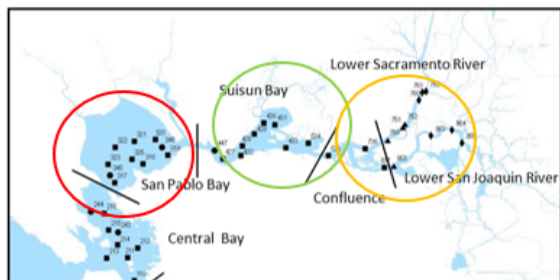
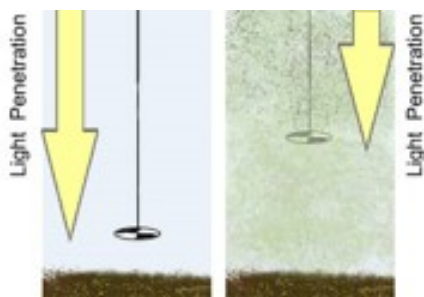


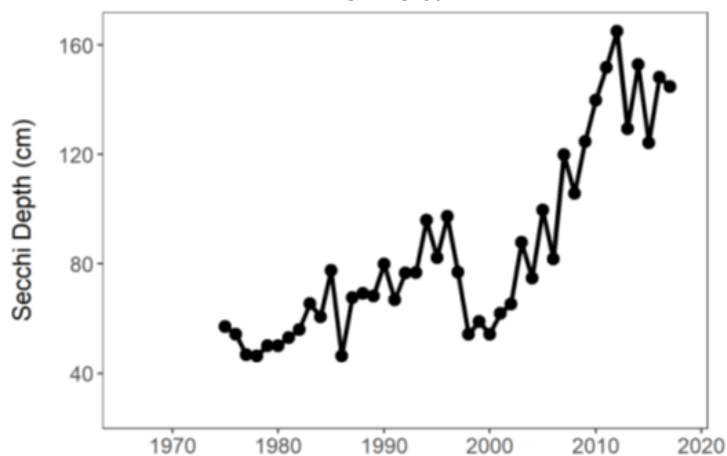
Secchi Depth



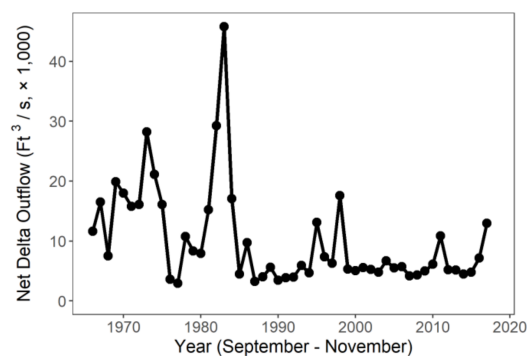
- Organisms in this ecosystem are adapted to high turbidity conditions, and reductions in turbidity can have many negative ecological effects. Higher values for Secchi depth indicate lower turbidity.
- Secchi depth is measured monthly by DWR's Environmental monitoring program by dropping a black-and-white disk in the water until it disappears.



The Delta

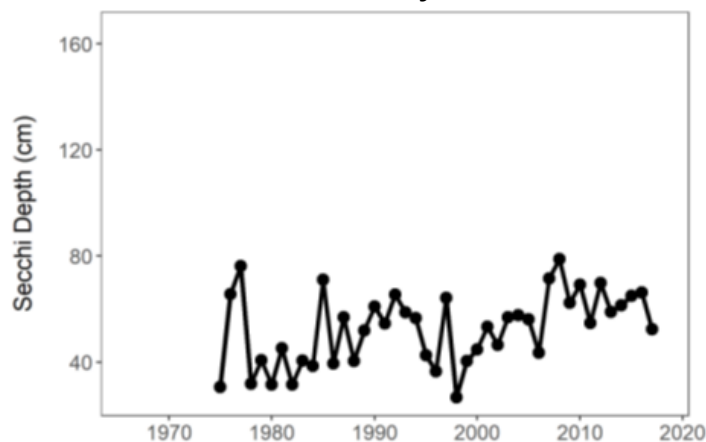


- The Delta has been getting clearer over time.



