

COMMITTEE STAFF SUMMARY FOR SEPTEMBER 19, 2023 WRC

3. WHITE STURGEON SPORT FISHING**Today's Item**Information Action

Discuss and potentially make recommendations for: (A) any regulation changes for white sturgeon beginning in 2025, and (B) interim emergency measures for 2023 and 2024 related to white sturgeon population declines.

Summary of Previous/Future Actions

Initial discussion

May 17, 2023; WRC

Today discuss and potentially make recommendations

September 19, 2023; WRC

Background

White sturgeon is an anadromous species of fish that resides primarily in the San Francisco Bay/Sacramento-San Joaquin River Delta (Bay-Delta) and migrates as adults into the major rivers of the Central Valley to spawn. The abundance of legal-sized white sturgeon has declined considerably since the 1980s.

At present, recreational anglers can keep one white sturgeon per day, and a combined total of three per year, between 40 and 60 inch fork length. The season is open year-round, with some limited regional and seasonal closures. In recent years, the number of fish caught and released has declined precipitously, indicating that fewer fish overall are being caught. The exploitation rate of white sturgeon is estimated to be high, ranging from 8.0 to 29.6% between 2007 and 2015; it has been suggested that the highest exploitation rate a white sturgeon population can sustain is approximately 5 to 10%.

During July and August 2022, the San Francisco Bay region experienced a major harmful algal bloom (HAB) of *Heterosigma akashiwo* that resulted in significant mortality of fishes, including sturgeon. While the absolute magnitude of the HAB's impact on the white sturgeon population is unknown, it is thought to be quite significant, due to the number and type of carcasses recovered. In addition, in July and August of 2023, a HAB of the same species was detected in San Francisco Bay and at least 15 white sturgeon carcasses were reported; total impacts are unknown.

At today's meeting, the Department is expected to recommend all harvest of white sturgeon within the recreational fishery be paused starting January 2024, until new regulations can be developed that will limit exploitation to sustainable rates based on monitoring. A short pause also will allow time for the population to begin stabilizing from the HAB-induced die-offs while the Department readjusts management measures for the future population. Today, the Department will provide details of its proposal for emergency regulations, as well as initial vetting of longer-term, white sturgeon regulation changes.

Significant Public Comments

One commenter supports a catch-and-release fishery but opposes geographical closures (Exhibit 2).

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Recommendation

Commission staff: Support an emergency regulation regarding white sturgeon, based on the Department's proposal and today's discussion.

Department: Support an emergency regulation regarding white sturgeon.

Exhibits

1. [Department presentation](#)
2. [Email from Terence Cerutti, received August 17, 2023](#)

Committee Direction/Recommendation

The Wildlife Resources Committee recommends the Commission support an emergency regulation regarding white sturgeon, based on the Department's proposal and today's discussion.



WHITE STURGEON FISHERY REGULATION CHANGES: FGC WILDLIFE RESOURCES COMMITTEE UPDATE

FISHERIES BRANCH

PRESENTED BY DR. JOHN KELLY

California Department of Fish and Wildlife

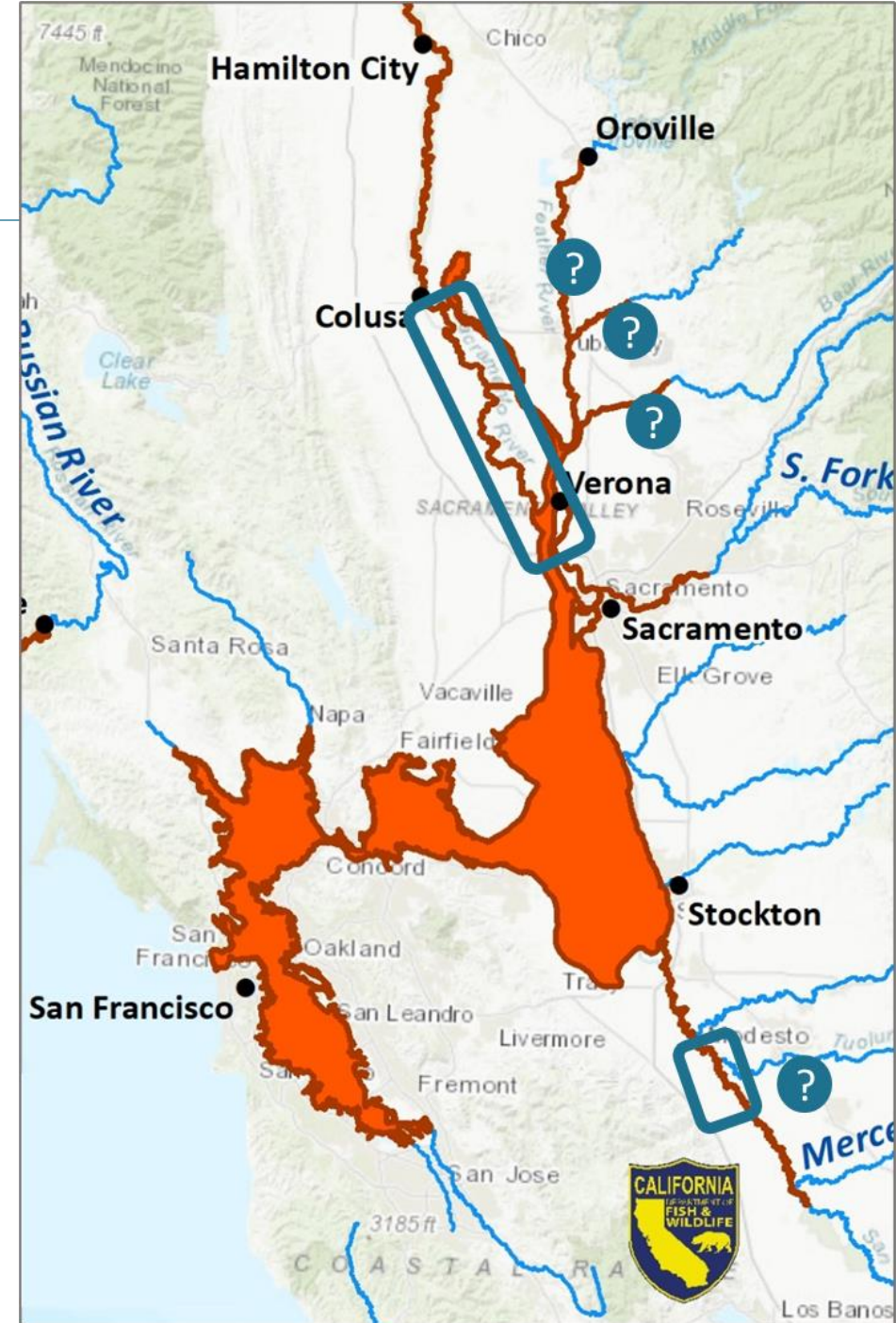
White Sturgeon (*Acipenser transmontanus*)

- Up to 20+ feet, 1800 lbs
- Lifespan: 100+ years
- Estuary and freshwater oriented
 - Infrequent ocean movements
- 1 California population
- Recreational fishery
- **CA Species of Special Concern:**
vulnerable to overexploitation



