




RESTORING THE SACRAMENTO-SAN JOAQUIN DELTA ECOSYSTEM

California EcoRestore (EcoRestore) will accelerate and implement a comprehensive suite of habitat restoration actions to support the long-term health of the Sacramento-San Joaquin Delta's (Delta) native fish and wildlife species.



	<p>Implement multiple fish passage improvement projects in the Yolo Bypass and other key locations</p>		<p>Coordinate with existing local Habitat Conservation Plans and Natural Community Conservation Plans (HCP/NCCP)</p>		<p>Through the Delta Stewardship Council's Delta Science Plan, leverage collaborative Delta science efforts such as the Interagency Ecological Program and Interim Science Action Agenda, and undertake investigations that support adaptive management and long-term understanding of Delta systems.</p>
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Over the next 5 years, California will pursue more than 30,000 acres of critical Delta restoration under the EcoRestore program, and pursuant to pre-existing regulatory requirements and various enhancements to improve the overall health of the Delta. **Proposition 1 funds and other state public dollars will be directed exclusively for public benefits unassociated with any regulatory compliance responsibilities.**

Additional priority restoration projects will be identified through regional and locally-led planning processes facilitated by the Delta Conservancy. Plans will be completed for the Cache Slough, West Delta, Cosumnes, and South Delta. Planning for the Suisun Marsh region is already complete and a process for integrated planning in the Yolo Bypass is underway. The Delta Conservancy will lead the implementation of identified restoration projects, in collaboration with local governments and with a priority on using public lands in the Delta.

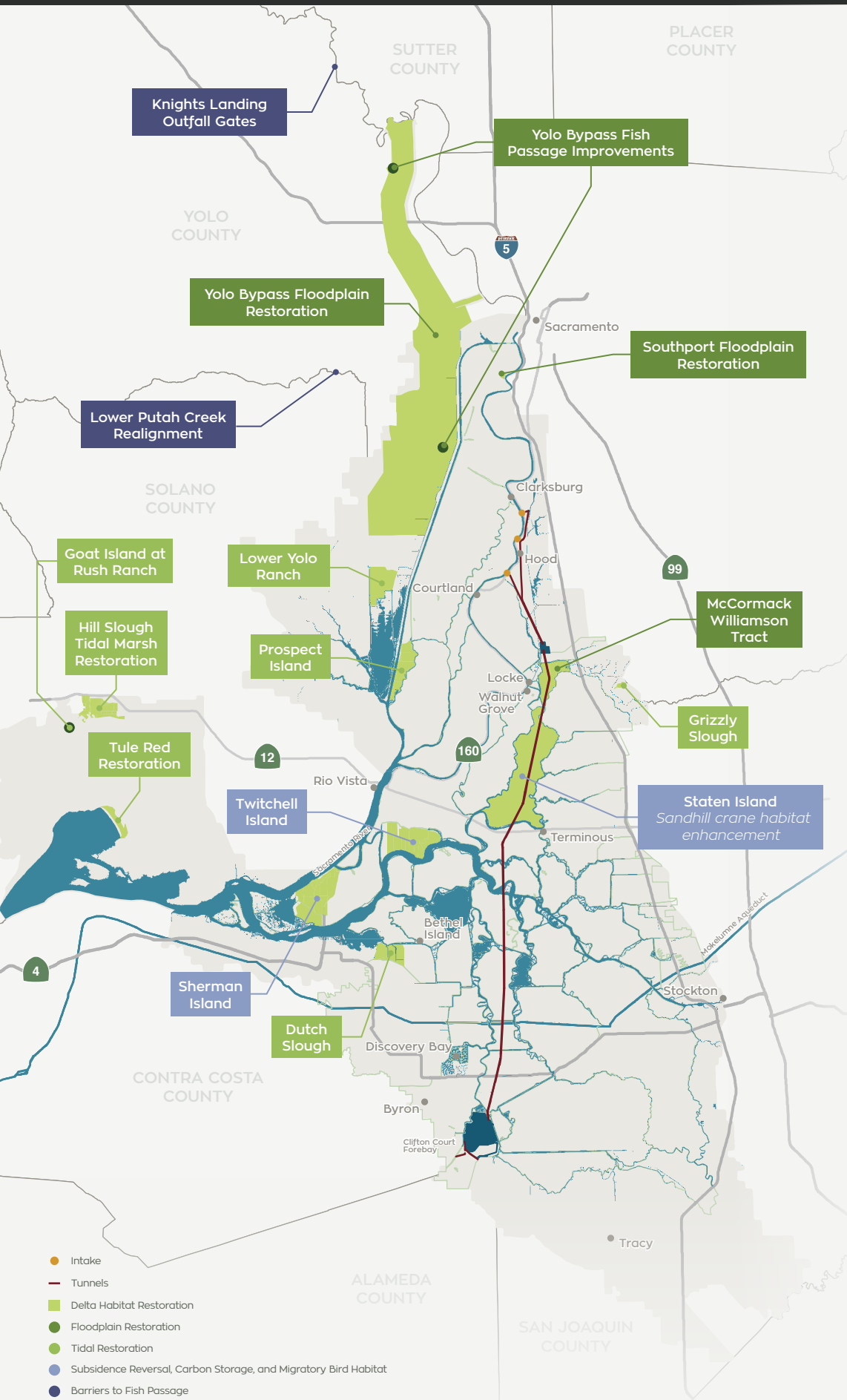
ADDITIONAL ACTIONS:

