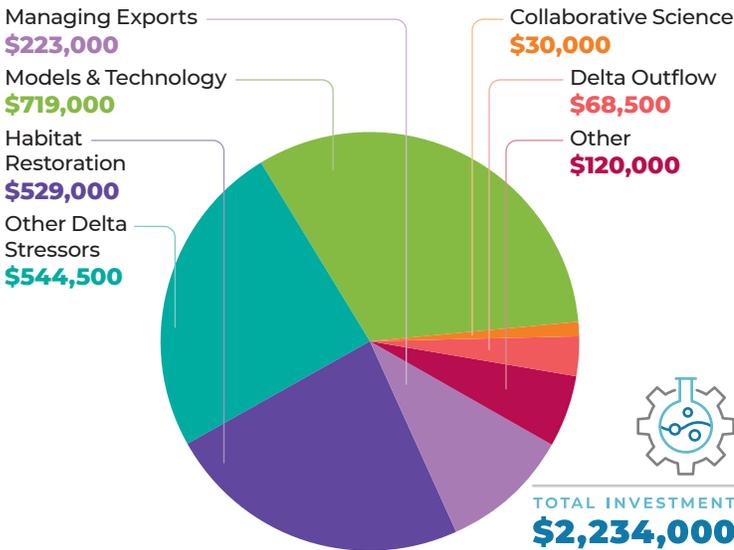


By looking at our state's water supply challenges through a scientific lens, we can help the state to achieve the co-equal goals of providing a more reliable water supply for California and protecting, restoring and enhancing the Delta ecosystem.

That is why the State Water Contractors (SWC) are collaborating with our partners in academia, government, non-profit and the private sectors to invest in new research and other programs that will spur future policymaking and improved water management practices throughout California.

SWC'S TOTAL INVESTMENT IN SCIENCE AND RESEARCH



Our Priorities & Successes

MANAGING EXPORTS TO MINIMIZE AND AVOID FISH ENTRAINMENT

The Sacramento-San Joaquin Delta is a complex maze of interconnected waterways. The SWC are funding research to learn all we can about the way fish move through the system so that we can manage our export operations to meet the State's co-equal goals:



Salmonids—\$98,000

- ▶ Acoustic Telemetry Data Gathering
- ▶ Incidental Take Limit (ITL) Monitoring

Delta Smelt—\$125,000

- ▶ Fall Outflow

OTHER DELTA STRESSORS—IDENTIFYING & UNDERSTANDING IMPACTS ON THE DELICATE DELTA ECOSYSTEM

In addition to being an environmental treasure, the Delta is the hub for California's water supply. As we seek to balance the water needs of both humans and the environment, we need to fill in the data gaps to better understand the many stressors affecting the Delta ecosystem and the fish that depend on it.

- ▶ \$160,000—Hatcheries and Non-Native Predators
- ▶ \$180,000—Toxicity in the Sacramento River near Hood
- ▶ \$35,000—Phytoplankton Enumeration
- ▶ \$170,000—Sacramento River Nutrient Change Study (Amonium Molecule)

MODELS AND TECHNOLOGY— DEVELOPING NEW WATER MANAGEMENT TOOLS

The SWC are also **investing over \$700,000 in 2018-2019** alone to apply research to the development of cutting-edge tools and models that can be used to support better decision-making, including highly recommended life-cycle models:



Delta Smelt Genome Sequencing



Delta Smelt EDNA



Delta Smelt Science Plan



Chinook Salmon Lifecycle Modeling



HABITAT RESTORATION— RESEARCHING HOW TO MAKE HABITAT RESTORATION SUCCESSFUL

Much of our original wetlands and floodplains have been lost to human development and several important components of the dynamic habitat fish need have been removed. Habitat restoration is recreating that inherent magic in water's interaction with land to restore their historical habitat. The SWC are investing in research to inform habitat restoration approaches to maximize the benefits of these projects:

Chinook Salmon \$276,000

- ▶ Fish Growth & Food Production
- ▶ Life History Diversity Study

Longfin Smelt \$230,000

- ▶ Physical Habitat Features

DELTA OUTFLOW— A BALANCING ACT

For the fish we are all trying to protect, the right landscape is just as critical as the right flow, and how these interact with each other to restore the dynamic functions of their habitat is the question we need to answer.

Delta Smelt \$68,000

- ▶ 12-month study analyzing data from the Suisun Marsh Salinity Control Gate Action as part of the Delta Smelt Resiliency Strategy



Our Commitment to Collaborative Science and the Next Generation of Water Researchers

The SWC are going above-and-beyond by collaborating with our partners at the local, state and federal levels, in academia and the private sector, to help the state meet its co-equal goals through the Collaborative Science and Adaptive Management Program (CSAMP). The SWC are also working to foster California's next generation of water researchers through the Sea Grant Fellowship, which provides unique research opportunities for graduate and post-doctoral students interested in freshwater resources and policy decisions.