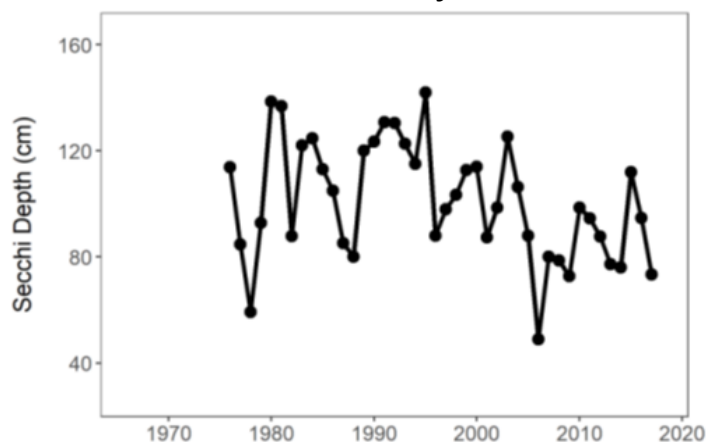
- Delta outflow is a major ecosystem driver and depends on natural hydrological variability and water management operations, including exports from the Delta and reservoir operations.

Suisun Bay



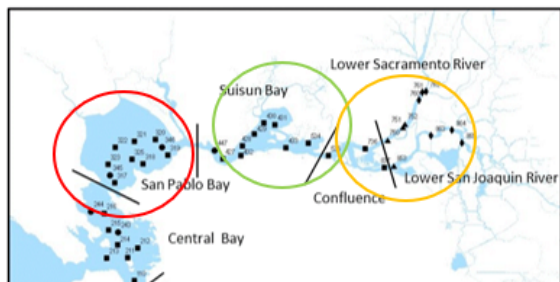
- Suisun bay is usually pretty murky, meaning low secchi depth.

San Pablo Bay

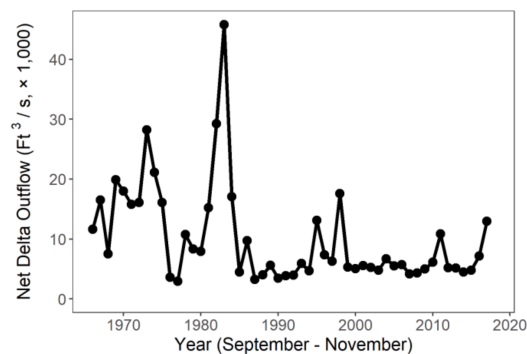


- San Pablo bay is pretty clear.

Temperature

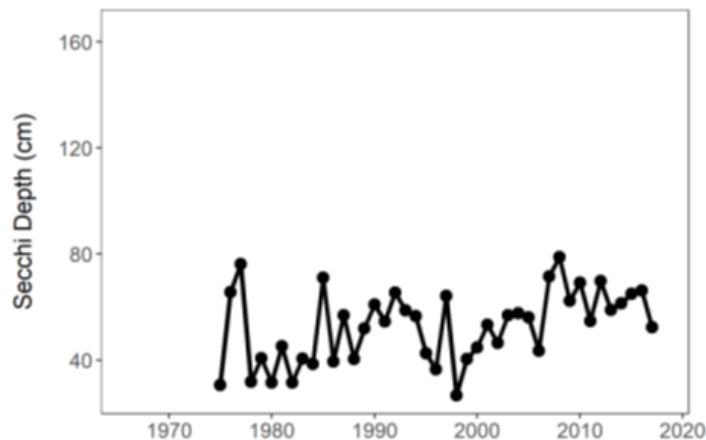


- Water temperature affects fish and stuff.
- High temperatures lead to fish not doing so good and some harmful algal blooms.
- Climate change will make things worse.



