



## NEW TOOLS FOR STEELHEAD OUTREACH AND COLLABORATION

**PRESENTED BY:**

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# Topics Covered

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- Compliance and Regulations
- Other tools and outreach
- Data Dashboard overview



# Recommended Actions

From Gusman and Hause (2023)

- Implement non-return fee and/or reward system
- Increase outreach to younger demographics
- Determine non-return bias with survey
- Real time reporting app

Other CDFW Recommendations

- Decrease ambiguity in regulations around targeting rainbow trout
- Increased program reporting and data transparency
- Implement regional creel surveys

## Human dimensions of angler nonresponse in California's recreational steelhead fishing report card program

November 21, 2023

### FULL RESEARCH ARTICLE

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### Abstract

Angler demographics and behaviors have a significant impact on recreational fishery-dependent data, and recently, human dimensions have become more widely recognized as an important part of fisheries management. California's steelhead (*Oncorhynchus mykiss*) report card program has served to track recreational fishing effort and catch each calendar year for management purposes through angler self-reporting. However, angler report card return rates are consistently low, and there has been no recent effort to investigate angler attributes that may be contributing to nonresponse. This study evaluated trends in angler demographics as they relate to annual steelhead report card return rates as well as online reporting rates across the 2012–2019 study period. The study also assessed whether specific demographic or behavioral characteristics may affect the likelihood of anglers returning their report cards. Older, more avid anglers were found to have a greater likelihood of reporting in general. Motivations or deterrents for response vs. nonresponse could not be identified due to data limitations and should be the subject of future research.

**Key words:** angling avidity, angler reporting, angler survey, catch card, human dimensions, nonresponse bias, nonresponse error

**Citation:** Gusman Costa, V. M., and C. L. Hause. 2023. Human dimensions of angler nonresponse in California's recreational steelhead fishing report card program. *California Fish and Wildlife Journal* 109:e11.

**Editor:** Erica Meyers, Water Branch



# Compliance and Regulations

# Addressing Compliance

## Non return fee

- Higher compliance
- More admin work
- Negative perception

## Reward

- Lower compliance
- Less admin work
- Positive perception

## Other

- Reminders via social media & email also effective tools
- Continued education



# Examples

## Spiny Lobster Card

- Non-return fee or license restriction
- Increased return rate avg. from ~20% to ~50%
- Increased admin work

## Deer Tags

- Non return fee
- Increased return rate avg. from ~50% to 75%
- Some increased admin work





# Proposed Regulations

## New timeframe

- Card is valid from Aug. 1<sup>st</sup> – April 30<sup>th</sup>
- Reporting period: May 1<sup>st</sup> – 31<sup>st</sup>
- Allows time to process cards and enforce fine and/or restrict ability to buy new card
- Card not required May-July
- Better aligns with steelhead season & reporting windows

## Other

- Clarify requirement to possess card when fishing for any *O. mykiss* in anadromous waters