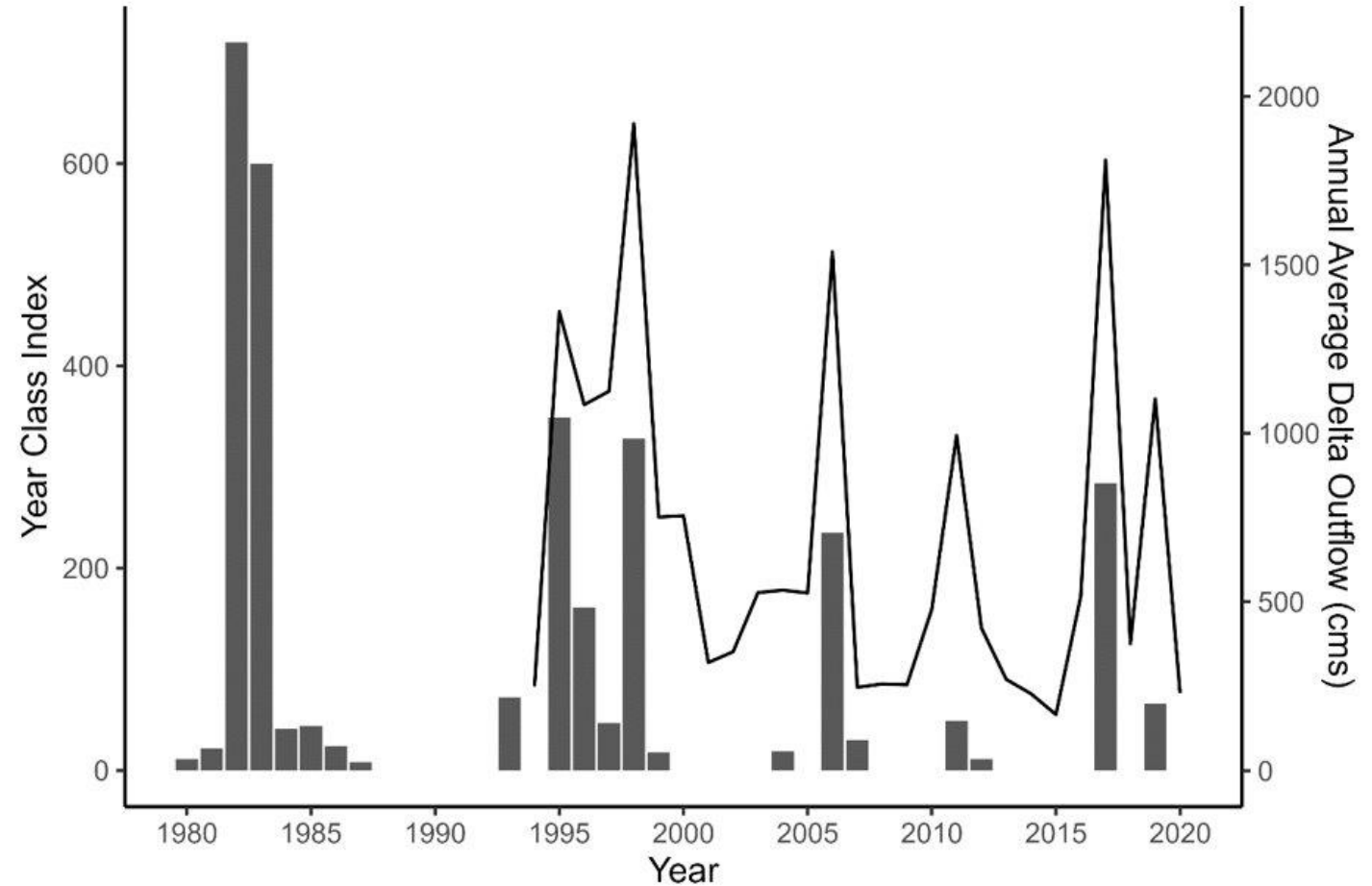
Species Biology

- Spawns in large Central Valley rivers
 - January – May
- Limited habitat
- Spawning is not annual
 - Males 1-2 years
 - Females 2-5 years



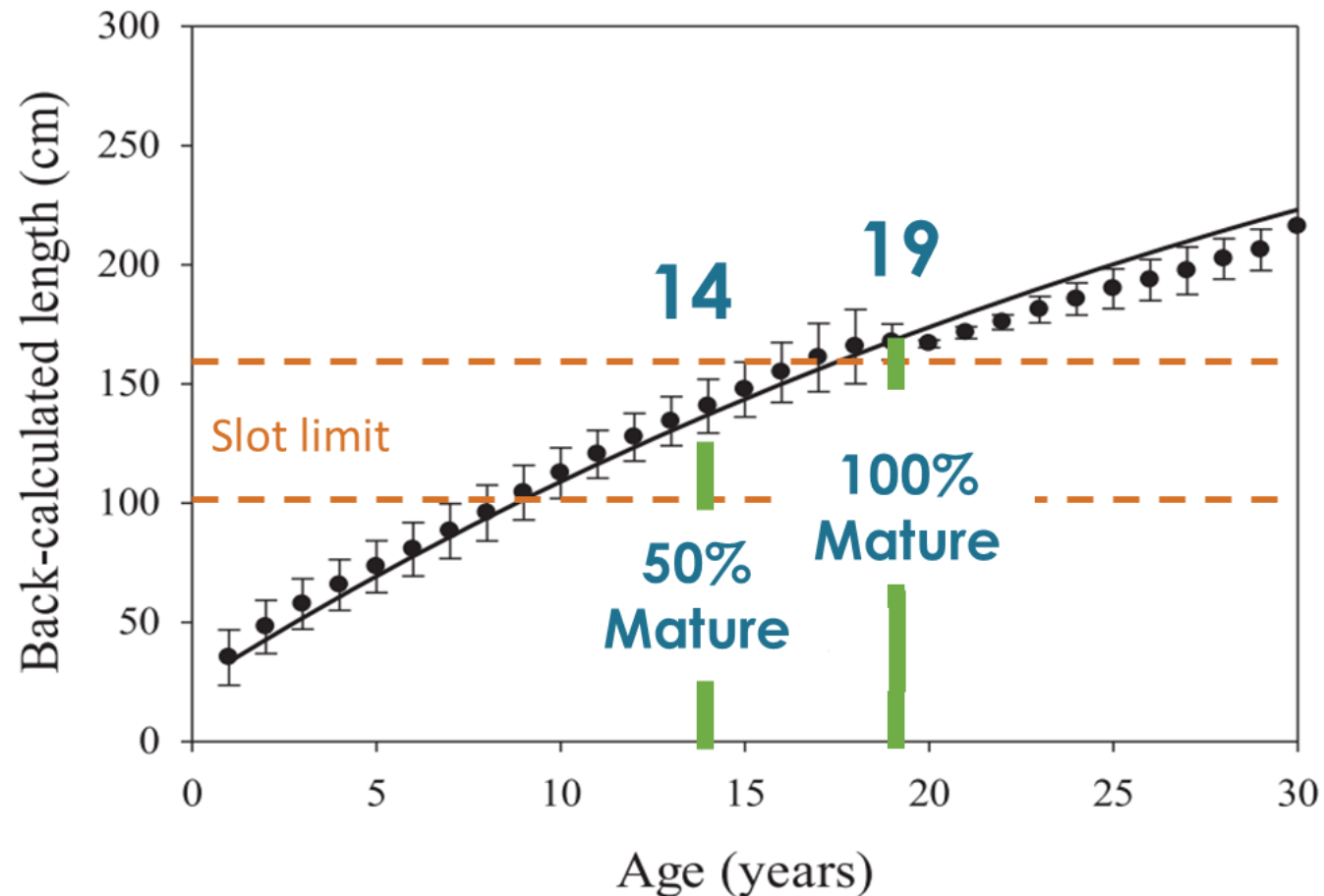
Species Biology

- Year Class Index = survival to years 1 and 2
- Infrequent recruitment success
 - Correlated with wet years