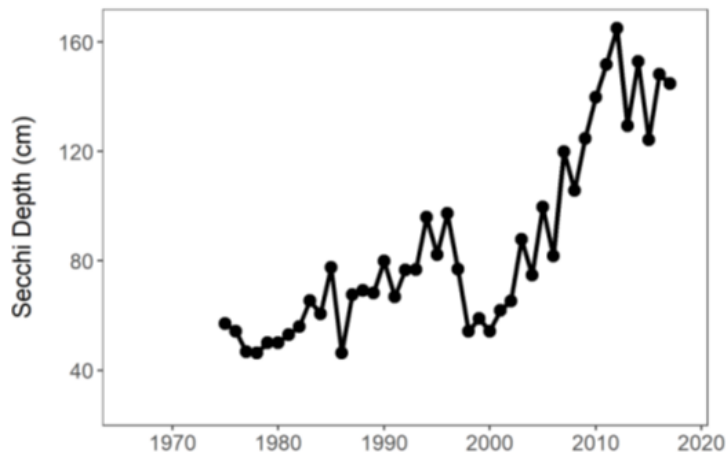
- Delta outflow is a major ecosystem driver and depends on natural hydrological variability and water management operations, including exports from the Delta and reservoir operations.
- High Delta outflow causes fresher conditions in San Pablo Bay.

Suisun Bay



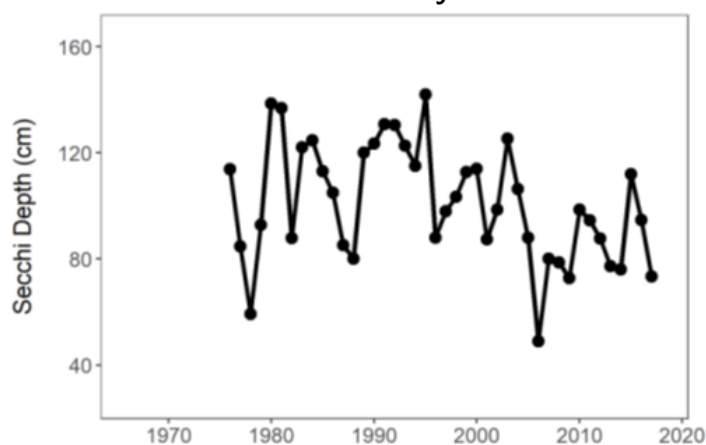
- Suisun Bay is cool.

The Delta



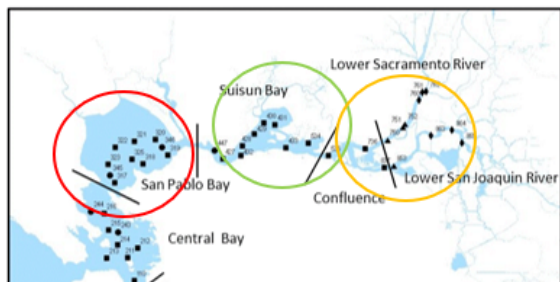
- The delta is hot and stuff, but wetlands might form thermal refugia.

San Pablo Bay

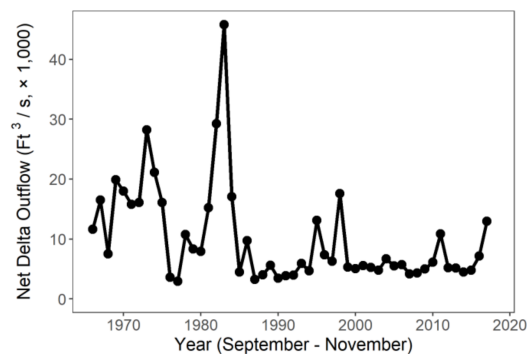
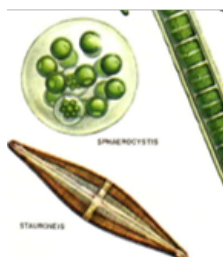


- Other fun temperature facts.

Chlorophyll

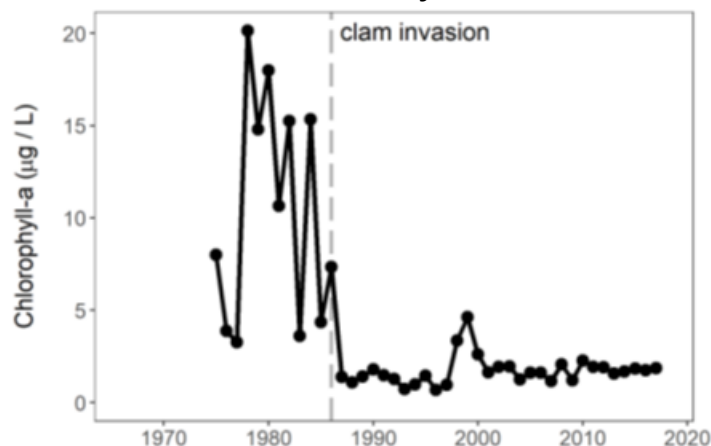


- Chlorophyll fact 1.
- Chlorophyll fact 2.
- Chlorophyll fact 3.