## Potential Implementation in 2027





# Other Tools and Outreach

# Creel Surveys

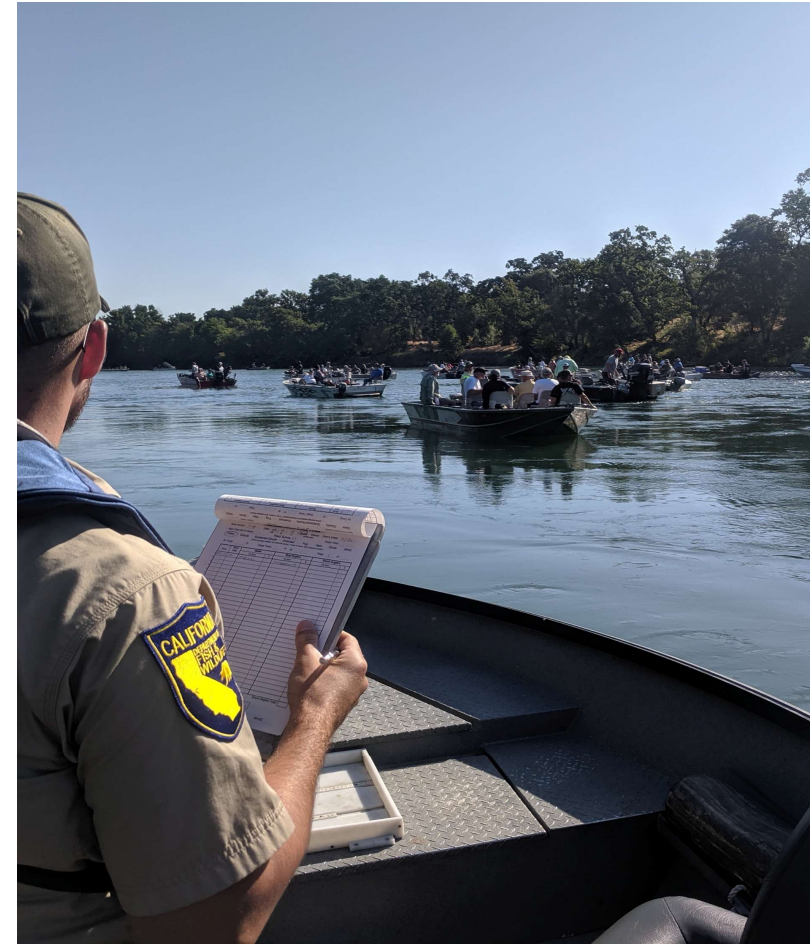
Funded by SH Report Card Program

## Benefits

- Stream specific data for management
- Data comparison to Report Card
- Report Card and SH fishing satisfaction surveys
- Angler outreach – in person

## Surveys Funded

- Russian River, Mad River, Carmel River, South Central Coast Streams



# Outreach

## Social Media

- Good for reaching multiple demographics, particularly younger folks

## Other Targeted Outreach

- Emails to Steelhead Card holders
- Monthly Angler Update newsletter
- Fishing tips and reporting reminders

## Increased Program Reporting (goal)

- Annual fishing reports



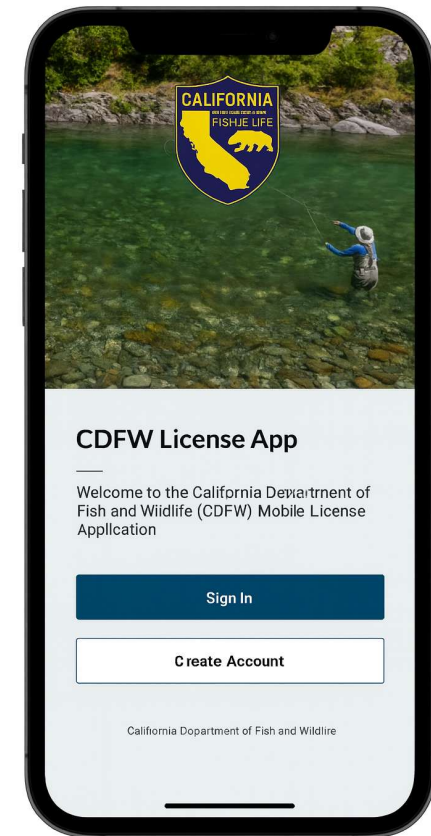
# Future Efforts

## Real time reporting app

- May increase participation from younger demographics
- Provides real-time data
- No need for long paper card

## Non-compliance survey

- Determine success and effort of non-reporters
- Improve catch estimates and utility of data
- Better understanding of non-reporters