Species Biology

- Slow growth and late maturity

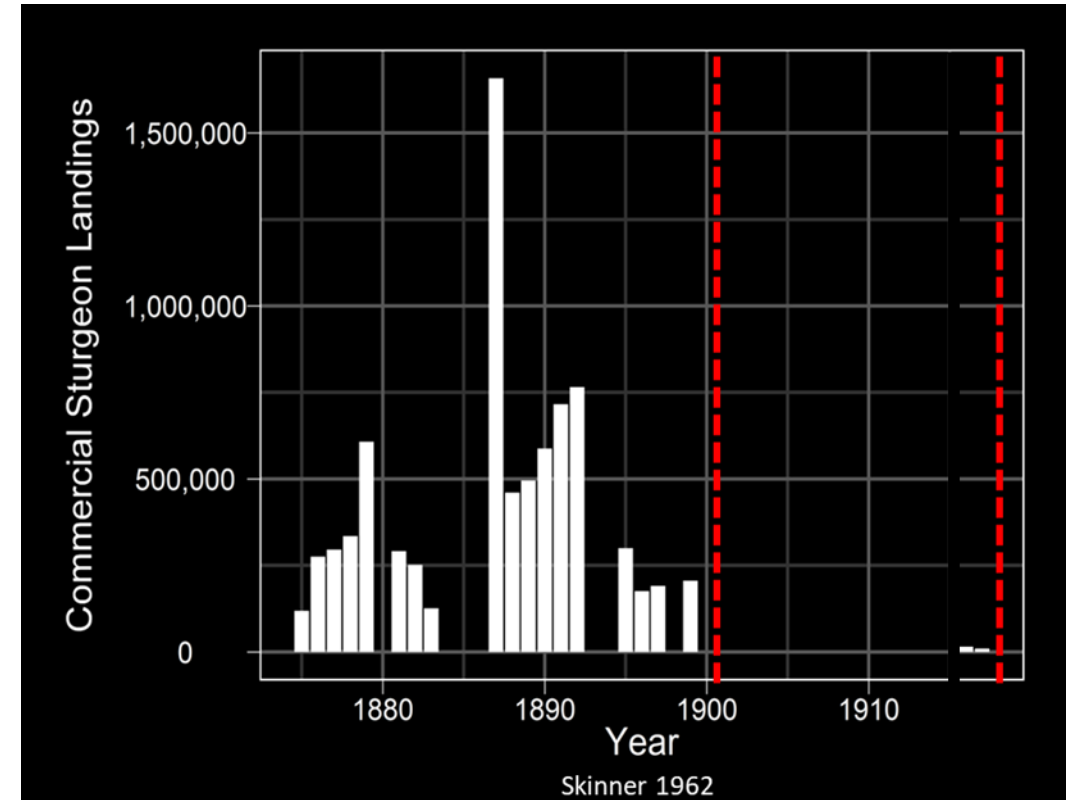


Data source: CDFW Bay Delta Region – IEP Adult Sturgeon Survey

History of the Fishery:

Commercial and Recreational Fishery

- 1860's: Sturgeon fishery first monitored
- 1901: Closed
- 1909: Reopened
- 1917: Closed long term.
Commercial fishery remains closed.



History of the Fishery



1954

Fishery reopens (Green and White). 40" Total Length (TL) minimum, one fish per day

1990

Slot implemented: Min. size ↑ to 42" TL, Max. size set at 72" TL

1992

Min. size ↑ to 46" TL

2007

- Green Sturgeon fishery closed
- Max. size ↓ to 66" TL for White Sturgeon
- Sturgeon Fishing Report Cards required
- Maximum take of 3 white sturgeon per year, 1 per day

1956

Min. size ↑ to 50" TL

1964

Min. size ↓ to 40" TL

1991

Min. size ↑ to 44" TL

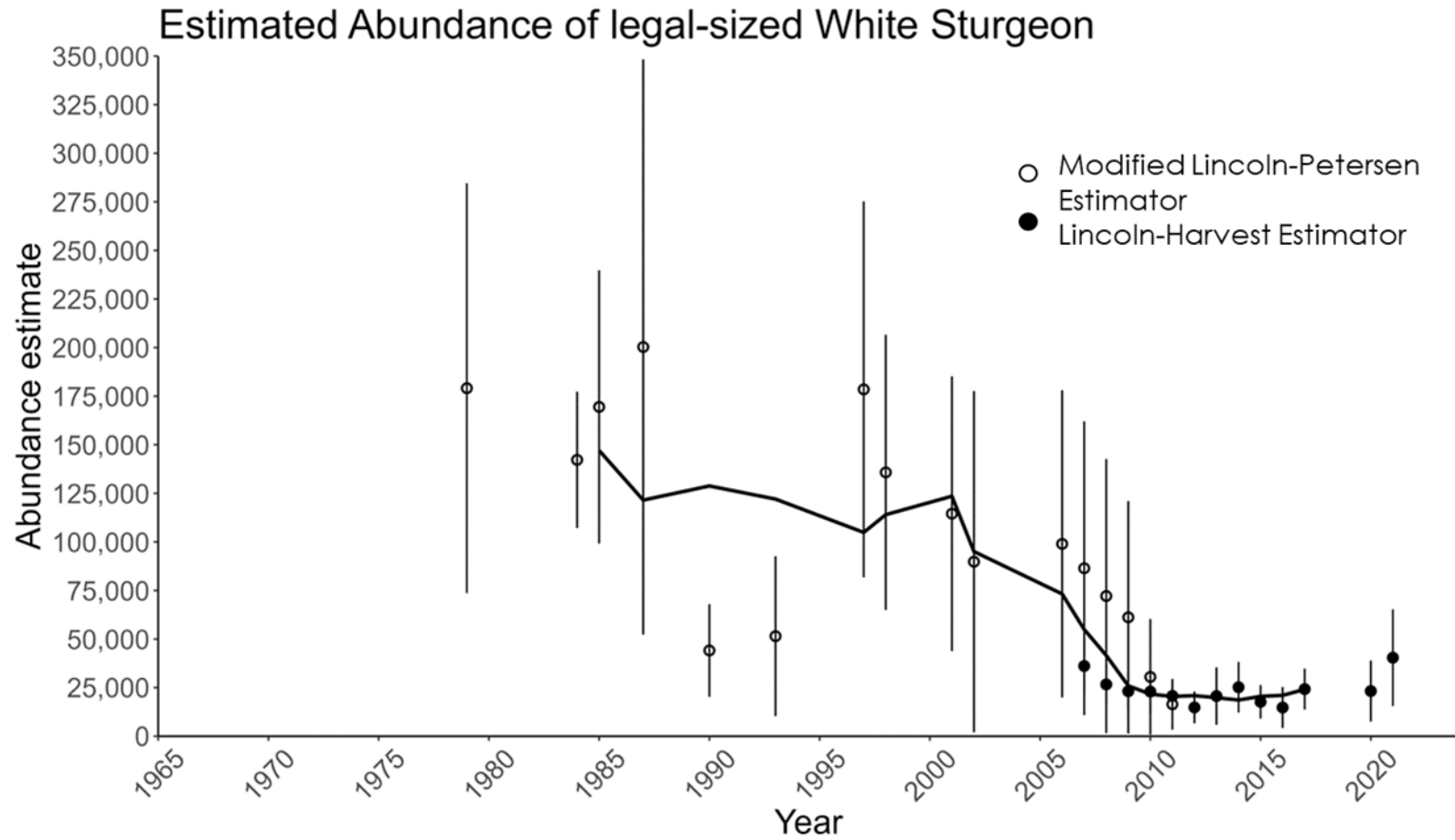
2006

Green Sturgeon listed as ESA Threatened

2013 – present

- Slot changed to 40-60" Fork Length (FL)
- Fish >68" FL may not be removed from water
- Single barbless hook, no snares or gaffs
- Closure upper Sac. R & central SF Bay