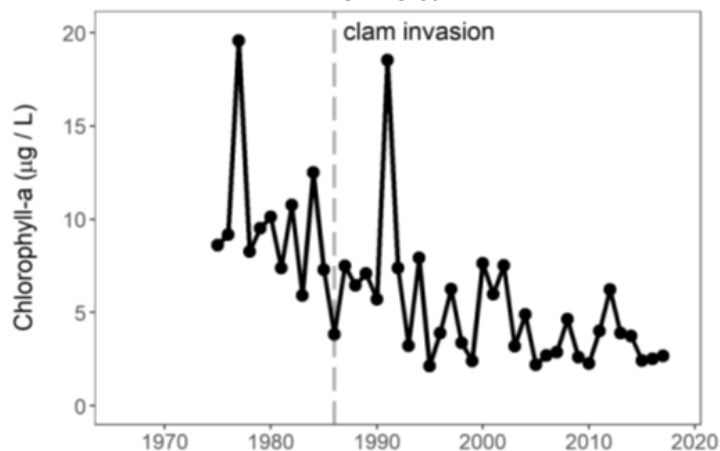
- Delta outflow is a major ecosystem driver and depends on natural hydrological variability and water management operations, including exports from the Delta and reservoir operations.

Suisun Bay



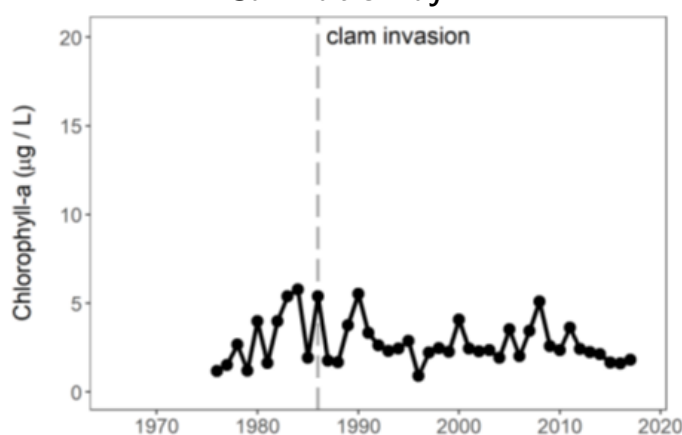
- Clams really hit Suisun hard.

The Delta



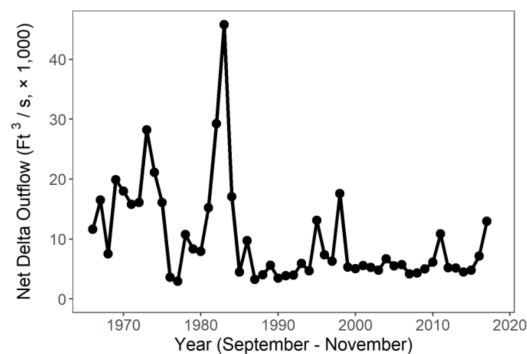
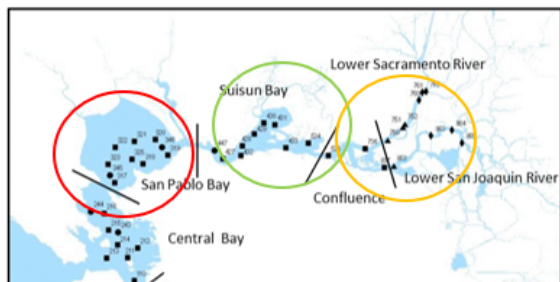
- The delta is hot and stuff, but wetlands might form thermal refugia.

San Pablo Bay



- San Pablo bay didn't have a big decrease in chlorophyll after the clam invasion, but it's always been low.

