## What's next with CEFF?

### **CEFF Implementation Workplan**

- Additional work needed to support statewide implementation of CEFF
  - Improvements in technical tools
  - Track and document case studies
  - Mechanisms for ongoing data and information sharing
- Living document should be periodically reviewed and updated

#### California Environmental Flows Framework:

Implementation Workplan

Prepared by:

California Environmental Flow Working Group, a committee of the California Water Quality Monitoring Council

DRAFT for Internal Review - August 3, 2021

https://ceff.ucdavis.edu/tech-report

#### **Technical Tool Advancements**

 Modeling in ungauged systems for alteration assessment and tradeoff evaluation (Section C) across drainage network

 Understanding interactions between flow and temperature to inform management of temperature-dependent species

 Predicting groundwater contributions to allow for more holistic management of water resources

### Modeling Actual Flows in Ungauged Systems

- Critical component of CEFF Section C and development of environmental flow recommendations across drainage network
- Modeling of actual flows and/or actual functional flow metrics to enable alterations analyses (Section C) with Upstream tech
- Further understand how alteration of functional flows may affect biology to inform tradeoff evaluation
  - ➤ Alteration effects on umbrella species representative of full community assemblages (Obester et al., 2022)
  - ➤ Bio-indices (CSCI/ASCI) and functional flow alteration statewide (Peek et al., 2022) and southern California (Irving et al., 2022)

## Understanding Interaction between of Flow and Temperature

• Inform management of temperature dependent species (e.g., fish)

 Relationship between functional flow metrics and stream temperature via temperature models

Interactions between flow alteration, temperature, and aquatic species

## Predicting Groundwater Contributions for More Holistic Water Resource Management

 Improve predictions of groundwater contributions to summer baseflows in systems strongly influenced by groundwater interactions

 Coordinate with Sustainable Groundwater Management Act (SGMA), Flood-MAR, and other programs that consider interactions between surface water and groundwater

Additional CEFF case studies where SGMA is being implemented

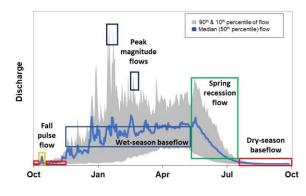
### We want your input!

• Google Form: <a href="https://forms.gle/bqMBN3XD9BAunRtWA">https://forms.gle/bqMBN3XD9BAunRtWA</a>

- Score elements of implementation workplan according to need
- List any missing key elements
- Questions or comments

 Consider collaborating with the technical team to implement elements of the workplan and/or on case studies

# Functional Flows Calculator Demo at 4pm in Coastal Hearing Room



- How to calculate functional flow metrics using daily flow timeseries (observed or modeled) using Functional Flows Calculator (Patterson et al., 2020, J. Hydrol.)
- R package: <a href="https://github.com/ceff-tech/ffc">https://github.com/ceff-tech/ffc</a> api client
  - Tool installation and setup
  - Package functionality
  - Demonstration and use of tool

#### Questions?

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#### **CEFF FAQs**

#### https://ceff.ucdavis.edu/fact-sheets-and-faqs

#### California Environmental Flows Framework



In response to comments received throughout the development of the Framework, the CEFF Technical Team has developed resources to help users understand the Framework and answer common questions.

A fact sheet describing the Framework is available for download <u>here.</u>

The FAQs provided below detail responses to questions that arose during public review of the California Environmental Flows Framework version 1.0. They have been grouped into the following categories based on similar themes: Clarity of terms/presentation, underlying conceptual approach, modeling and analysis, and implementation challenges.