Abundance Estimates



Black line represents 5-year rolling average

Sturgeon Report Card Data

Total caught:

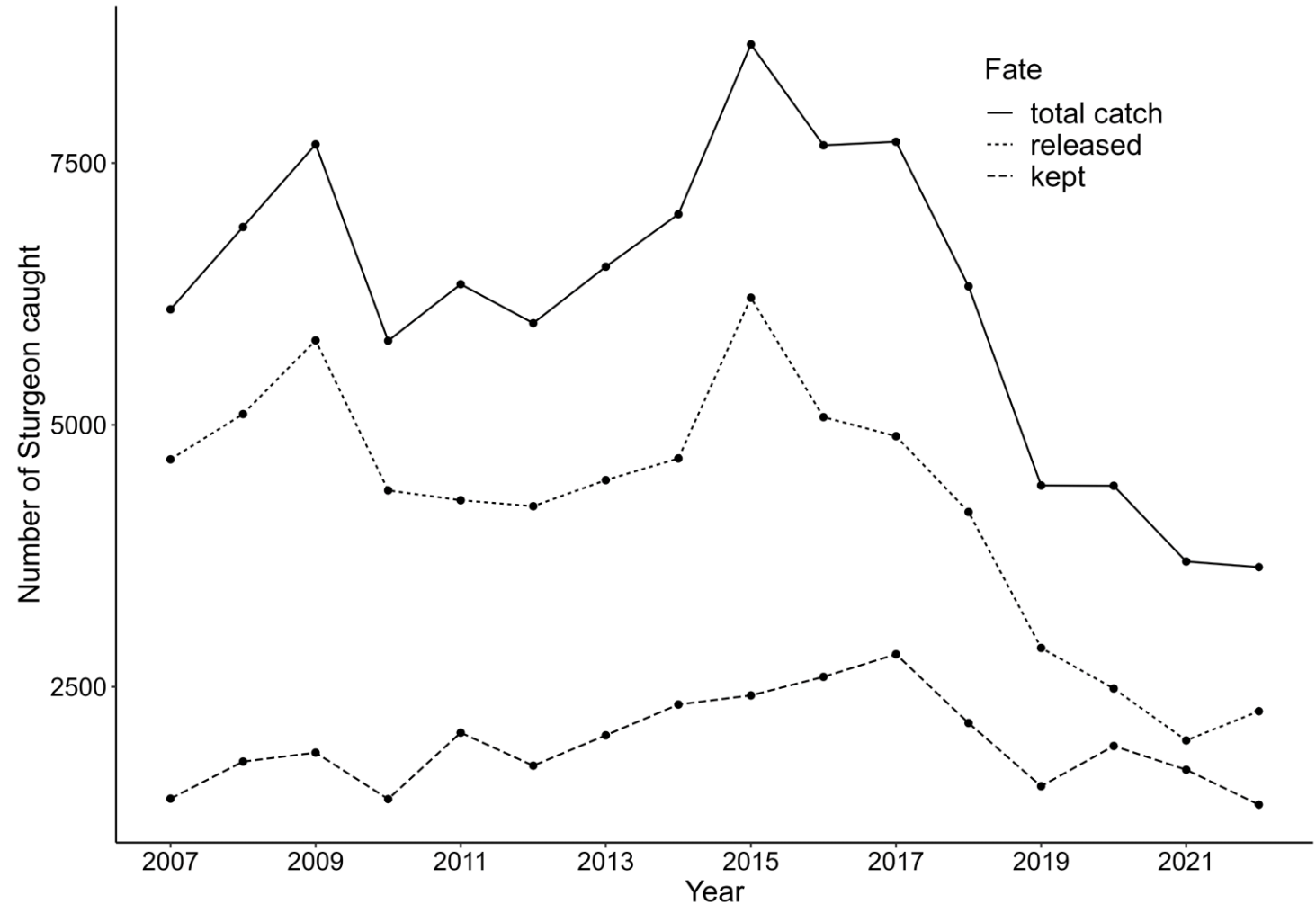
- Max: ~ 8,600 in 2015
- Min: ~ 3,600 in 2022

Released Fish:

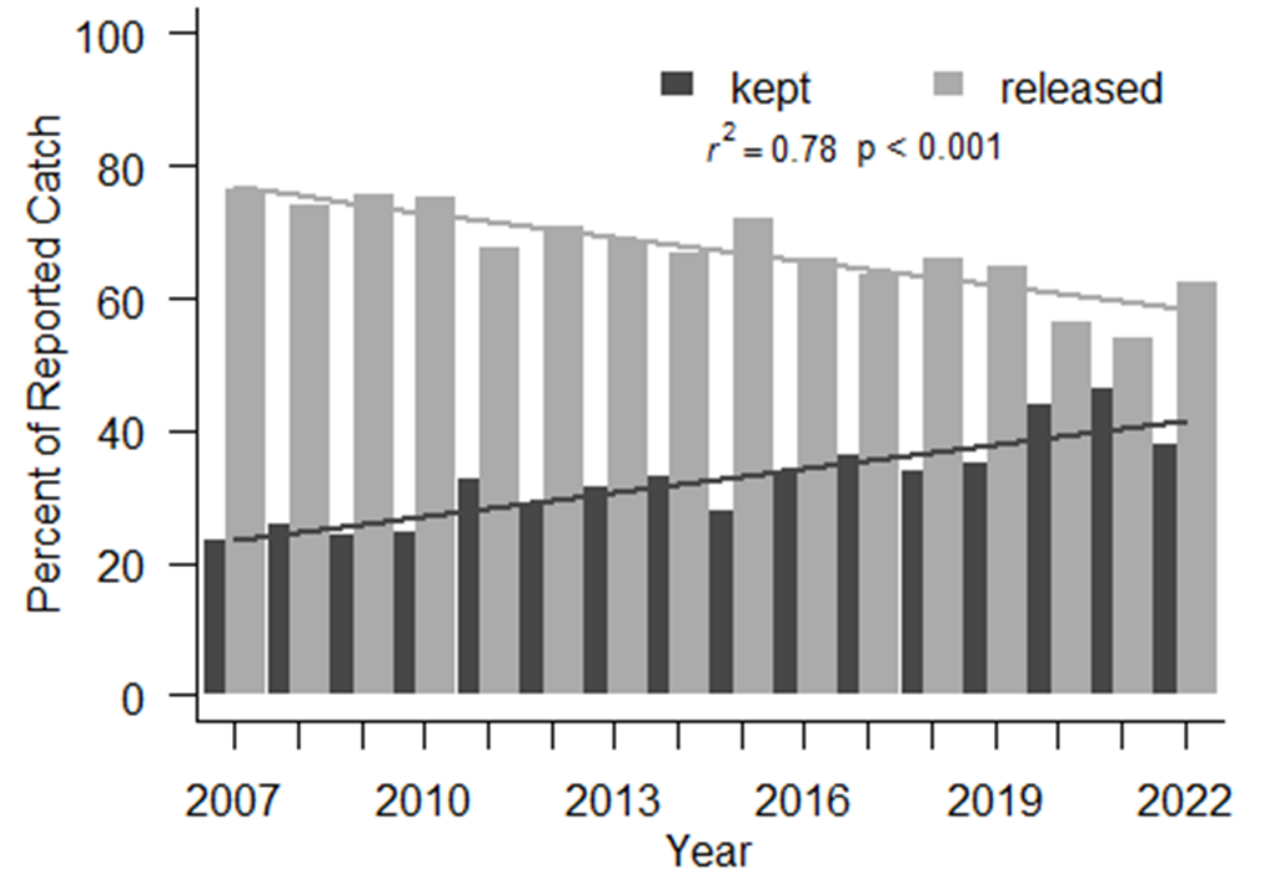
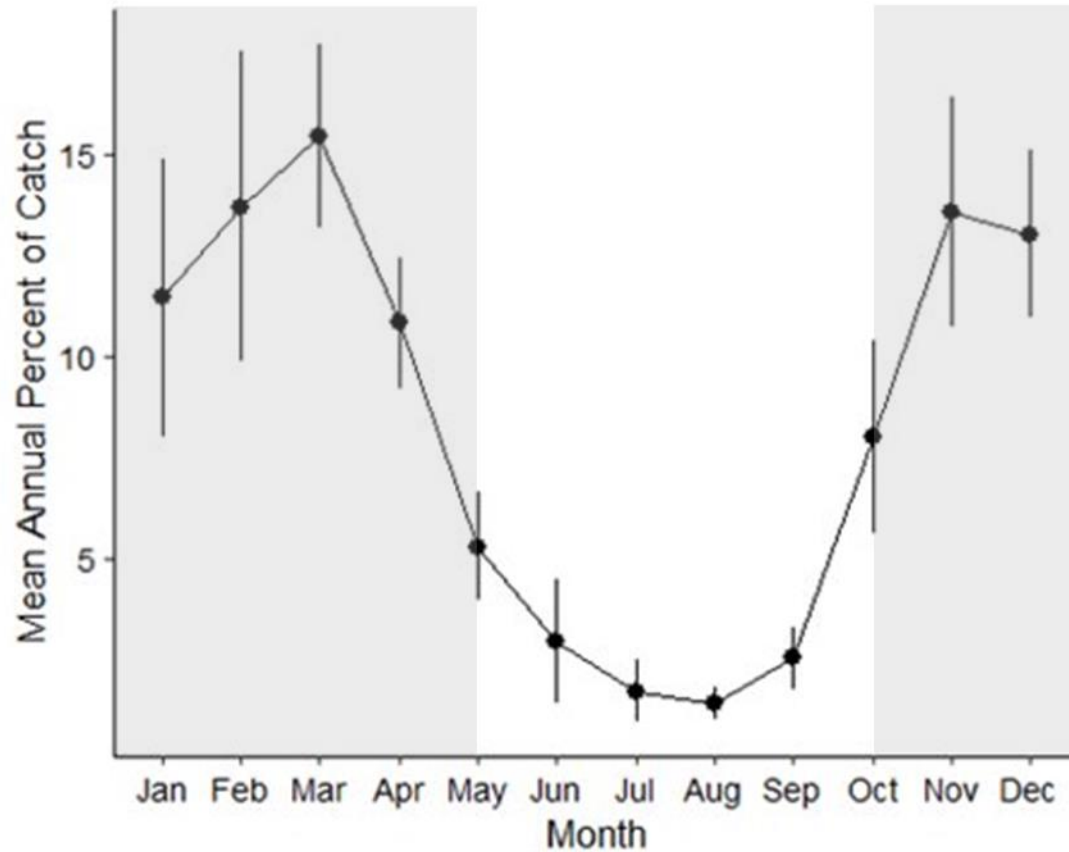
- Max: ~ 6,200 in 2015
- Min: ~ 2,000 in 2021

Kept Fish:

- Max: ~ 2,800 in 2017
- Min: ~ 1,300 in 2022

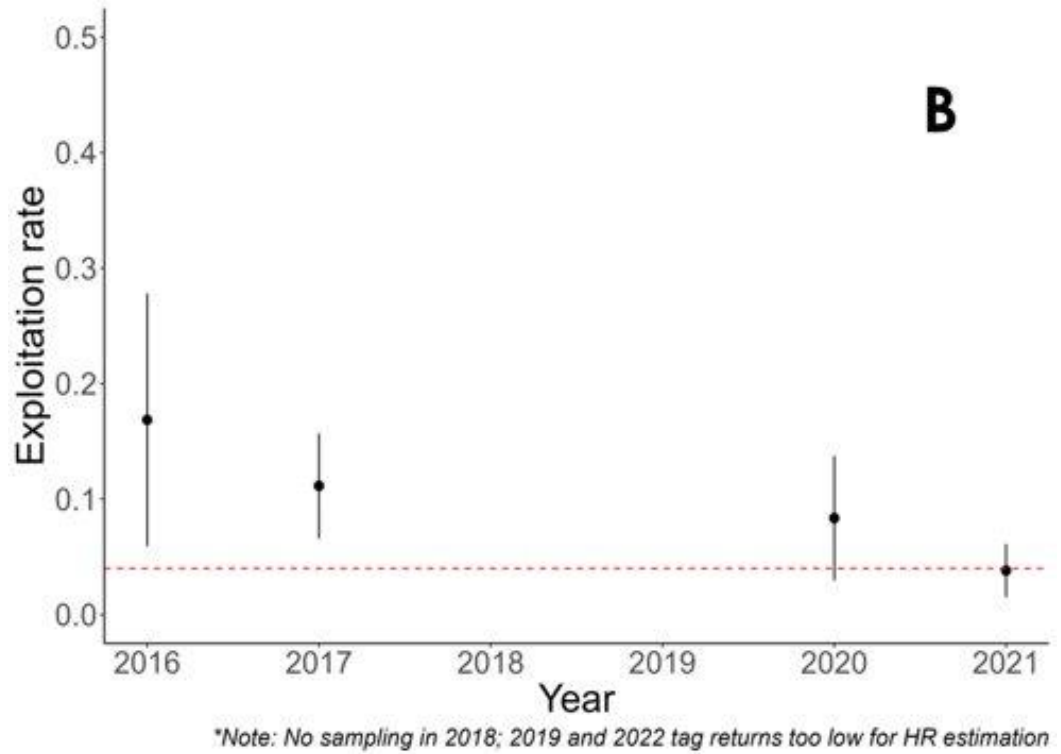
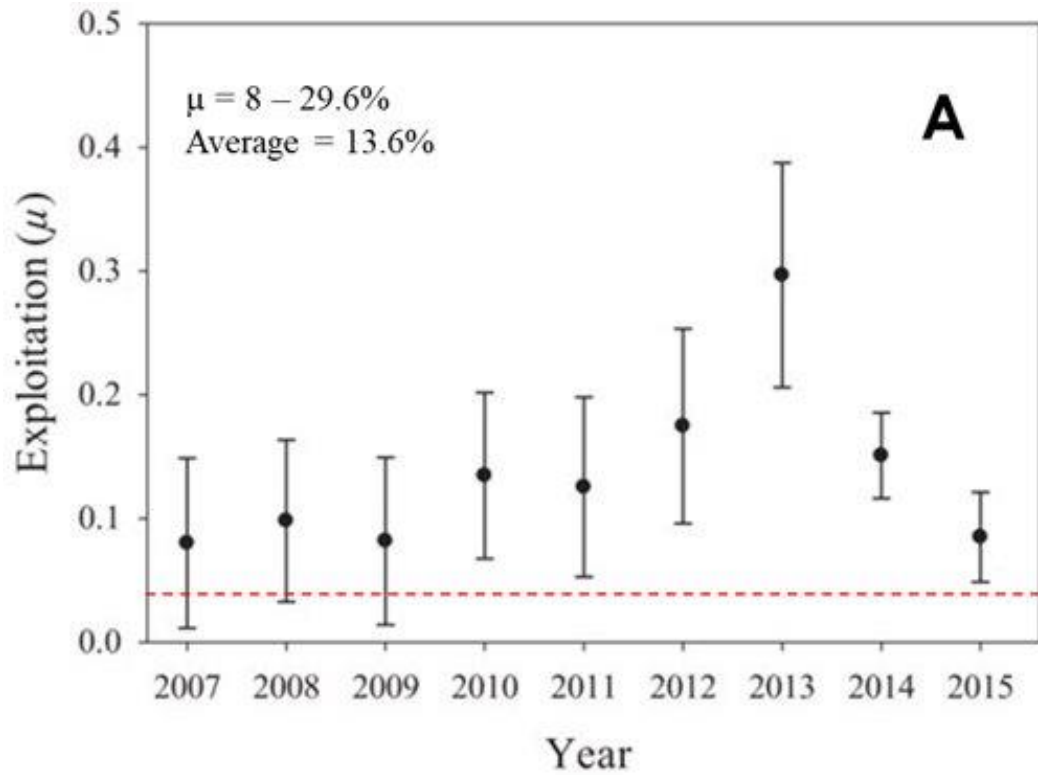