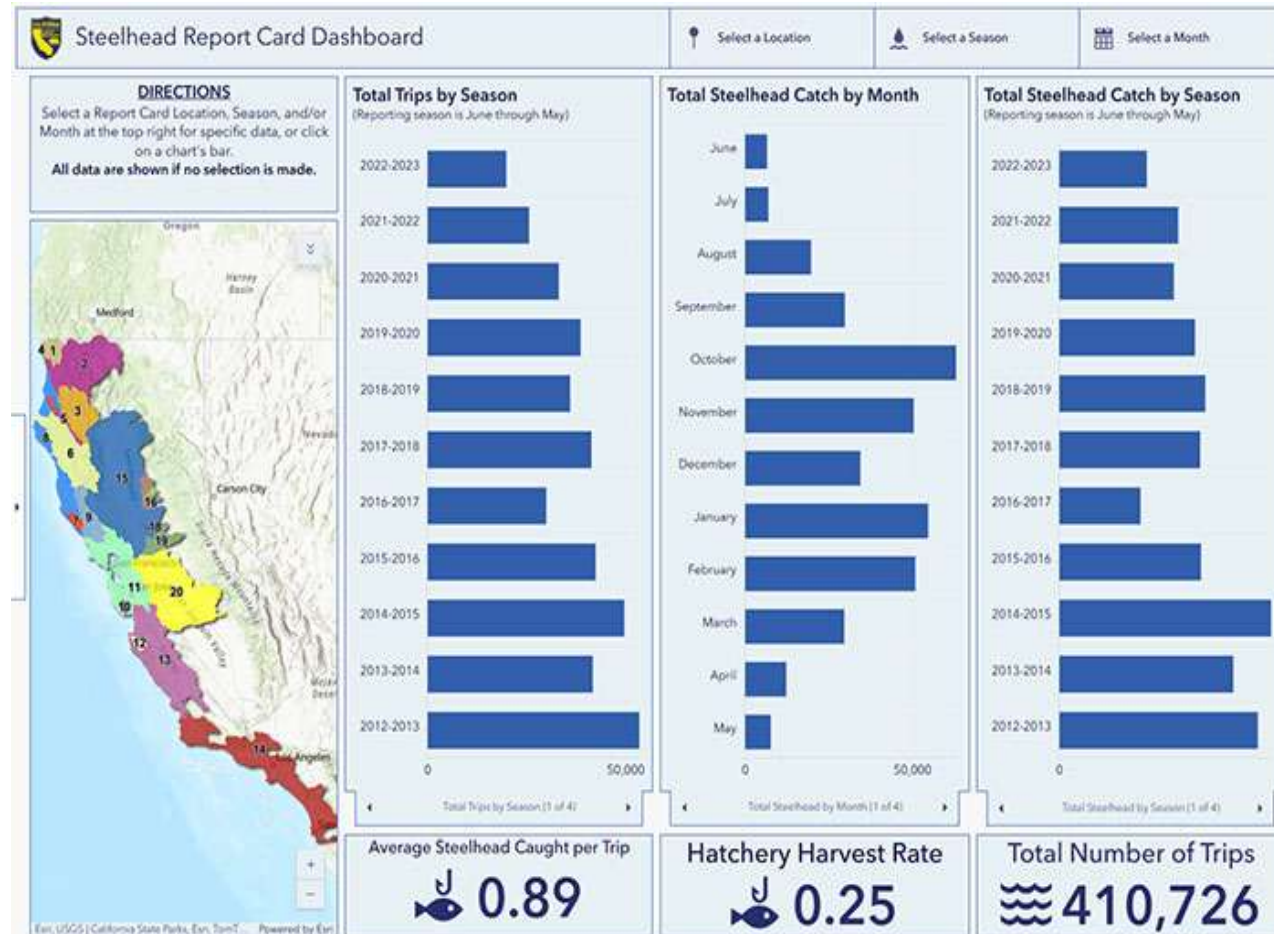




# Data Dashboard

# Dashboard

- Goals:
  - Medium for anglers to view their data contributions
  - Increases data transparency
  - Help new steelhead anglers learn where and when to fish
- Data organized by steelhead season
- Updated annually
- Found on Steelhead Report Card website



# Steelhead Report Card Dashboard

Select a Location Select a Season Select a Month

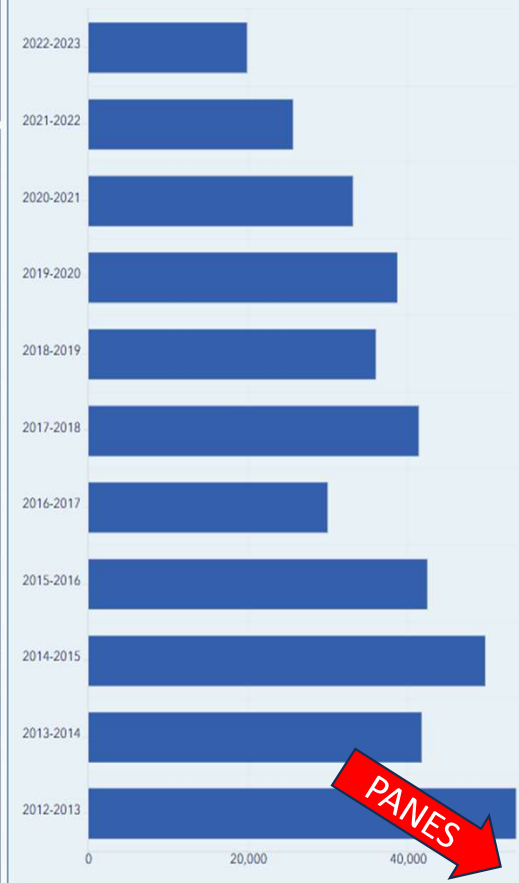
### DIRECTIONS

Select a Report Card Location, Season, and/or Month at the top right for specific data, or click on a chart's bar.  
All data are shown if no selection is made.