Zooplankton

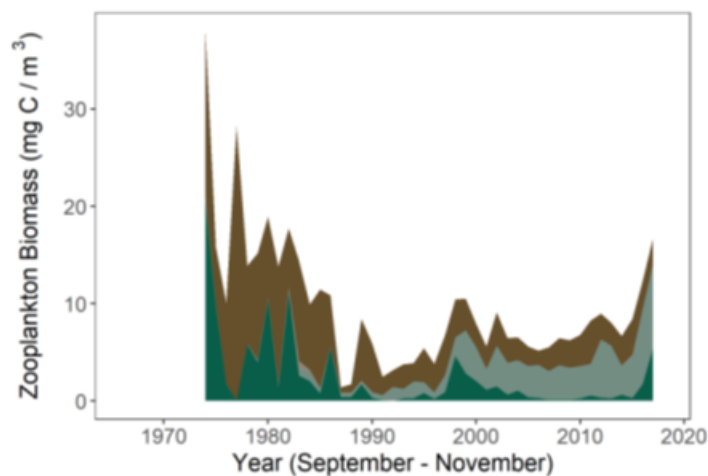


- Delta outflow is a major ecosystem driver and depends on natural hydrological variability and water management operations, including exports from the Delta and reservoir operations.

- Here's some info on zooplankton.

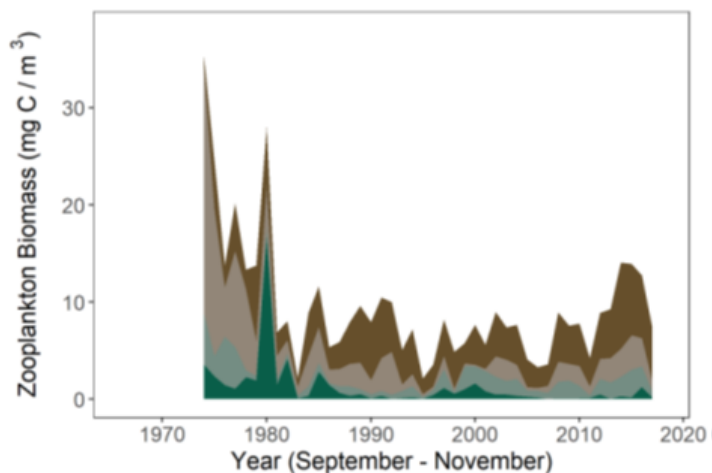


Suisun Bay



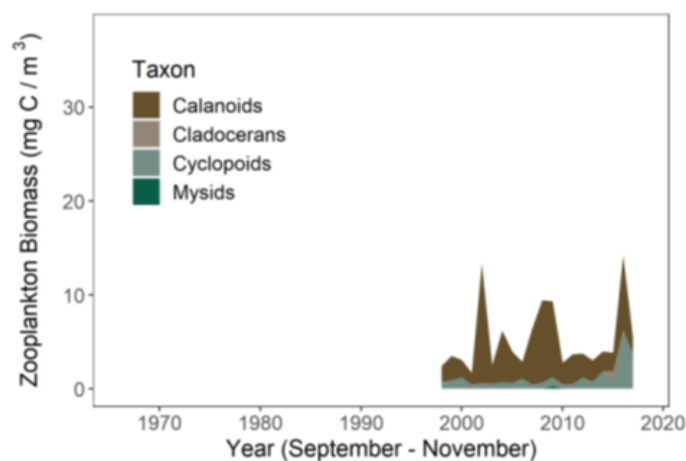
- There used to be lots of mysids, but now it's mostly cyclopoids.

The Delta



- Lots of calanoid copepods.

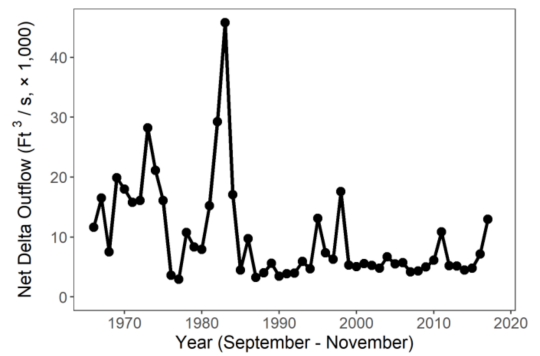
San Pablo Bay



- Not many zoops here.