Sturgeon Report Card Data



Source: CDFW Fisheries Branch – Sturgeon Fishing Report Card: 2022 Summary Data Report

Exploitation (Harvest) Rate



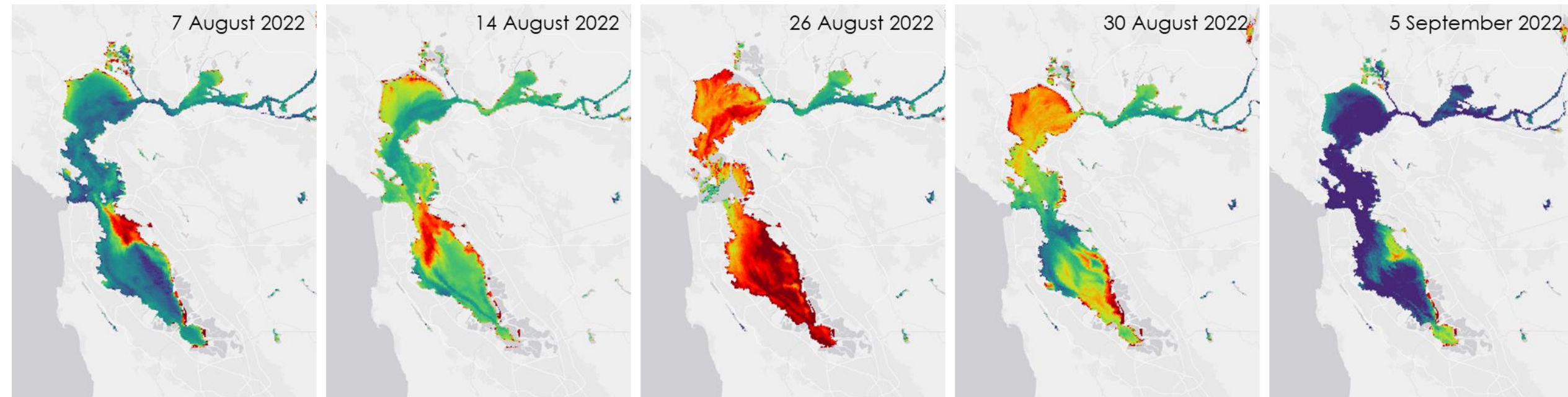
Proportion of fish harvested out of the total harvestable population (40-60 inch FL fish). Both figures derived from CDFW Adult Sturgeon Survey data. **Figure A:** Blackburn et al. 2019; **Figure B:** CDFW Fisheries Branch analysis. Red dashed line indicates 4% exploitation rate, the maximum target to permit harvest.

2022 Harmful Algal Bloom fish mortality



Example of fish carcasses observed during the 2022 Harmful Algal Bloom, including Yellowfin Goby (right picture, Lake Merritt) and White Sturgeon (other pictures).