- Engagement of the Delta's local governments to determine community supported restoration practices
- Solicit and receive support from federal agencies and other partners
- Support and engage in inter-agency and stakeholder joint venture efforts aimed to recover Central Valley salmon and steelhead populations
- Coordinate with non-governmental organizations, academia, and other stakeholders throughout California to address various stressors in the Delta, such as invasive species and methylmercury

FUNDING FOR RESTORATION PROJECTS WILL BE PROVIDED THROUGH MULTIPLE SOURCES

- Floodplain and tidal/sub-tidal habit restoration required by existing regulatory frameworks will be funded by state and federal water contractors
- Wetlands restored for subsidence reversal and carbon management will be supported by the AB 32 Greenhouse Gas Reduction Fund and other sources
- Various aquatic, riparian, and upland restoration and multi-benefit flood management projects will be supported by Proposition 1 & 1E
- Additional projects will be supported by various local and federal partners





**PRIORITY RESTORATION OBJECTIVES
 BREAKING GROUND BETWEEN
 2015 AND 2018**



For more information please visit: http://resources.ca.gov/california_water_action_plan

A STATE-OF-THE-ART SOLUTION

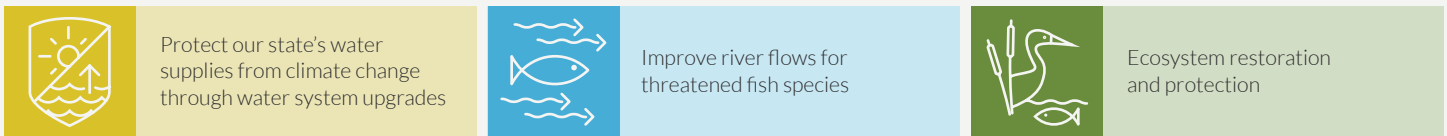
SCIENCE, TECHNOLOGY, AND INNOVATION

This prudent, realistic, science-driven, and achievable approach will fix California's aging water delivery system and protect our economy and public safety. This approach responds to an unprecedented level of public review and comment.

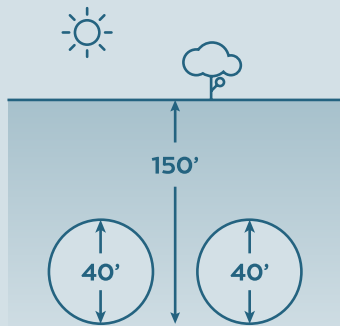
The project covers five main areas:



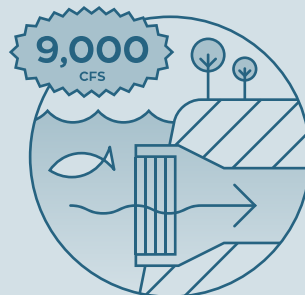
Upgrading our water delivery system would improve the natural direction of river flows, help native fish species migrate to and from the ocean, guard against water supply disruptions, and ensure that local water projects like recycling and groundwater recharge work better.