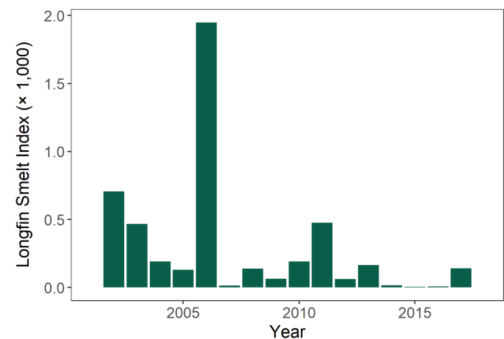
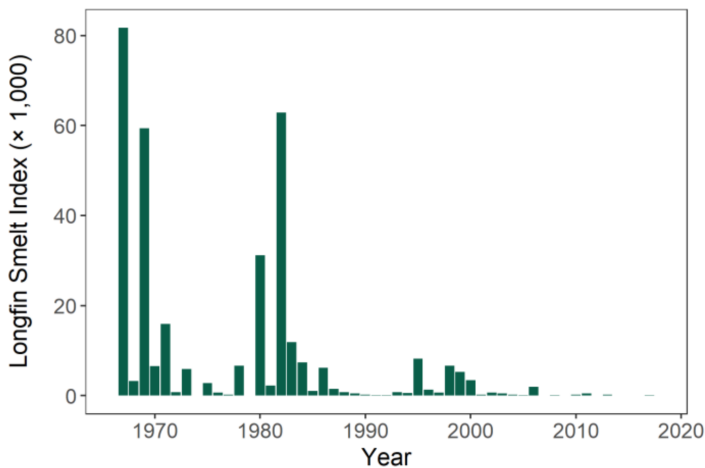
2017-2018 Winter Season Report

Smelt



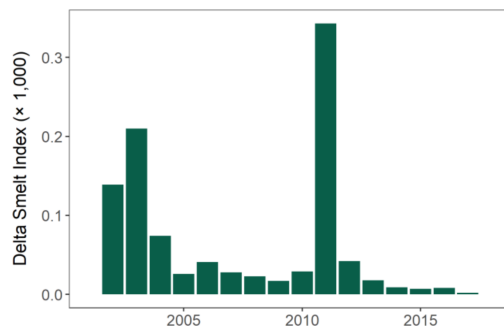
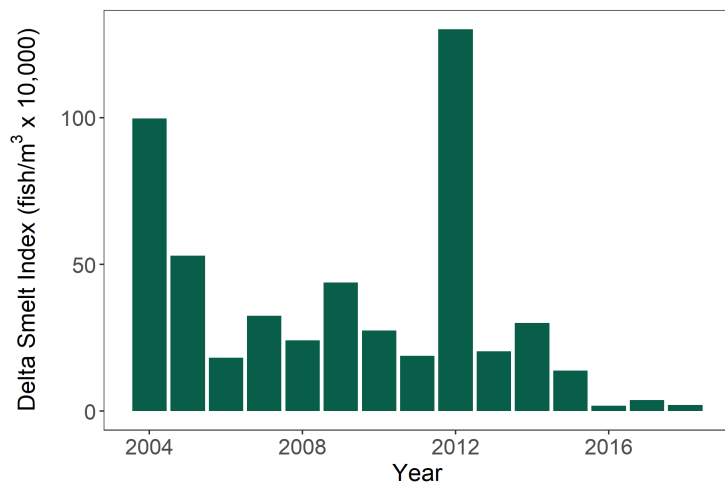
- High outflow leads to increased abundance of Longfin Smelt.
- High outflow increases abundance of Delta Smelt only in cooler years.

Longfin Smelt – Bay Study



- Longfin smelt experienced severe declines in the early 2000s and have not recovered.
- Bay Study is the only IEP survey that samples throughout San Francisco Bay, making it especially good at picking up Longfin Smelt.

Delta Smelt – SKT



- Spring Kodiak Trawl samples throughout the Bay and Delta.
- Delta smelt are not doing so great.