2022 Harmful Algal Bloom: timeline



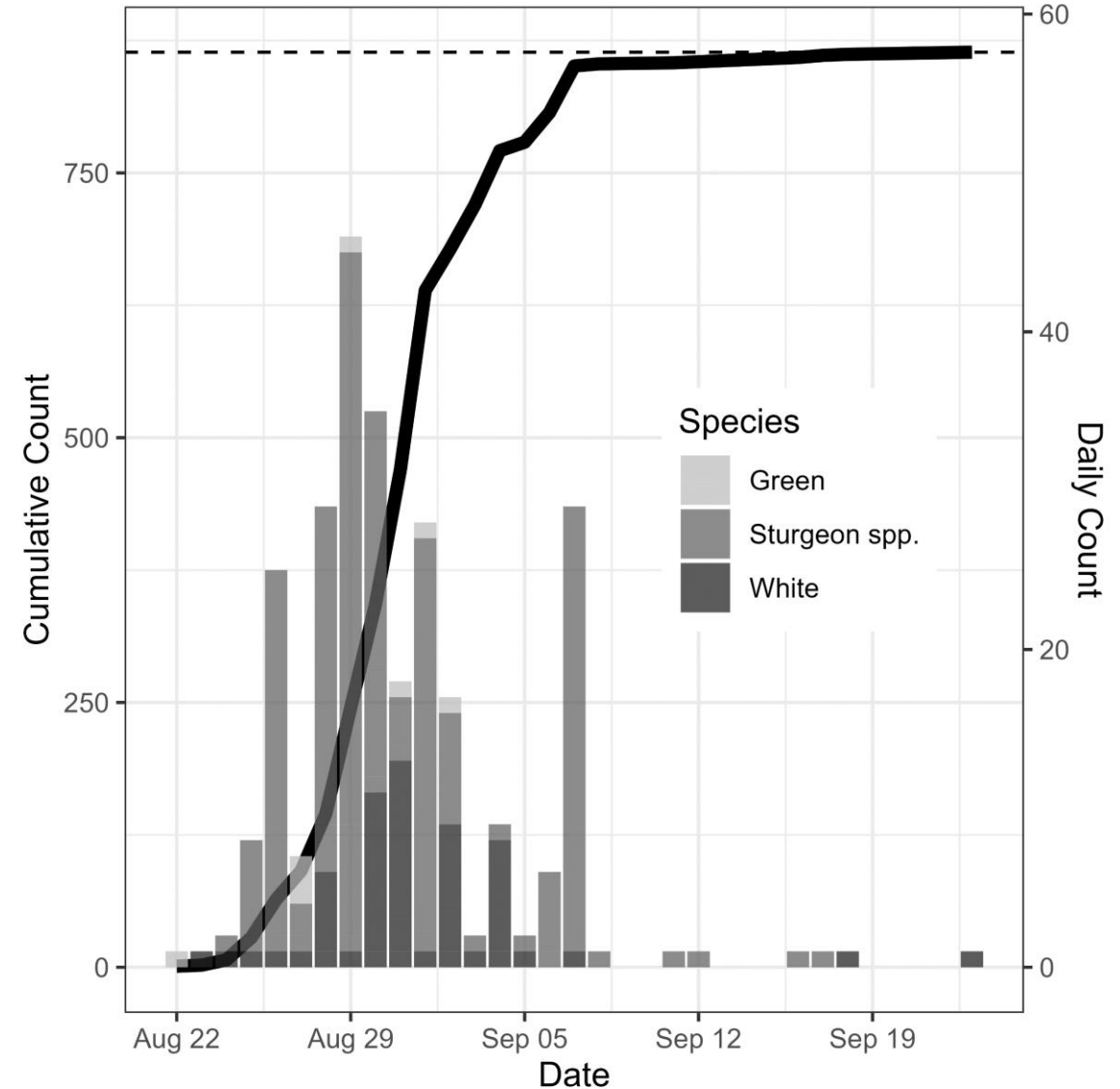
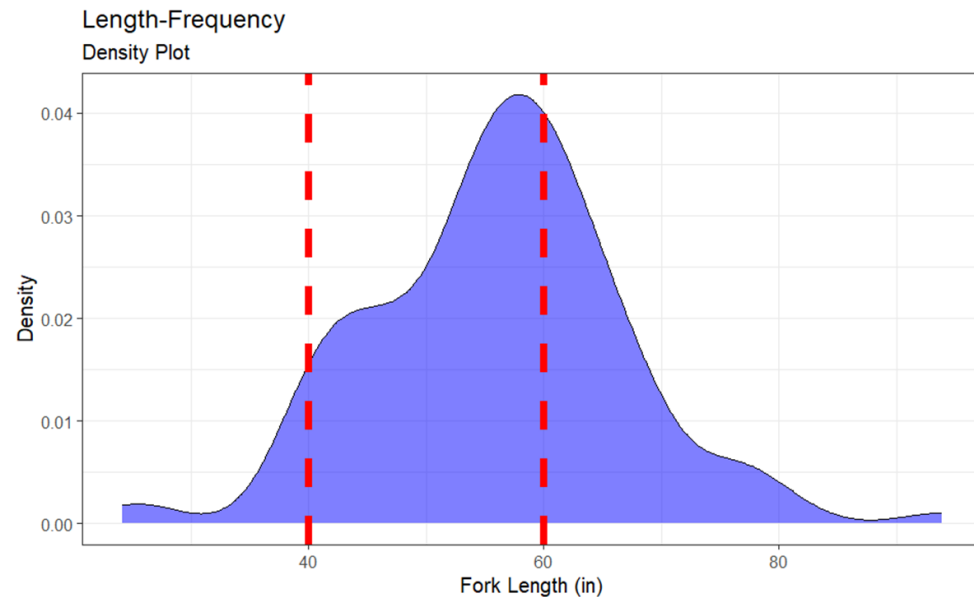
Data source: Sentinel 3 satellite data, SFEI Harmful Algal Bloom Analysis tool, <https://fhab.sfei.org/>

Satellite imagery of chlorophyll-a, a measure of algal concentration used to monitor algal blooms, over the timescale of the 2022 Harmful Algal Bloom of *Heterosigma akashiwo*. Warm colors (yellow-red) indicate high levels of algae.

2022 Harmful Algal Bloom: mortality

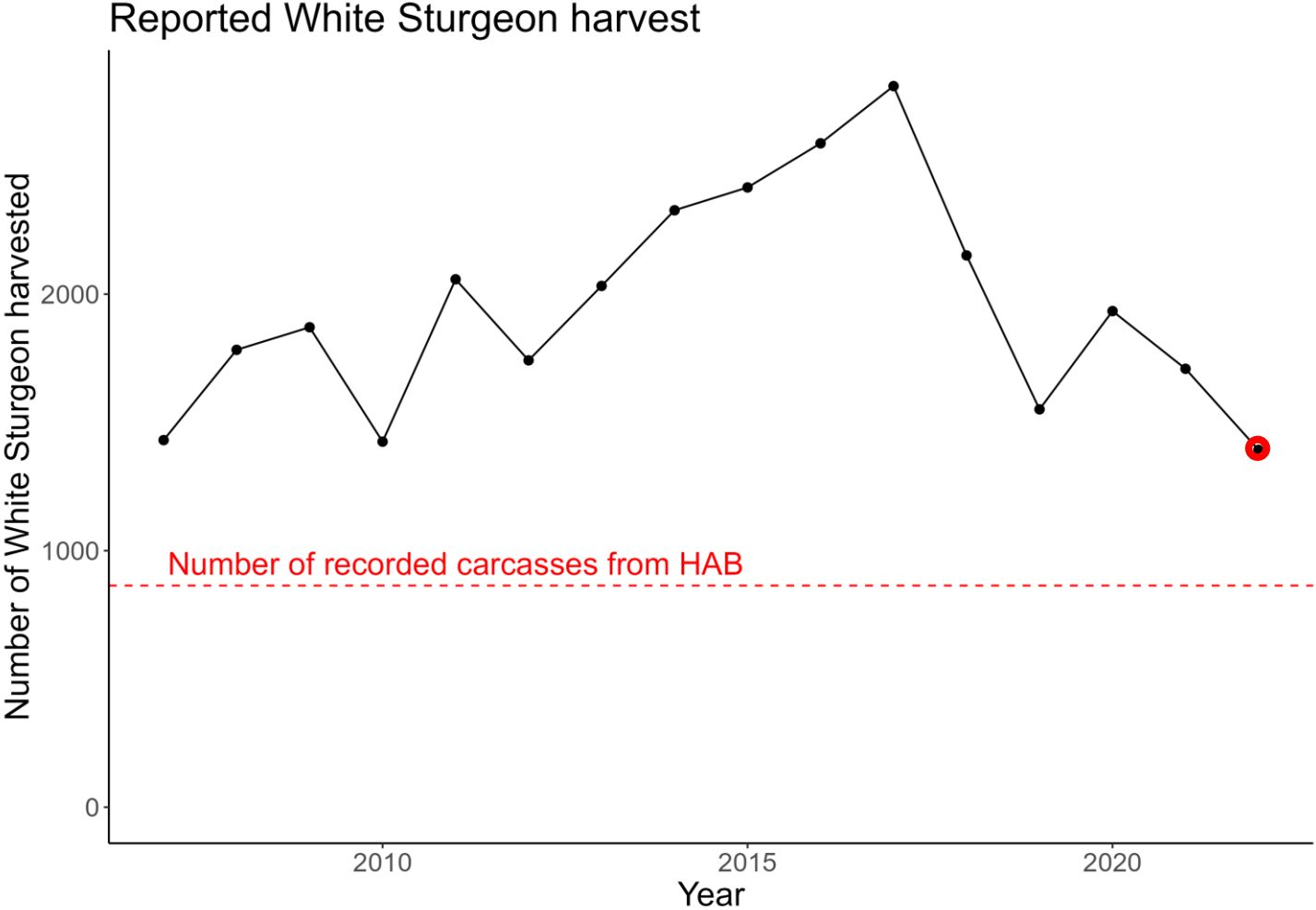
Carcasses observed:

- 864 Sturgeon (total)
 - 195 White Sturgeon
 - 17 Green Sturgeon
 - 652 (species unknown)
- 86% larger than the minimum legal size
- 30% larger than the maximum legal size



2022 Harmful Algal Bloom: mortality

Reported mortality (red dotted line) represented 62% of the total harvest reported on Sturgeon report cards in 2022 (red circle).