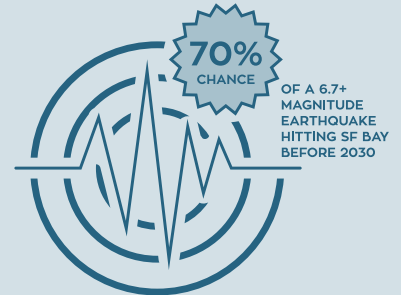
WATER DELIVERY UPGRADE



2 tunnels up to 150' below ground designed to protect California's water supplies

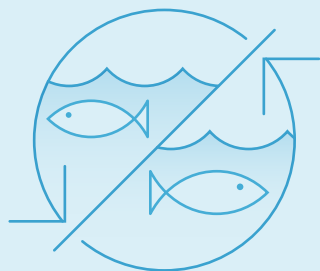


3 new intakes, each with 3,000 cubic-foot per second (cfs) capacity. Average annual yield of 4.9 million acre-feet.

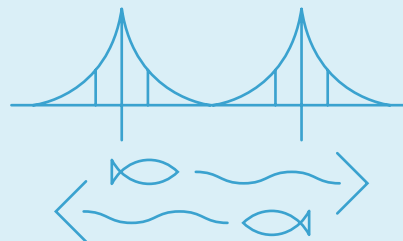


Protection against water supply disruption from failure of aging levees due to sea-level rise, earthquakes and flood events

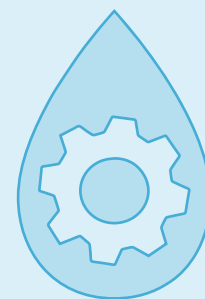
IMPROVED RIVER FLOWS



Reinstate a more natural direction of river flows in the South Delta by 46-160 percent



New criteria to protect spring outflow to San Francisco Bay



Criteria to protect Sacramento River flows and fish

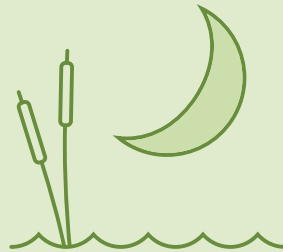


NEW ENVIRONMENTAL MITIGATION

California WaterFix will include ~2,100* acres of habitat restoration to mitigate for the construction and operation of the new water facilities. These costs will be paid for exclusively by water agencies benefiting from the project. Over the next 5 years, California will pursue more than 30,000 acres of critical Delta restoration under the California EcoRestore program, and pursuant to pre-existing regulatory requirements and various enhancements to improve the overall health of the Delta. **Proposition 1 funds and other state public dollars will be directed exclusively for public benefits unassociated with any regulatory compliance responsibilities.**



Improve habitat conditions along five miles of important juvenile salmon migration routes



Restore tidal and non-tidal wetland habitat to sustain habitat functions for native wildlife, such as the giant garter snake and salmon



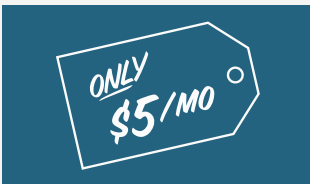
Restore native riparian forest and scrub to support habitat for riverside species and improve linkages for terrestrial and other native species



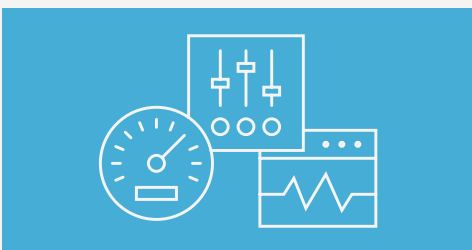
Improve connectivity among existing patches of grassland and other natural habitats



For more details on the full scope of environmental enhancements and government agency responsibilities, please visit: http://resources.ca.gov/california_water_action_plan



The cost to fix California's primary water delivery system is estimated at \$14.9 billion – or about \$5 a month for urban water users – and will be paid for by public water agencies that rely on the supplies.



An Adaptive Management and Monitoring Program will guide real-time operations of the system.



Our communities – farms, businesses, homes – and economy depend upon reliable, affordable, high-quality water supplies.



The time to act is now. Californians cannot afford a broken and unreliable water delivery system.

For more information please visit californiawaterfix.com.


