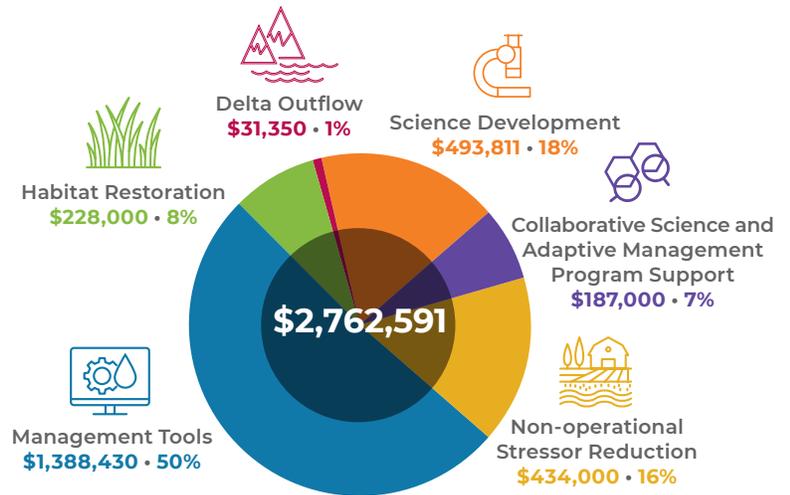


By looking at California's water supply challenges through a scientific lens, we can help the state to achieve the co-equal goals of providing a more reliable water supply and protecting, restoring and enhancing the Delta ecosystem.

## ACCOMPLISHMENTS

- ✓ The association's first-ever science symposium, convening stakeholders, researchers and scientists to better understand Longfin Smelt and their habitats, with more to come.
- ✓ Preliminary results from tributaries along the Northern California coast showing the presence of larval Longfin Smelt as far north as the Klamath River estuary.
- ✓ An ongoing analysis of Delta outflow needs and adaptive management to support a healthy fish population.
- ✓ A solid foundation for new research that will drive future policymaking and efforts to protect fish, wildlife and water quality.
- ✓ Support for California's next generation of water scientists and researchers through the California Sea Grant Delta Science Fellowship.

## SWC'S TOTAL INVESTMENT IN SCIENCE AND RESEARCH TO DATE



\*Percentages rounded to the nearest whole number.



## MANAGEMENT TOOLS

The SWC are applying research to the development of cutting-edge tools and models that can be used to support better water management decision-making at the state and federal levels.

### INVESTMENTS

Constituent Tracker	\$132,000
Probabilistic Length at Date (Phase 2)	\$225,000
Data Collection at Fremont Weir	\$688,770
Mapping Winter-run Habitat	\$20,718
Salmon Entrainment Model	\$16,500
Longfin Smelt Modeling	\$305,442

**\$1,388,430**



## SCIENCE DEVELOPMENT

SWC is collaborating with our partners in academia, government, non-profit and the private sectors to invest in new research for the protection and management of ESA species and enhancement of ecosystem habitats including supporting scientific studies, attending meetings, conducting workshops, pursuing grant funding opportunities, etc.

### INVESTMENTS

Facilitation	\$132,000
Longfin Smelt Symposium	\$15,000
Delta Outflow Symposium	\$20,000
South Delta Dredging Program	\$37,000
Expert Reviewer for IEP	\$18,000
Monitoring Surveys	
Delta Science Fellows	\$384,811
Review of the Delta Smelt Life Cycle Model	\$10,000

**\$493,811**



## NON-OPERATIONAL STRESSOR REDUCTION

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.

### INVESTMENTS

Delta Outflow Project	\$173,000
Spring Toxicity Testing	
Operation Baseline Study on Primary Production	\$261,000
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	<b>\$434,000</b>



## HABITAT RESTORATION

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 altered. Creating new habitat is helping to enhance the food web and protect endangered and threatened species. The SWC are investing in research to inform habitat restoration approaches to maximize the benefits of these projects.

### INVESTMENTS

Habitat Permitting	\$100,000
Biological Opinions	
Longfin Smelt Coastal Tributary Study	\$128,000
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	<b>\$228,000</b>



## COLLABORATIVE SCIENCE AND ADAPTIVE MANAGEMENT PROGRAM (CSAMP) SUPPORT

CSAMP focuses on science and adaptive management issues related to current and future biological opinions for State Water Project (SWP) and Central Valley Project (CVP) operations, including the science underlying specific actions contained in the reasonable and prudent alternatives (RPAs).

### INVESTMENTS

Fisheries Biologist	\$50,000
Structured Decision Making	\$11,000
Technical Work Group Participation	
CSAMP Facilitation	\$126,000
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	<b>\$187,000</b>



## DELTA OUTFLOW

For the fish we are all trying to protect, understanding the mechanisms underpinning flow and the interaction between flow and landscape are critical for restoring the dynamic functions of habitat.

### INVESTMENTS

Winter-run Lifecycle Model	\$31,350
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	<b>\$31,350</b>