Interagency Ecological Program Status & Trends

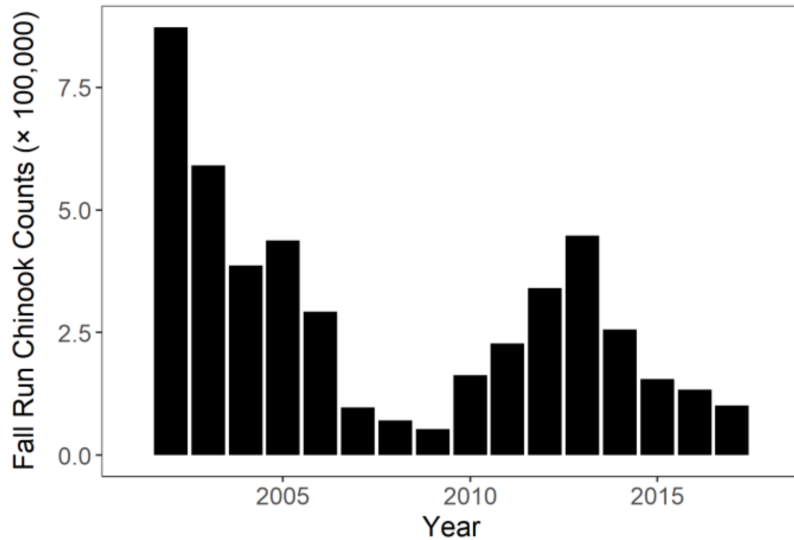
2017-2018 Winter Season Report

Salmon

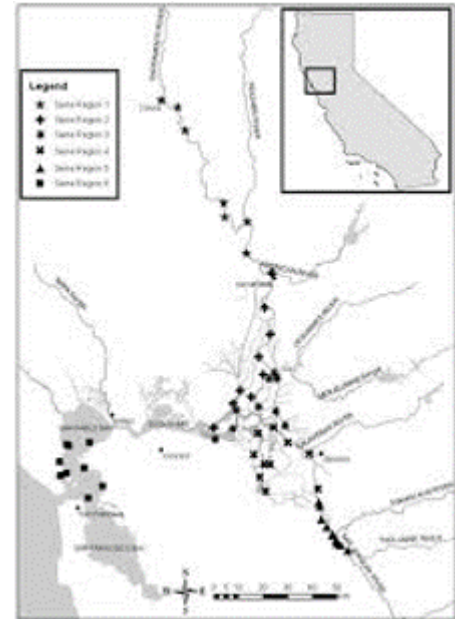
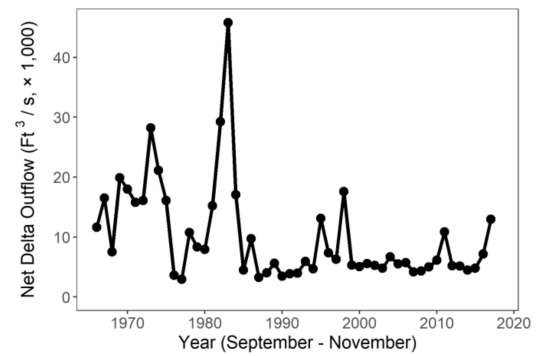
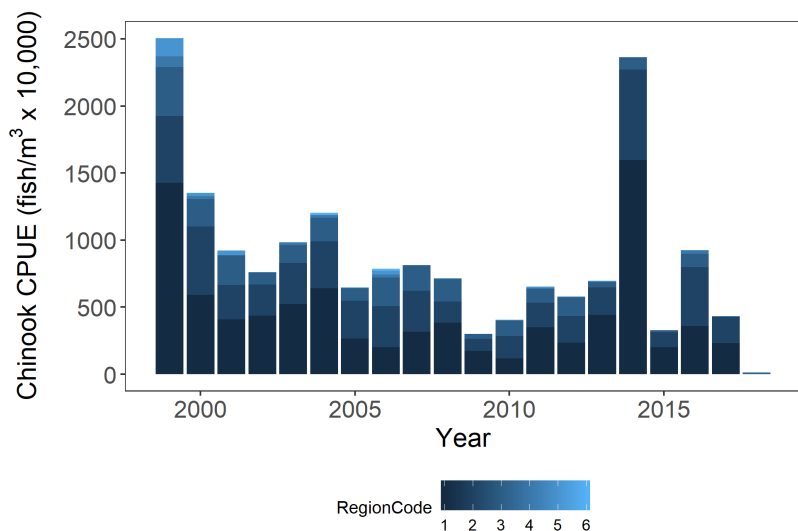
- Salmon have been doing OK in recent years, though not amazing.
- The drought was hard on them.