PROTECTING WATER SUPPLIES

Water flows from the Sierra Nevada mountains through the Sacramento-San Joaquin Delta (Delta), a critical link in California's water supply network. **The existing system is outdated, inefficient and in need of repair.**

Hundreds of miles of dirt and rock levees are all that protect our state's water supplies from saltwater intrusion and disruption. Without fixes to our water supply infrastructure, the Delta and the state's economy face threats:

1

CLIMATE CHANGE



- **Sea levels continue to rise**, putting pressure on aging levees, some protecting islands more than 20 feet below sea level.
- With warmer average temperatures expected, more intense storms and floods are likely, **increasing pressure on dirt levees.**

2

SEISMIC RISK



- Five active fault lines and many more inactive **fault lines pose a threat to our existing water delivery system.**
- A major earthquake or storm could cause flooding on as many as 20 islands at once and **jeopardize statewide water supplies.**

3

ENVIRONMENTAL DECLINE



- **Existing operations cause reverse river flows**, trap and kill migrating salmon, and have contributed to a severe decline in delta smelt.

THE PROPOSED FACILITY IS THE RIGHT SIZE

A SMALLER PROJECT COSTS MORE AND WASTES WATER IN WET YEARS

The charts on the right depict the effectiveness of a 9,000 cubic feet per second (cfs) facility, which captures maximum water supplies when all environmental flow improvements are met.

A 9,000 (cfs) facility is **40 percent smaller** than the existing system and provides the **greatest complement to local water supply projects** by allowing the safe capture of water in wet and above-normal years so that it can be stored and used in dry years.

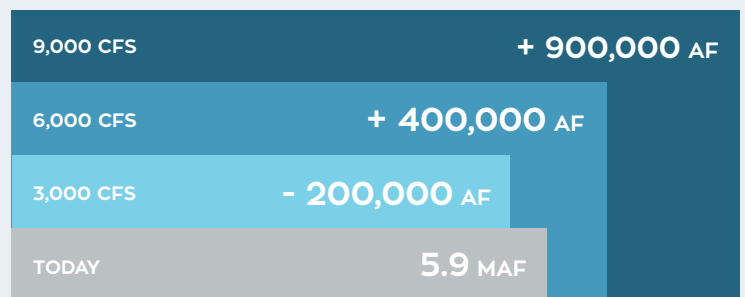
A smaller facility would provide much less water. The proposed 9,000 cfs facility is the best option for:

- Reducing reverse flows and minimizing the trapping of migrating fish
- Enhancing the ability to store surplus outflows and reduce diversions during critical fish migration periods
- Improving drinking water quality to meet public health standards
- Expanding groundwater recharge and recycling at the local level
- Protecting against water outages due to climate change, flooding, and earthquakes

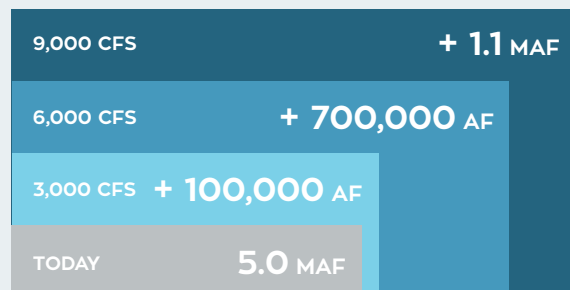
The cost of building the tunnels as a result of an emergency outage would range anywhere from \$3.6 - \$18.2 billion more than it would cost to build them now.

