Relationships between water temperature and estuarine inflow

Major findings:



- Negative temperature-inflow relationships
 - Higher inflow = **cooler** water
 - Most common



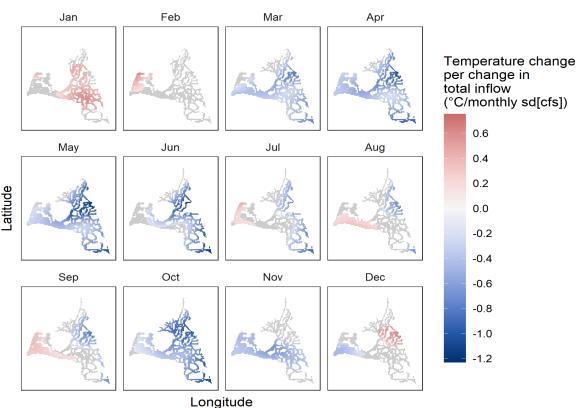
- Positive temperature-inflow relationships
 - Higher inflow = warmer water
 - Occurs during winter and downstream in the summer.

Take-away-point(s):

Understanding long-term patterns is important because ...

- 1. Temperature drives ecosystem functions from subcellular to community scales
- 2. Many species including managed fishes are sensitive to temperature changes, a management need highlighted by the 2022-2026 Science Action Agenda Management Need 5

Fig 4 (Bashevkin & Mahardja, 2022)



NOTE: This study looked at correlation, not causation, and did not evaluate the impact of dam releases on water temperature

Bashevkin SM, Mahardja B. "Seasonally variable relationships between surface water temperature and inflow in the upper San Francisco Estuary". Limnology and Oceanography, (2022). 67(3), p. 684-792, https://doi.org/10.1002/lno.12027.