Certification
SECTION 401

▶ California Department of Fish and Wildlife Lake and Streambed Alteration Agreement
SECTION 1602
- ▶ U.S. Army Core of Engineers
SECTION 404 PERMIT and **SECTION 14 PERMIT**

▶ State Water Resources Control Board
CHANGE PETITION

▶ Delta Stewardship Council
DELTA PLAN CERTIFICATION OF CONSISTENCY

2018/2019 PROCUREMENT SCHEDULE - REQUEST FOR QUALIFICATIONS (RFQ)



*Not a complete list; issuance dates are subject to change.

○ Advertise ■ Consultant Response Period ● Consultant Response Due — Agency Selection Period ● Award



A MODERN INFRASTRUCTURE UPGRADE

WaterFix is part of the state's overall water management portfolio, which includes conservation, water management, recycling, ecosystem protection and more.

KEY PROGRAM GOALS

- Secure clean water supplies for 27 million Californians and 3 million acres of farmland.
- Improve the Sacramento-San Joaquin Delta's (Delta) ecosystem.
- Update California's aging water delivery system.

WATER DELIVERY UPGRADE

Three new intakes, each with 3,000 cubic-feet per second (cfs) capacity, located on the Sacramento River in the north part of the Delta, closer to high quality water and away from critical habitats.

Two tunnels up to 150' below ground designed to protect California's water supplies from sea level rise, earthquakes, floods and levee failure.

Consolidated pumping plant to lift water into forebay in the south Delta to connect to SWP/CVP facilities.

IMPROVED RIVER FLOWS & ECOSYSTEM HEALTH

A return to more natural river flows in the south Delta, minimizing harmful reverse flows caused by powerful pumps.

Continued compliance to meet San Francisco Bay outflow requirements to protect against salt water intrusion and improve the overall health of the Delta ecosystem.

New intake location away from endangered species, with advanced fish screens to protect aquatic species.

Improving the reliability and sustainability of California's aging water system.

PRIMARY PROJECT FEATURES

- 1

NORTH DELTA
Three north Delta intakes provide higher quality water and reduce impacts to fish. These new intakes offer increased water delivery system flexibility when operated with the existing facilities to secure water supplies while meeting environmental and water quality standards.
- 2

CENTRAL DELTA
Gravity-fed tunnels improve operation and maintenance; and protect clean water supplies from salt water intrusion due to sea level rise, earthquakes, floods and levee failure.
- 3

SOUTH DELTA
Combined pumping facility located on existing state-owned property at Clifton Court Forebay to reduce environmental and construction impacts.

DELTA ECOSYSTEM BENEFITS

WaterFix will contribute to the **restoration and protection of up to 15,600 acres** of critical Delta habitat as mitigation for ongoing construction and operational impacts.

