

Delta Science Program & NCEAS 2021 Synthesis Working Group Information Sheet



**Delta
Science
Program**

DELTA STEWARDSHIP COUNCIL

- The need for increased capacity, dedicated time, and coordinated synthesis is recognized in the [Delta Science Plan](#), [Science Action Agenda](#), and [Interagency Ecological Program Science Strategy](#).
- The Delta Science Program is leading a synthesis working group, which includes quality training and a focused opportunity for enhanced collaboration.
- The working group consists of 18 participants from nine agencies and universities and outputs from the effort are ongoing.

Overview

The Delta Science Program partnered with the [National Center for Ecological Analysis and Synthesis](#) (NCEAS) to lead a collaborative working group, which delivered high-quality training in synthetic data science and statistical techniques in the fall of 2021. The working group also provided a focused opportunity for enhanced collaboration between scientists from federal and State agencies as well as academic scientists.

Working group participants convened for three weeks of training and collaboration facilitated by experts from NCEAS. Following this working group event, participants have been performing data analysis and synthesis using their newly developed skills to address questions important to Bay-Delta management. Preliminary results were presented on January 24, 2022, for a one-day virtual wrap-up workshop hosted by NCEAS. Outputs from the effort have been and continue to be released, including the open science curriculum, multiple peer-reviewed articles, presentations, reproducible workflows, R functions, and data publications.

Why a synthesis working group is important

Ecological synthesis is a critical component of ecosystem-based management and informed decision-making. NCEAS's emphasis on open science principles and techniques promotes transparency and data sharing through reproducible data, software, and workflows. The need for increased capacity, dedicated time, and coordinated synthesis is recognized and included as an action in the [Delta Science Plan](#), [Science Action Agenda](#), and [Interagency Ecological Program Science Strategy](#).

Participants

The working group consists of 18 participants from nine agencies and universities:

- California Department of Fish and Wildlife (CDFW)
- California Department of Water Resources (DWR)
- Delta Stewardship Council, Delta Science Program (DSP)
- National Oceanic and Atmospheric Administration (NOAA)
- University of California Berkeley (UCB)
- University of California Davis (UCD)
- University of California Santa Cruz (UCSC)
- U.S. Bureau of Reclamation (USBR)
- U.S. Fish and Wildlife Service (USFWS)
- U.S. Geological Survey (USGS)



Goals

The working group is leveraging the Fall 2021 training and the collaborative setting to analyze drivers of the estuarine aquatic food supply. The participants divided into two distinct subgroups focusing on:

- The effect of flood management on estuary health.
- Identifying the drivers of food web dynamics on an estuary scale.

Products from this working group will offer strong scientific support to inform decision-making for restoration, protection of endangered species, and management of flow actions. The focus on food webs serves broad interagency goals, such as ecosystem function, resilience, and sustainability. Furthermore, comprehensive, spatially explicit, food-web modeling is a recommendation in the [Delta Independent Science Board's](#) review of [The Science of Non-native Species in a Dynamic Delta](#).