Red Bluff Diversion Dam



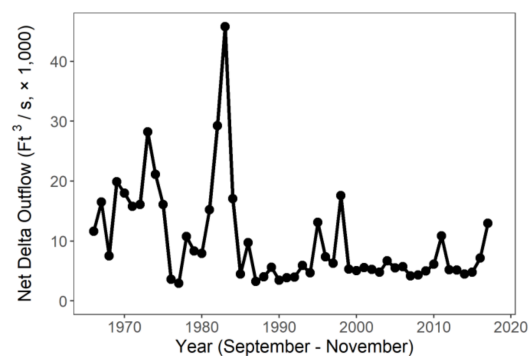
DJFMP Beach Seines



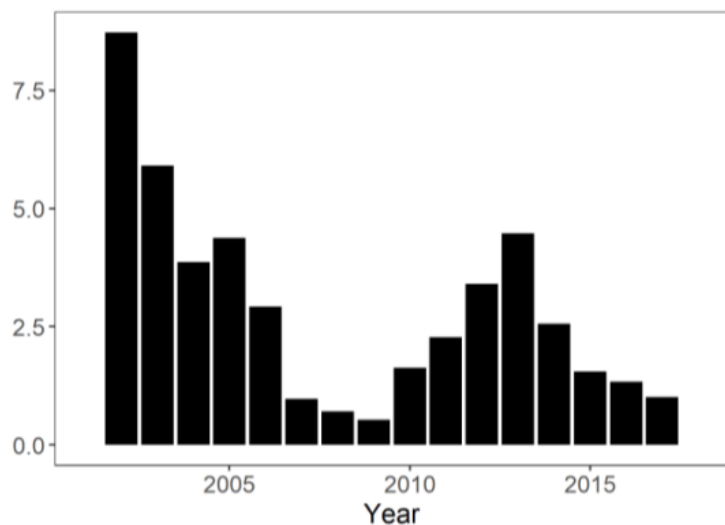
- Preliminary estimates of passage by brood-year (BY) and run for unmarked juvenile Chinook salmon and steelhead trout captured by rotary-screw traps at Red Bluff Diversion Dam (RK391), Sacramento River, CA.
- This sampling provides an estimate of production in the upper watershed.
- DJFMP's beach seine data provides information on landscape patterns of juvenile chinook occurrence.
- Researchers use these patterns to determine differences in salmon life-history.

2017-2018 Winter Season Report

Other fish

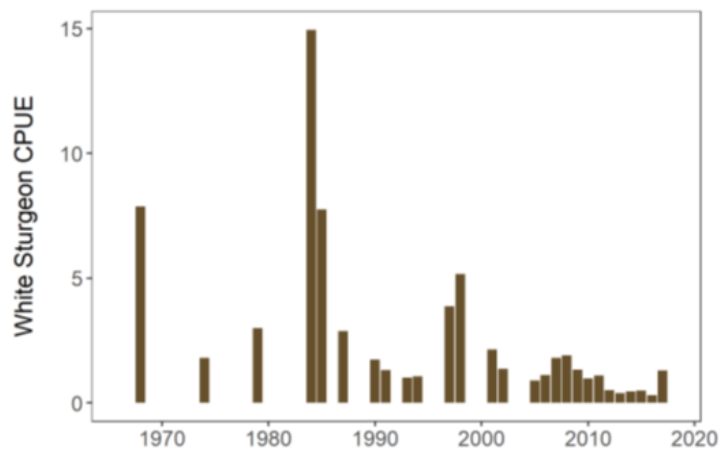


Splittail – Yolo bypass screw trap



- Splittail spawn on flood plains such as the yolo bypass.
- They do really well in wet years.
- The screw trap catches a lot of juvenile splittail in the spring after a wet year.

Sturgeon – Bay Study



- Juvenile sturgeon are caught in Bay Study's otter trawl.
- White sturgeon support a recreational fishery.
- Green sturgeon are listed as threatened.