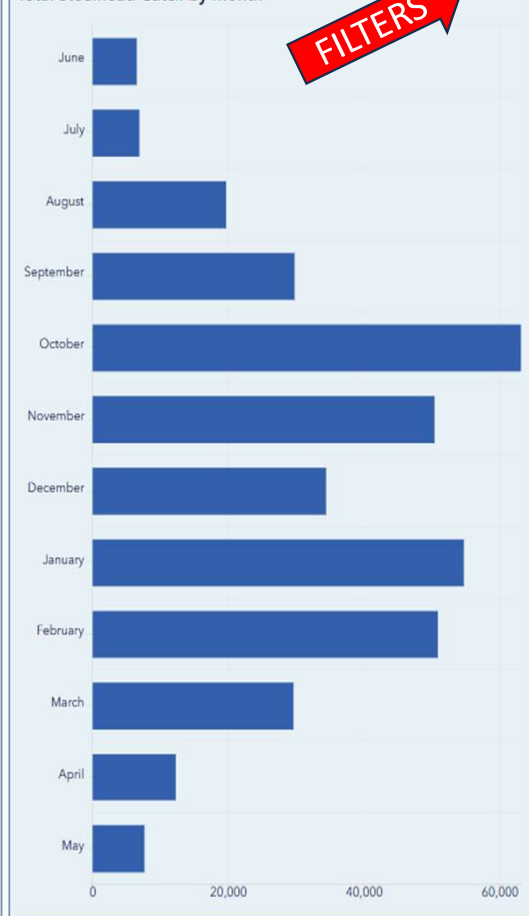


### Total Trips by Season

(Reporting season is June through May)



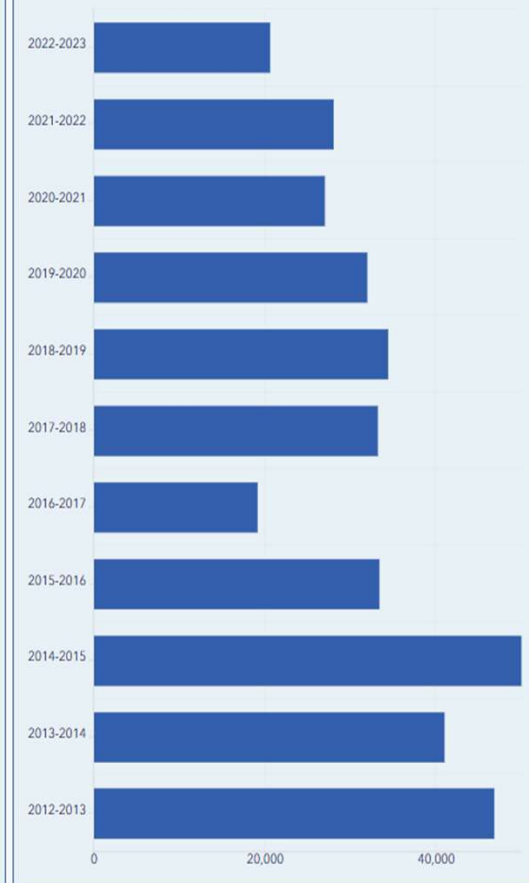
### Total Steelhead Catch by Month



**FILTERS**

### Total Steelhead Catch by Season

(Reporting season is June through May)



Average Steelhead Caught per Trip

**0.89**

Hatchery Harvest Rate

**0.25**

Total Number of Trips

**410,726**

Map: USGS/Courtesy Sacramento, California State Parks, Fish, Tom Tom, Camille, FAO, NOAA, Broomfield, Inc. ERI

# Steelhead Report Card Dashboard

**FILTER: Klamath**

Select a Location  
2 - Klamath River and tri...