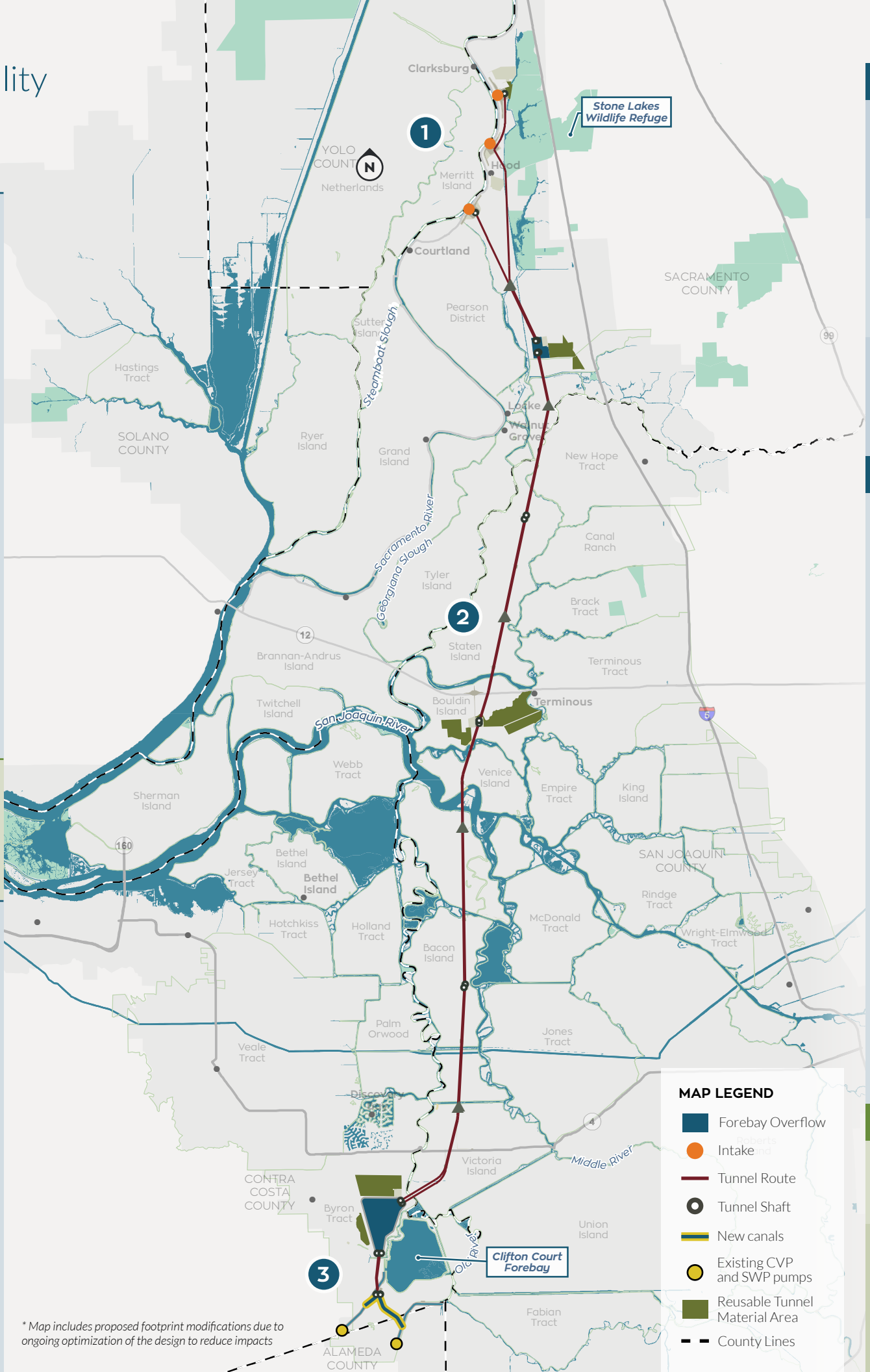
WATERFIX IS GUIDED BY THE BEST AVAILABLE SCIENCE AND PUBLIC INPUT

ADAPTIVE MANAGEMENT & COLLABORATIVE SCIENCE
Address uncertainties and make adjustments over time

OPERATIONAL CRITERIA
New criteria, improved flexibility and protected flows

OVERSIGHT
Coordinated management with state and federal fish and wildlife agencies

PUBLIC INVOLVEMENT
Unprecedented level of public review and comment has helped refine the project



WATERFIX BENEFITS

Water security for **27 million people** and thousands of businesses

Irrigation for more than **3 million acres** of farmland

Reduces entrainment and addresses **natural flow patterns** for native fisheries

4.9 million acre-feet of water on average annually

Improved reliability against **earthquakes, sea level rise** and **levee failure**