Data sources: CDFW Fisheries Branch – Sturgeon Fishing Report Card data; CDFW Bay Delta Region – 2022 Harmful Algal Bloom carcass monitoring

Fishery Regulations: Current

- Season open all year
- Report Card required
- 1 fish per day, 3 per year
- No upper limit to total annual harvest
- 40-60 inch Fork Length slot limit



Fishery Regulations: Future

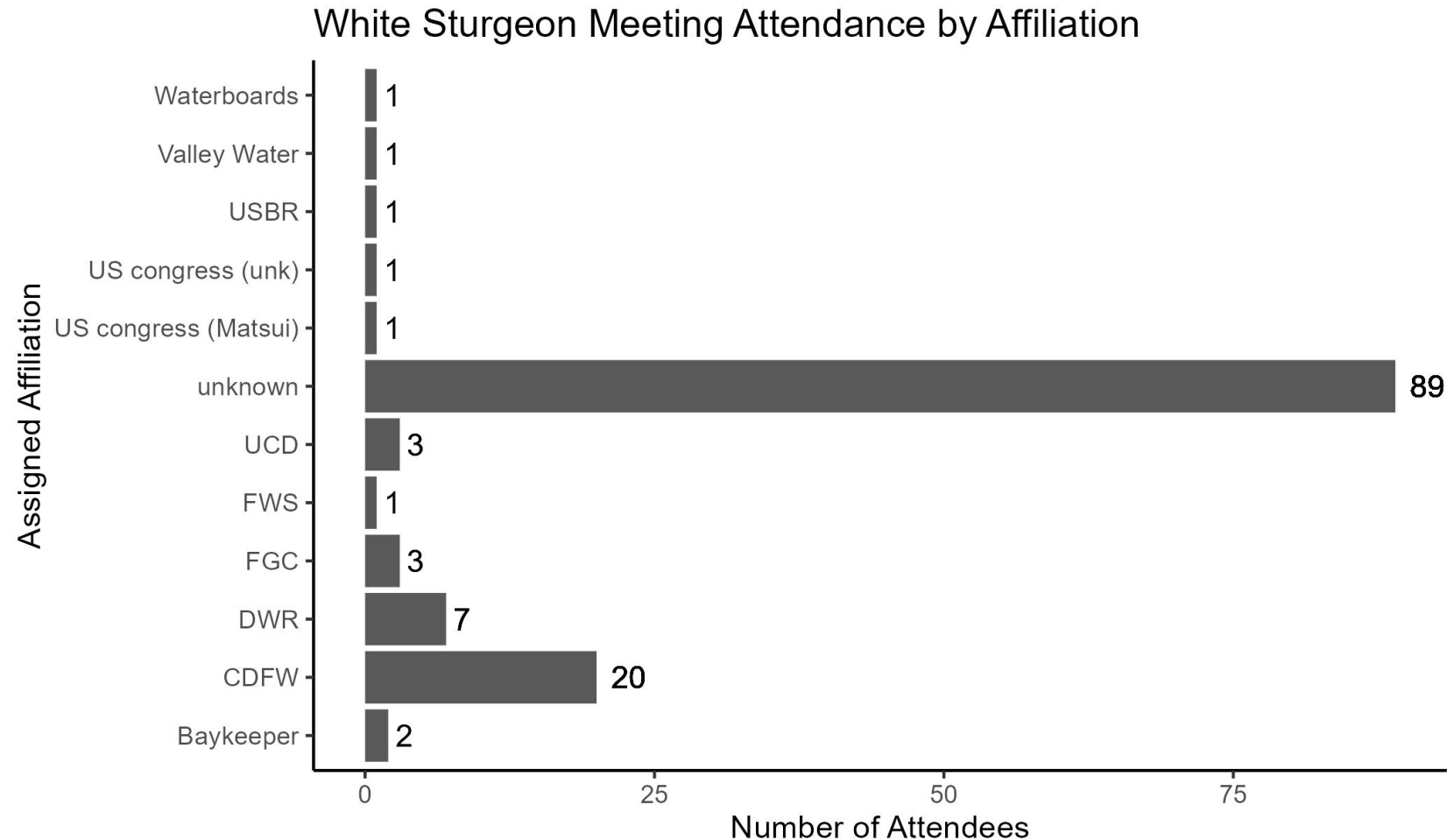
Permanent changes under consideration for 2025:

- Harvest allowed under a quota/harvest tag program limited to <math><4\%</math> of legal-sized population, set by monitoring. Geographic and time restrictions will apply.
- San Francisco Bay and Delta
 - Catch and release open all year
- Sacramento and San Joaquin rivers and tributaries
 - Catch and release June – December
 - Closed January – May



Outreach: Public Meeting

- Virtual Meeting on May 16, 2023
- 130 online attendees
- Meeting slides (as PDF) and recording posted on CDFW Sturgeon webpages



Outreach: Angler Questionnaire

- Available on CDFW webpages from May 17-August 15
- Emailed to last 4 years of Report Card purchasers and advertised on Department social media, Angler Update, and press release.
 - English, Spanish, Chinese (simplified and traditional), Korean, Tagalog, Russian, Vietnamese
- 3506 responses (97% English language)

Outreach: Angler Questionnaire

Summary of responses:

- **88%** are not members of a fishing association or a natural resource agency (**97%**)
- **66%** fish for sturgeon 1-5 times a year
- **70%** fish by boat without a guide
- Main reason for fishing for WS: **67%** recreation; **27%** food
- Most enjoyment comes from: **66%** challenge of hooking a fish; **17%** food source/delicacy
- **83%** practice some level of harvest fishing
- Under a harvest quota, **81%** would continue to participate in the fishery
 - **28%** would only participate if they received a harvest tag
- **57%** of existing anglers would continue to participate in a catch and release only fishery
- **60%** support seasonal and location-specific closures to protect sturgeon during spawning migration

Next steps

- White Sturgeon Community Working Group
- Tribal Outreach following established CDFW protocol
 - Tribal Listening Session, date TBD
- Develop recommendation to FGC for permanent regulations for 2025 following best science and incorporating input from community
- Proposed interim Emergency Angling Regulations



- Questions or comments?
Sturgeon@wildlife.ca.gov

Proposed Interim Emergency Regulations:

- Declining population, catastrophic HAB mortality
- Exploitation high, more tags sold than fish
- Spawning vulnerable to disturbance; critical life history stage to protect

Emergency Recommendation:

- Catch and release only
 - San Francisco Bay and Delta – all year
 - Sacramento and San Joaquin rivers/tributaries
 - Closed January – May to protect spawning
 - Catch and release June – December
- Report card required



From: Terrence Cerutti [REDACTED]
Sent: Thursday, August 17, 2023 12:33 PM
To: FGC <FGC@fgc.ca.gov>
Subject: Sturgeon Reg. Change

Ms. Miller-Henson or Person in Charge,

I understand that we need to make a change with the Sturgeon fishery in order to keep the species thriving. I agree that a Catch and Release program next year would help the cause.

I'm writing to ask for 1 things.

Please don't close down areas where us recreational fishermen can fish for sturgeon. If you close where we can fish, it's overkill and a gross miss use of the states power. We already use barbless hooks which makes Catch and Release easy and harmless to the fish. I hope you can help with this request. We have already been hit with the Salmon closure and the reduction of Halibut that we can harvest. Please don't kick us recreational fishermen again by telling us where we can and cannot fish for sturgeon next year. Thank you for your help and time.

Respectful,
Terence Cerutti