Select a Season

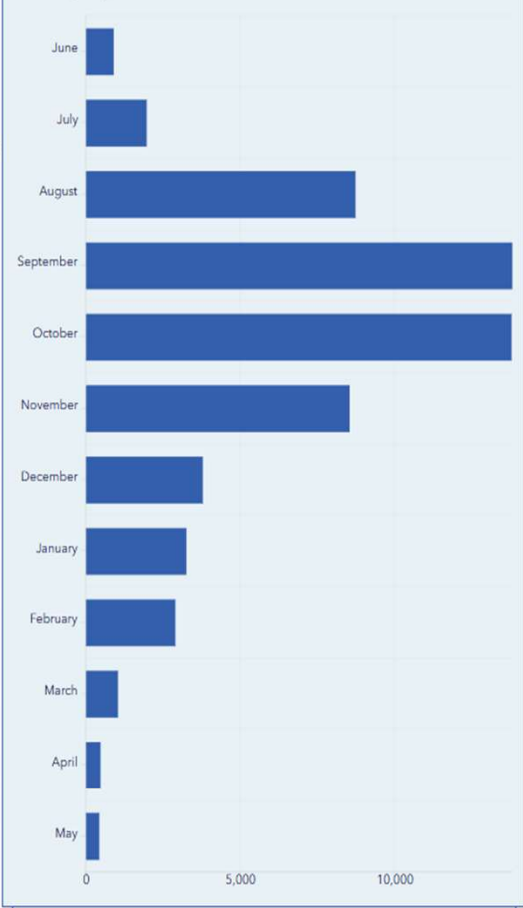
Select a Month

### DIRECTIONS

Select a Report Card Location, Season, and/or Month at the top right for specific data, or click on a chart's bar. All data are shown if no selection is made.

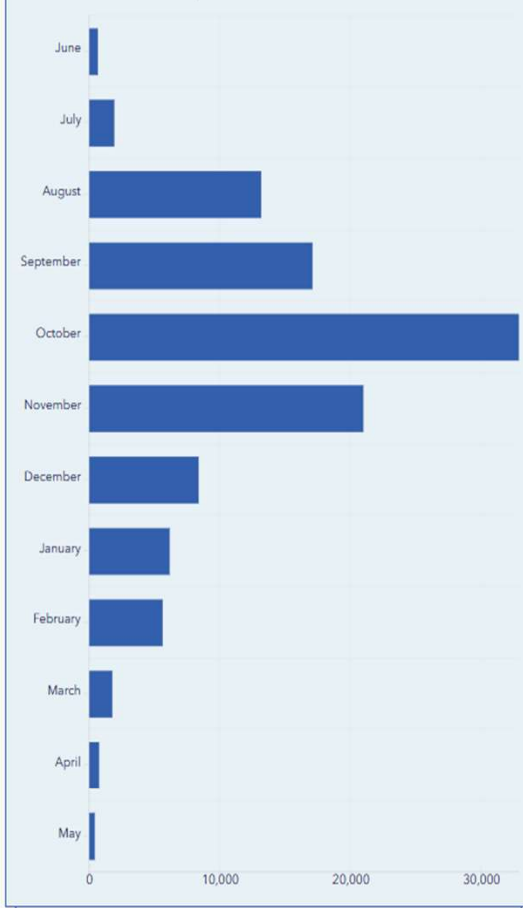


### Total Trips by Month



Total Trips by Month (2 of 4)

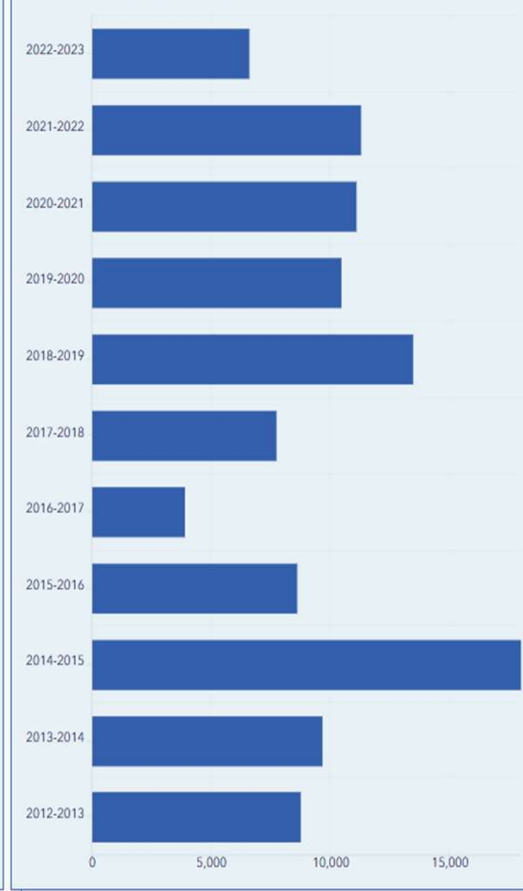
### Total Steelhead Catch by Month



Total Steelhead by Month (1 of 4)

### Total Steelhead Catch by Season

(Reporting season is June through May)



Total Steelhead by Season (1 of 4)

### Average Steelhead Caught per Trip

 **1.84**

### Hatchery Harvest Rate

 **0.15**

### Total Number of Trips

 **59,358**

# Limitations and Nuance

- Data quality limited by angler participation
  - Totals can be misleading (eg: total steelhead vs total trips)
  - Trends are generally representative but don't tell entire story
- Working on ways to improve interface



Thank you!



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