Nearly **122,000 full-time** equivalent jobs created

COST AND FUNDING

TOTAL
\$15.74
BILLION

\$14.94
BILLION

Tunnel Design & Construction

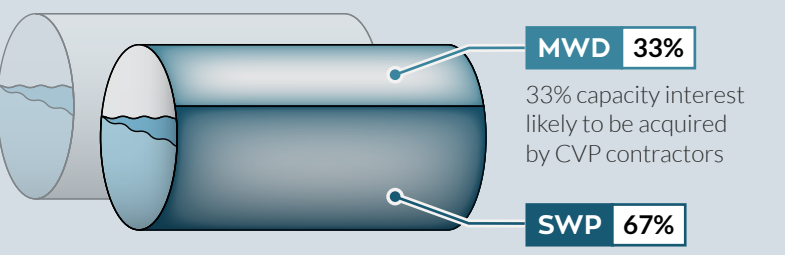
\$796
MILLION

Mitigation & Associated Costs

2014 dollars

FUNDING PARTICIPATION AND CAPACITY ALLOCATION

The graphic below shows the current funding commitments and capacity allocation by participating water agencies. It does not represent the amount of water each entity will receive.



STAY CURRENT WITH PROJECT PROGRESS

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californiawaterfix.com

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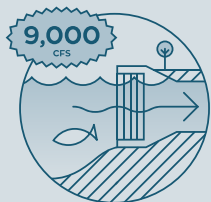
bit.ly/CAWaterFixYT



UPDATE ON CALIFORNIA WATERFIX

WaterFix is a long-overdue infrastructure upgrade that will maintain a reliable source of water for 27 million Californians and more than 3 million acres of farmland in the San Francisco Bay Area, Central Valley and Southern California, while addressing Delta ecosystem issues. It is a critical element of the state's overall strategy to create climate change resiliency and ensure a reliable water supply for the future, as outlined in Governor Brown's California Water Action Plan.

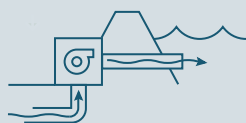
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A return to more natural river flows in the south Delta, minimizing harmful reverse flows caused by powerful pumps.



Continued compliance to meet San Francisco Bay outflow requirements to protect against salt water intrusion and improve the overall health of the Delta ecosystem.



New intake location away from endangered species, with advanced fish screens to protect aquatic species.

- ▶ The project is the same 9,000 cfs project as originally proposed, including two tunnels and three intakes.
- ▶ DWR is proposing WaterFix with a slightly smaller footprint due to ongoing optimization of the design to reduce impacts.
- ▶ The Department of Water Resources is, and will remain, the owner, operator and water right holder of the State Water Project and its facilities, including WaterFix.
- ▶ Regardless of how the participating public water agencies fund construction of the project, ownership and operational authorities for the facility remain with DWR.

- ▶ The decision by the Metropolitan Water District of Southern California to invest in WaterFix has created a path to allow for the construction of the full project. The state no longer anticipates the need for a staged implementation option.
- ▶ Costs related to the 67% capacity will be recovered through the State Water Project contractors, who are continuing to finalize their cost allocation.
- ▶ The 33% capacity funded by MWD (separate from their SWP portion) is likely to be acquired by CVP contractors.



NEXT STEPS

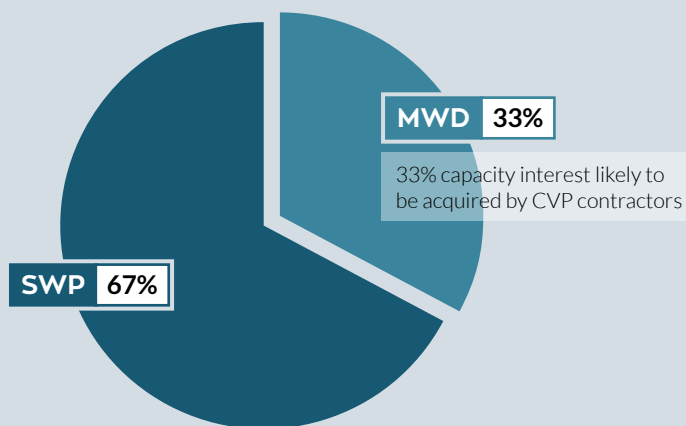
- ▶ Other public water agencies are bringing agreements to their boards in May.
- ▶ DWR will continue to pursue remaining permits, including (among several others):
 - ▶ Change Petition (State Water Resources Control Board)
 - ▶ Delta Plan Certification of Consistency (Delta Stewardship Council)