A 9,000 CFS FACILITY WOULD PROVIDE AN AVERAGE ANNUAL YIELD OF 4.9 MILLION ACRE-FEET

WET YEAR



ABOVE-NORMAL YEAR

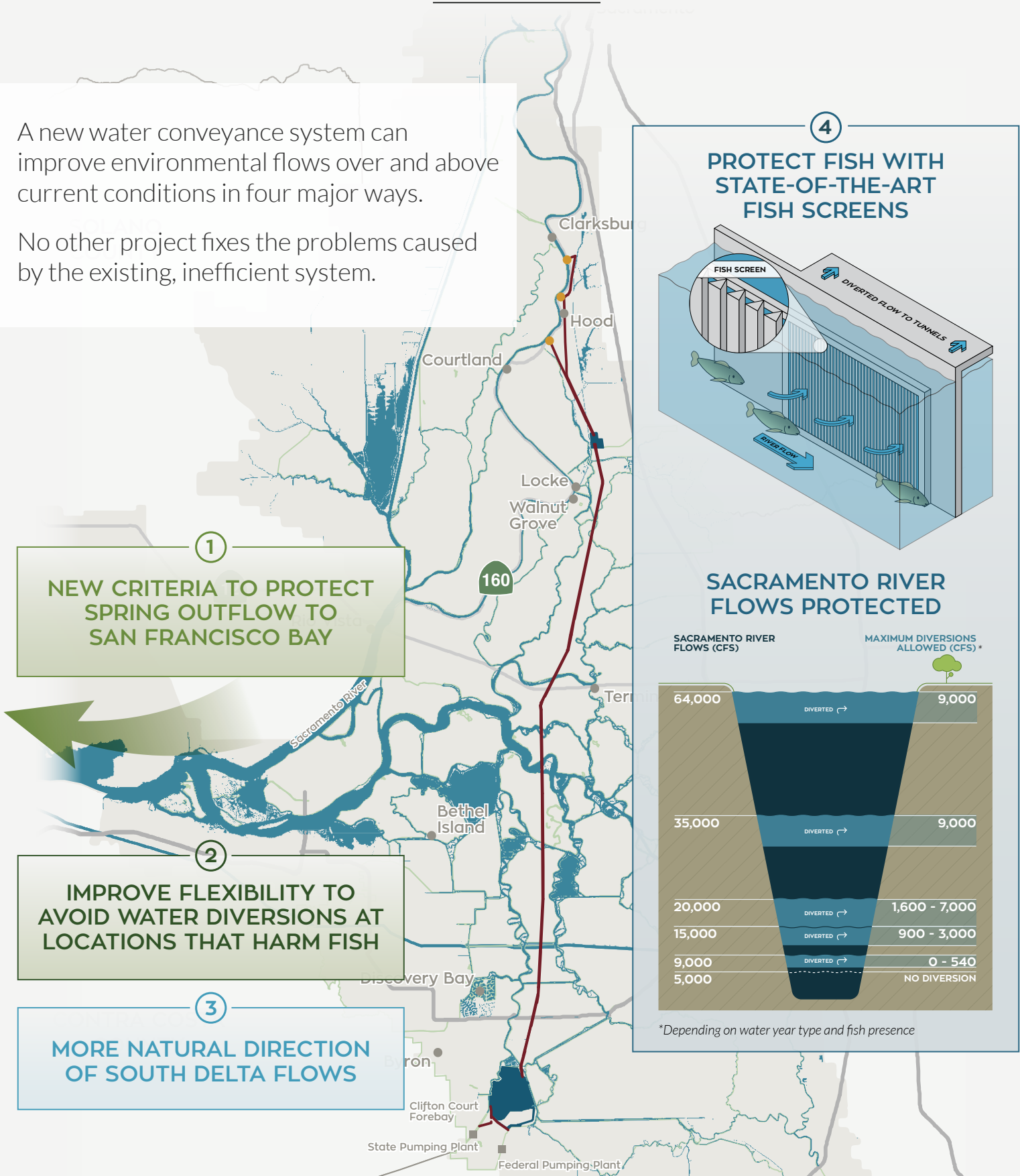


The yields depicted account for climate change, which is expected to cause more intense storms and flood events.

PROTECTING FISH

A new water conveyance system can improve environmental flows over and above current conditions in four major ways.

