SCIENCE = SOLUTIONS

SWC ANNUAL SCIENCE REPORT

2020-2021

Science is about more than data and research, it's about teamwork. Collaboration is key, and the State Water Contractors are committed to working together with our partners in academia, government, non-profit and the private sectors to invest in California's water future.

ACCOMPLISHMENTS

Incidental Take Permit Implementation and Collaboration—

- The SWC and Member Agencies participated in multiple interagency and stakeholder working groups tasked with determining how to implement permit requirements, including the Spring-Run Chinook Salmon Juvenile Production Estimate Core Team and Delta Coordination Group for summer-fall habitat actions for Delta Smelt.
- $19,000—The completion of the Winter-Run Salmon Entrainment Prediction Tool resulted in the early implementation of this tool as part of an ITP requirement. This tool helps to predict entrainment of salmon over the course of a season to inform real-time operational decisions in the south Delta.
- $470,000—Probabilistic Length at Date for Spring-Run Chinook Salmon will be developed to distinguish between salmon runs, which will reduce the likelihood that fall-run would be misidentified as spring-run and inadvertently impact water operations. This effort will ensure that take limits set forth in ESA and CESA permits are correctly applied to each run of listed salmon.

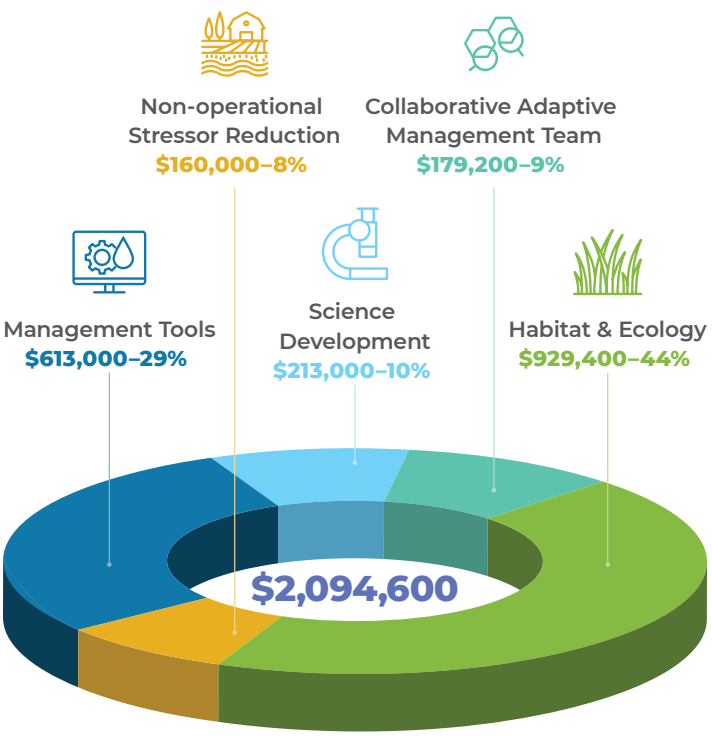
Salmon Recovery—

- $400,000—Funding for the first phase of a collaborative effort with environmental NGOs and agencies will create a definition for salmon recovery, forming the basis for a common starting point for all other salmon efforts.
- $200,000—Support for a study by the California Rice Commission will evaluate how rice fields can be managed to benefit Chinook salmon. This information can be used to design and implement restoration and other actions in the Sacramento River corridor.

Delta Science Program—

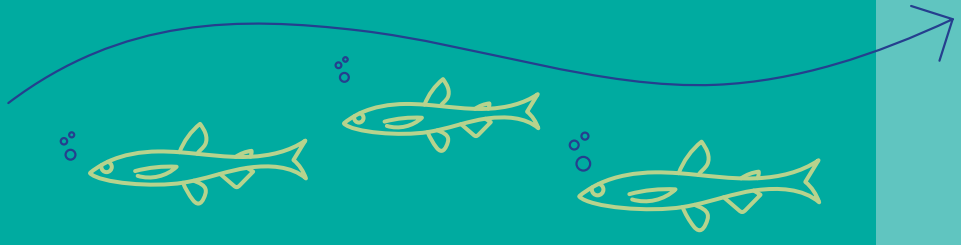
- $450,000—Co-funding a team of researchers for a project under the Delta Science Proposal Solicitation will provide much needed information on the detrital pathway of the Delta food web. This information can be used to design and implement tidal restoration in the Delta with greater certainty of benefits.

OUR INVESTMENTS



COLLABORATIVE ADAPTIVE MANAGEMENT TEAM

As a member of the Collaborative Adaptive Management Team (CAMT) the SWC is working with environmental NGOs, agencies, and public water agencies to study the different factors of Delta Smelt ecology and to implement a new structured decision making process that will help to protect this important fish species.



TO LEARN MORE, VISIT: SWC.ORG/SCIENCE

STRUCTURED DECISION MAKING EXPLAINED

A methodical way of documenting the basis for decision making. In structured decision making, the latest science, uncertainties, costs, and trade-offs are documented so that decision-makers can make more informed choices for ecosystem health. Structured decision making also supports adaptive management by integrating what is learned into subsequent decision processes.

SCIENCE = SOLUTIONS

SWC ANNUAL SCIENCE REPORT

2020-2021

NON-OPERATIONAL STRESSOR REDUCTION

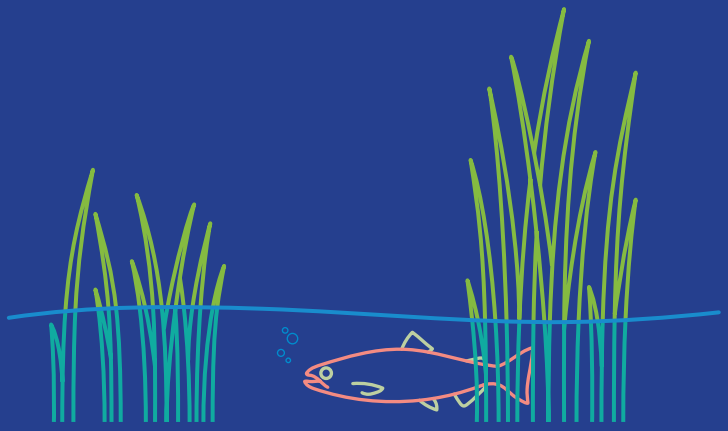
Over a century of man-made development, levee systems, pollution and more have fundamentally changed the Delta ecosystem and placed added stress on the State Water Project (SWP). While water operations have been the primary focus of Delta research, the SWC also supports investigations to learn how we can reduce other stressors.

SCIENCE DEVELOPMENT

Teamwork makes the...science work. The SWC is committed to supporting and identifying collaborative scientific efforts for the protection and management of endangered species and their habitats including supporting scientific studies, conducting workshops, pursuing grant funding opportunities, and more.

HABITAT AND ECOLOGY

Fish habitat is not just water. Restoring the ecological functions provided by the water-land interface is critical to improving fish populations. By supporting programs like California EcoRestore, innovations like using rice fields to improve salmon populations, and new technology like eDNA to identify where these fish live, the SWC are helping to restore and maintain our ecology.



TO LEARN MORE, VISIT: SWC.ORG/SCIENCE

MANAGEMENT TOOLS

The better the tools, the better the outcomes. Identifying and funding the development of new tools and models to better understand the various factors acting on the environment and how that impacts different fish populations is just one of the ways the SWC can aid scientists and researchers who are adding to California's knowledge bank.