COSTS



2014 dollars

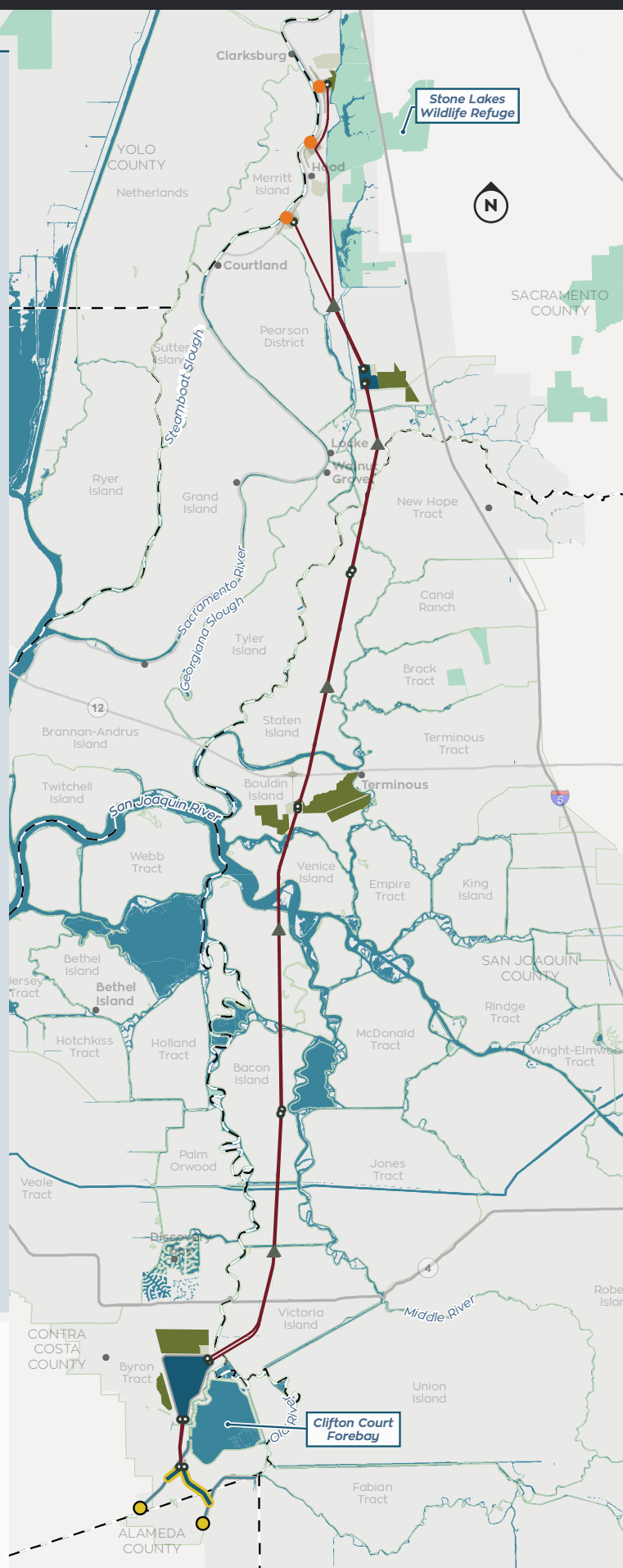
CURRENT FUNDING COMMITMENTS



MAP LEGEND

- | | | |
|------------------|----------------------------|-------------------------------|
| Forebay Overflow | Tunnel Shaft | Reusable Tunnel Material Area |
| Intake | New canals | County Lines |
| Tunnel Route | Existing CVP and SWP pumps | |

*Map includes proposed footprint modifications due to ongoing optimization of the design to reduce impacts





DESIGN REFINEMENTS PROPOSED

To Minimize Impacts, Improve Performance and Reduce Costs

Design improvements are being proposed to minimize impacts of the WaterFix project on local communities and the environment. The proposed changes build on past modifications that significantly reduced the project's footprint and costs. The new optimizations also seek to minimize impacts on environmental resources in the Delta, including wetlands and other water resources.