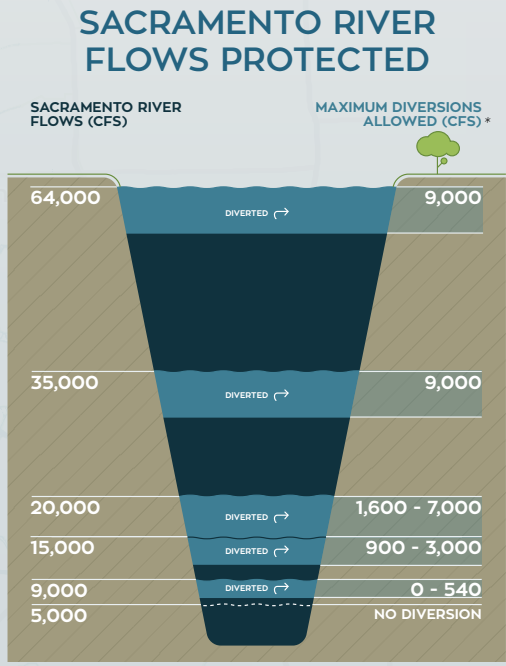
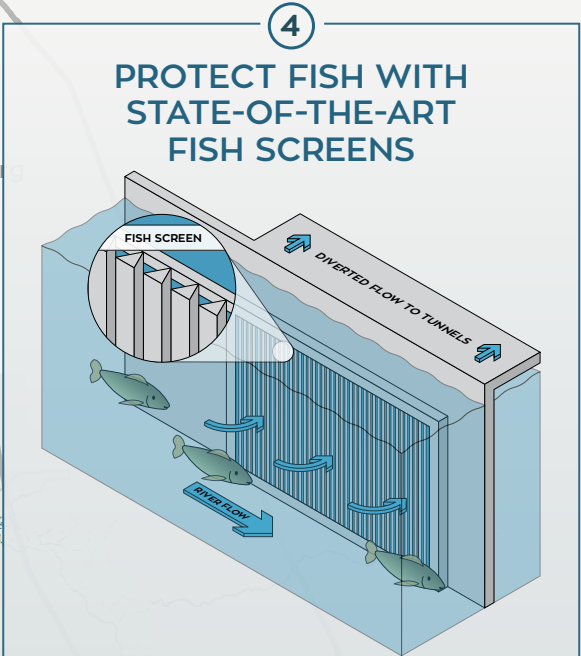
No other project fixes the problems caused by the existing, inefficient system.



1
NEW CRITERIA TO PROTECT SPRING OUTFLOW TO SAN FRANCISCO BAY

2
IMPROVE FLEXIBILITY TO AVOID WATER DIVERSIONS AT LOCATIONS THAT HARM FISH

3
MORE NATURAL DIRECTION OF SOUTH DELTA FLOWS



*Depending on water year type and fish presence

REFINED TUNNEL OPTION AND INTAKE DESIGN

MAPPING A BETTER ROUTE FORWARD

In 2013, significant changes to the proposed water facilities and operations reduced the overall project footprint by one-half of its original size to minimize community impacts. In 2014, the water facilities were further refined to address engineering improvements and feedback received during the public comment period. Since then, additional changes have been made to the proposed facilities. Changes to the project:



Reduce construction impacts on Delta communities and the environment



Reduce power requirements



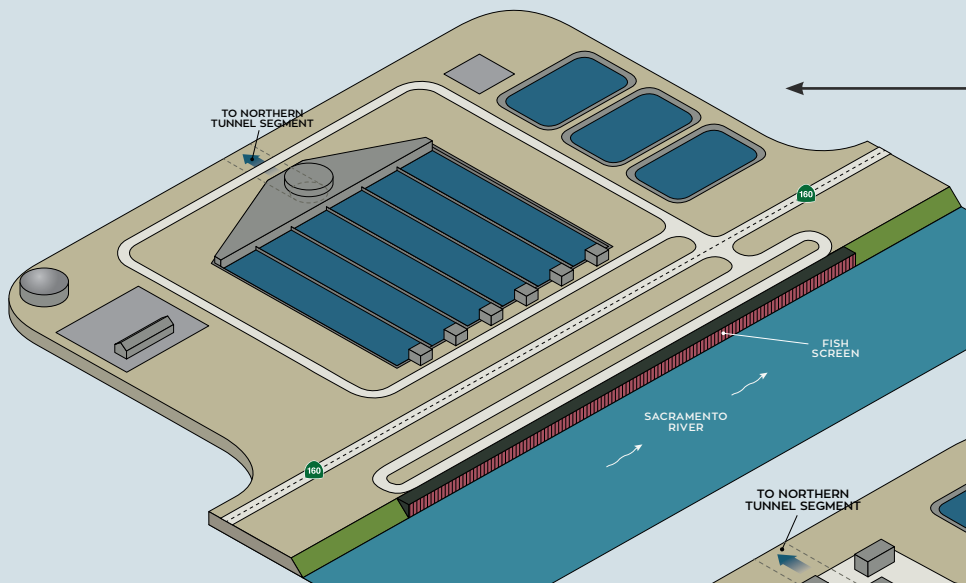
Increase use of state-owned property



Allow for gravity flow at certain river conditions

These changes, along with others, will be available for formal review and comment in the Partially Recirculated Draft Environmental Impact Report (EIR)/Supplemental Environmental Impact Statement (EIS) expected for release in June 2015.