The proposed optimizations will be subject to environmental review as a part of the forthcoming Supplemental Environmental Impact Report expected in Summer 2018.

KEY BENEFITS OF THE NEWLY PROPOSED OPTIMIZATIONS



Significantly reduces wetland impacts



Reduces impacts to salmon and smelt at the Clifton Court Forebay



Reduces the number of power poles and lines required which improves aesthetics, reduces impacts to birds, and minimizes the need for power facilities near the town of Courtland, while also eliminating the need to relocate large 230 kV and 500 kV transmission lines



Consolidates the reusable tunnel material (RTM) footprint to minimize impacts to Stone Lakes Wildlife Refuge and nearby agricultural lands



Reduces potential impacts to the town of Hood and a residential neighborhood on Kings Island

DESIGN REFINEMENTS & PROPOSED MODIFICATIONS

WaterFix will reduce permanent impacts to Delta wetlands by

MORE THAN
**500
ACRES**

And reduce temporary impacts to wetlands by

**2,000
ACRES**

Eliminate barge landing at Snodgrass Slough

BENEFITS: Reduces barge traffic in the northern portion of the Delta; reduces impacts to wetlands

Move a shaft site on Mandeville Island

BENEFITS: Avoids wetlands

Eliminate the Clifton Court Forebay modifications by moving the terminus of the main tunnels and forebay to a new location

BENEFITS: Reduces impacts to wetlands, salmon, and smelt; improves construction access; reduces permanent impacts to wetlands by 270 acres and temporary impacts to wetlands by over 1,900 acres

Eliminate the need to relocate a 500 kV and 230 kV transmission line from the Tracy substation

BENEFITS: Reduces wetland impacts and eliminates unnecessary costs

Move the north tunnel alignment to the east, just outside the town of Hood instead of directly below it

BENEFITS: Reduces potential impacts to the town of Hood

Move power line alignment to use SMUD's existing transmission corridor*

BENEFITS: Fewer powerlines required, improves aesthetics, reduces impact to birds, reduces need for large substation near the town of Courtland

Consolidate the Reusable Tunnel Material (RTM) footprint near the Intermediate Forebay into a single site

BENEFITS: Reduces impacts to Stone Lakes Wildlife Refuge, wetlands, and nearby agricultural activities; reduces construction impacts caused by truck traffic and improves operational efficiency; wetland impacts reduced by more than 50 acres

Optimize Bouldin Island activities by relocating shaft site, RTM, and barge landing

BENEFITS: Reduces wetlands impacts by over 100 acres on Bouldin Island; reduces potential impacts to Delta navigation and recreation opportunities

Move a pumping plant away from Kings Island

BENEFITS: Reduces impacts to a residential neighborhood on Kings Island; reduces impacts to wetlands

MAP LEGEND

- Forebay
- Reusable Tunnel Material Area
- Main Tunnels
- Main Construction Shaft
- ▲ Ventilation/Access Shaft
- Intake
- New canals
- Existing CVP and SWP pumps
- County Lines

* Previously implemented, not subject to further environmental review

** Map includes proposed footprint modifications due to ongoing optimization of the design to reduce impacts

WATERFIX: CREATING A MODEL ORGANIZATION TO DELIVER THE PROGRAM ON TIME AND BUDGET

Taking Effective Steps to Safely Design and Construct WaterFix
within Specifications, while Prudently Managing Risk

The Department of Water Resources (DWR) and participating public water agencies have extensively studied and analyzed organizational models for major infrastructure projects. DWR and the public water agencies will form a partnership to implement the most effective means of staffing, designing, contracting, constructing and financing WaterFix. This model is in the best interests of both the state and the public water agencies funding the project, assigning roles and responsibilities that align around a shared vision to build the project on time and budget.