ENGINEERING CHANGES TO INTAKE FACILITIES

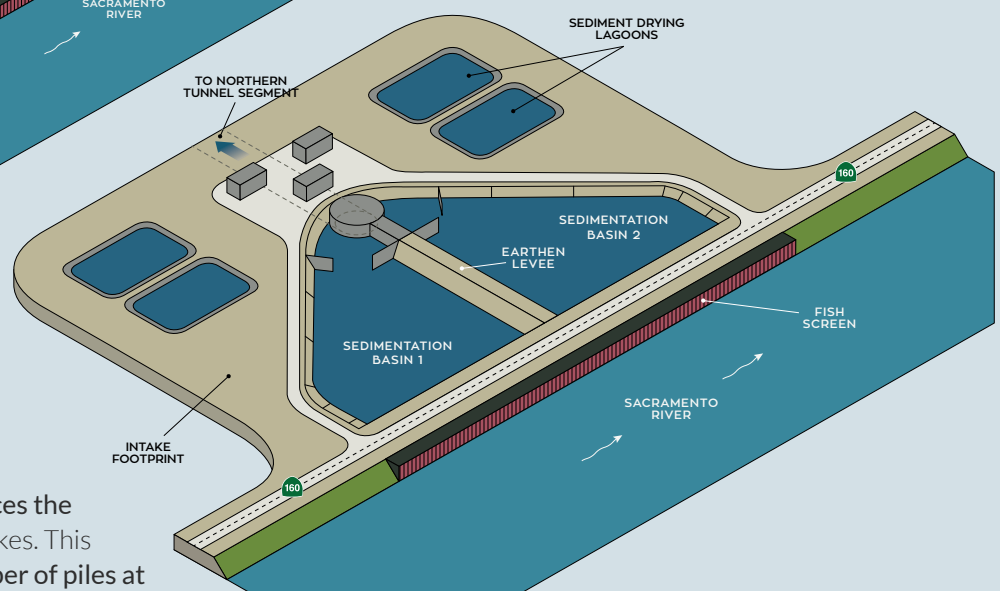


2014 PROPOSED DESIGN

In 2014, the three intakes were modified to **eliminate pumping plants and permanent power lines** from each intake site, which **reduced overall power needs**.

2015 PROPOSED DESIGN

The three intakes have been further refined to convert previously-proposed concrete sedimentation basins into two earthen bays. This change **eliminates the need to drive hundreds of piles (concrete pillars) into the ground, reduces equipment noise and truck trips, and significantly reduces the volume of concrete** needed to build the intakes. This modification is expected to **reduce the number of piles at each intake site by about 75 percent**.



PROPOSED PROJECT CHANGES

Reducing environmental impacts and improving operations



ENVIRONMENTAL BENEFITS

- 1 Eliminate the pumping plants, permanent power lines, and sediment basins at the northern intakes to reduce visual and air quality impacts and energy needs.
- 3 Reduce visual impacts near the town of Hood.
- 4 Remove permanent transmission lines near Stone Lakes Wildlife Refuge to reduce environmental impacts.
- 5 Reduce impacts on Staten Island wildlife habitat by removing the proposed tunnel launch facilities, large reusable tunnel material storage areas, a barge landing site, and high voltage transmission lines. This change also reduces the overall construction time on Staten Island.
- 6 Eliminate large access pads at vent structures to reduce the need for earth work
- 7 Eliminate environmental impacts on Italian Slough by removing an underground siphon.



OPERATIONAL BENEFITS

- 2 Gravity-fed operation improves tunnel operation and maintenance, reduces power requirements at the northern intakes, and improves long-term tunnel reliability by reducing internal pressure.
- 8 Consolidate pumping plants previously proposed at the three northern intakes to one combined pumping facility located on existing state-owned property at Clifton Court to reduce environmental and construction impacts.