ROLES

DEPARTMENT OF WATER RESOURCES (DWR) / DELTA CONVEYANCE OFFICE (DCO)

DWR has created the DCO to oversee WaterFix. DCO responsibilities include:

- ▶ Approve California WaterFix specifications that meet DWR standards for safety, durability, long-term operations and maintenance
- ▶ Review and approve any material changes to the specifications for design, construction and permit compliance
- ▶ Review and approve the California WaterFix annual budgets
- ▶ Ensure compliance with the Joint Exercise of Power Agreement between DWR and the DCA
- ▶ Oversee and approve acquisition process of necessary lands, easements and right-of-way for California WaterFix
- ▶ Review and approve the construction bid documents, the As-builts plans and ultimately facilities for operation

CONSTRUCTION JOINT POWERS AUTHORITY

The Construction JPA (Design Construction Authority (DCA)) will be formed by the participating funding agencies of the State Water Project. DCA responsibilities include:

- ▶ Implement final planning and design, construction and all financial accounting
- ▶ Develop the program's strategic, spending and business plans
- ▶ Let and manage construction contracts
- ▶ Select and supervise the Executive Director, Engineering Design Manager, and other staff/consultants
- ▶ Develop and implement a program-wide safety policy and approach to risk management
- ▶ Ensure compliance with construction specifications and mitigation measures
- ▶ Provide regular updates and reports to DWR
- ▶ Maintain transparency through the DCA board and public information programs
- ▶ Finalize remaining permits and ensure compliance with terms



CALIFORNIA WATERFIX: JOB CREATION

California WaterFix will result in substantial economic benefits to California, including the creation of about 122,000 full-time equivalent water facility jobs during construction, operation and maintenance of the project. A full-time equivalent job is defined as one person working full-time for one year.

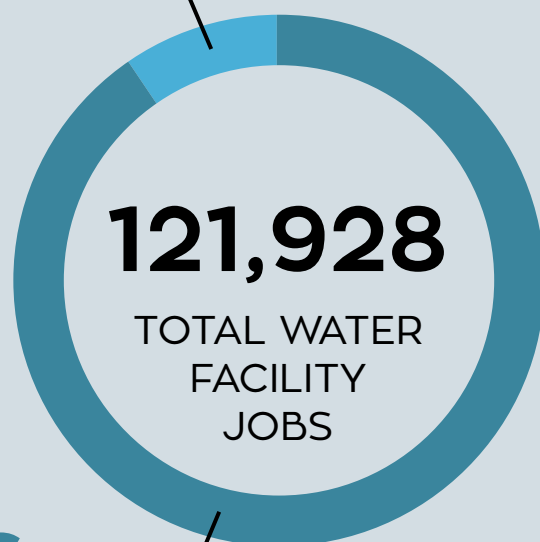
JOBS BREAKDOWN BY TYPE

11,332

**OPERATIONS &
MAINTENANCE**
Years 10-50

110,596

**CONSTRUCTION
& PLANNING**
Years 1-10



121,928

**TOTAL
WATER FACILITY
JOBS**

Employment impact types:

DIRECT

Jobs created for construction and maintenance

INDIRECT

Jobs created by the purchase of materials and equipment

INDUCED

Jobs created by purchases made by employees and families

LAND ACQUISITION

Employment impact from payments made to landowners to acquire land for habitat restoration

DIRECT WATER FACILITY JOBS

Construction, operation and maintenance of the WaterFix facilities will result in 20,660 direct, full-time equivalent jobs.

20,660

TOTAL DIRECT
WATER FACILITY
JOBS

JOB BREAKDOWN BY COUNTY

SACRAMENTO COUNTY

CONSTRUCTION PERIOD **3,972**

OPERATING PERIOD **37**

TOTAL COUNTY JOBS **4,009**

SAN JOAQUIN COUNTY

CONSTRUCTION PERIOD **3,491**

OPERATING PERIOD **33**

TOTAL COUNTY JOBS **3,524**

CONTRA COSTA COUNTY

CONSTRUCTION PERIOD **1,088**

OPERATING PERIOD **10**

TOTAL COUNTY JOBS **1,098**

TOTAL ADDITIONAL CONSTRUCTION JOBS ALONG ENTIRE ALIGNMENT

12,029

