

# *CENTRAL VALLEY ANGLER SURVEY: 2019 Recreational Harvest of Chinook Salmon*



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# 2019 Central Valley Salmon Season

General season: July 16 – December 16

## **Exceptions:**

### Lower American River

July 16–December 31

### Upper Sacramento River

August 1–December 16

RBDD to Deschutes Road Bridge

### Feather River

July 16–October 31

From Live Oak to the Thermalito outfall

Low flow channel closed

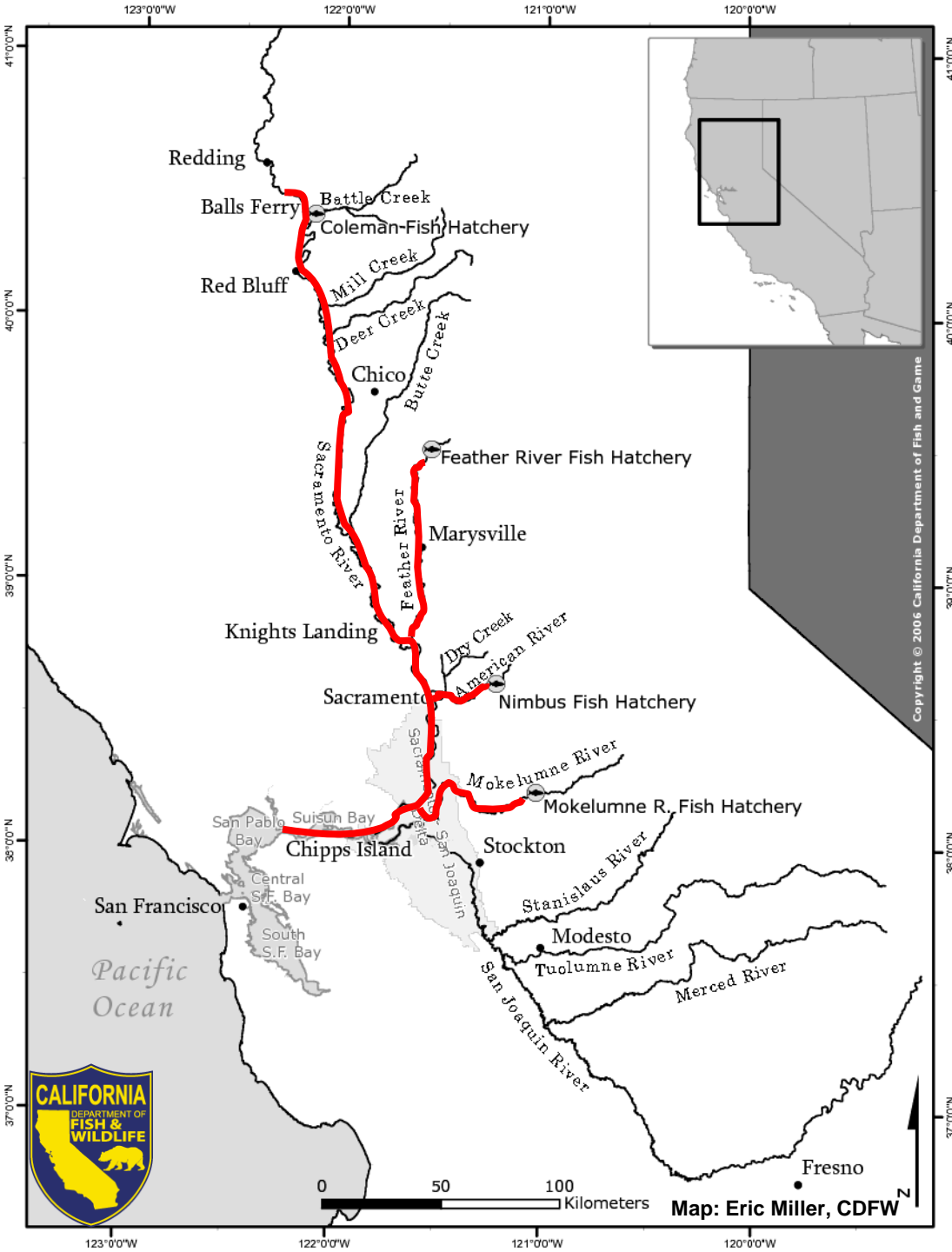


# Central Valley Angler Survey



- Estimate angler effort targeting Chinook Salmon
- Estimate catch & harvest of Chinook Salmon
- Estimate catch-per-unit-effort (CPUE)
- Collect biological information on the catch
- Recover coded-wire tags





# Sampling Design:

- 24 survey sections:
  - *Sacramento River: Carquinez Bridge to Deschutes Rd Bridge*
  - *Feather River*
  - *American River*
  - *Mokelumne River*
- Eight randomly selected sampling days per month:
  - *four weekdays*
  - *four weekend days*

# Estimates of Chinook Salmon Effort, Catch, and Harvest



## Data collection via:

- Roving angler counts
- Roving angler interviews
- Access point interviews

# Overview of 2019 Central Valley Sport Fishery for Chinook Salmon\*

<b><i>Effort:</i></b>	892,901 angler hours
<b><i>Trips:</i></b>	214,214 angling days
<b><i>Total catch:</i></b>	33,347 salmon
<b><i>Harvest:</i></b>	30,612 salmon
<b><i>Released:</i></b>	2,735 salmon
<b><i>Pct. retention:</i></b>	92%
<b><i>Catch rate:</i></b>	3.7 salmon per 100 angler hours



\* Based on fishery statistics for the American, Feather, Mokelumne and Sacramento rivers, July – December 2019.



# Raw Statistics

Contacted over 7,097 fishing parties

2,383 salmon reported kept

2,195 salmon observed

- or 7.2% of the estimated harvest

423 Adipose fin-clipped, 19% of observed salmon

402 heads (95%) taken for CWT recovery



# Coded Wire Tag Recoveries

**391 CWTs (97%) successfully recovered and read**

Percent	Count	
40%	156	Feather River Hatchery fall run
30%	117	Coleman National Fish Hatchery fall run
11%	41	Feather River Hatchery spring run
7%	28	Mokelumne River Hatchery fall run
7%	26	Coleman National Fish Hatchery late-fall run
5%	21	Nimbus Hatchery fall run
0%	2	Livingston Stone National Fish Hatchery winter run
0%	0	San Joaquin spring run



# Sacramento River Fall–Run Chinook Salmon (SRFC) Harvest

*Defined as any harvest of Chinook Salmon in the American, Feather, and Sacramento rivers*



*Excludes*

Harvest in the Mokelumne River

Harvest in the Late-fall-run Chinook Salmon fishery

Daily bag limit of 2 Chinook Salmon and 4 in possession

# SRFC Inland Harvest

SRFC comprised 99% of all Chinook Salmon harvest in the Central Valley in 2019



# Final SRFC Harvest Estimate

Nearly 33% of the harvest were grilse

20,307 adult

9,851 grilse

**30,158 Total SRFC**

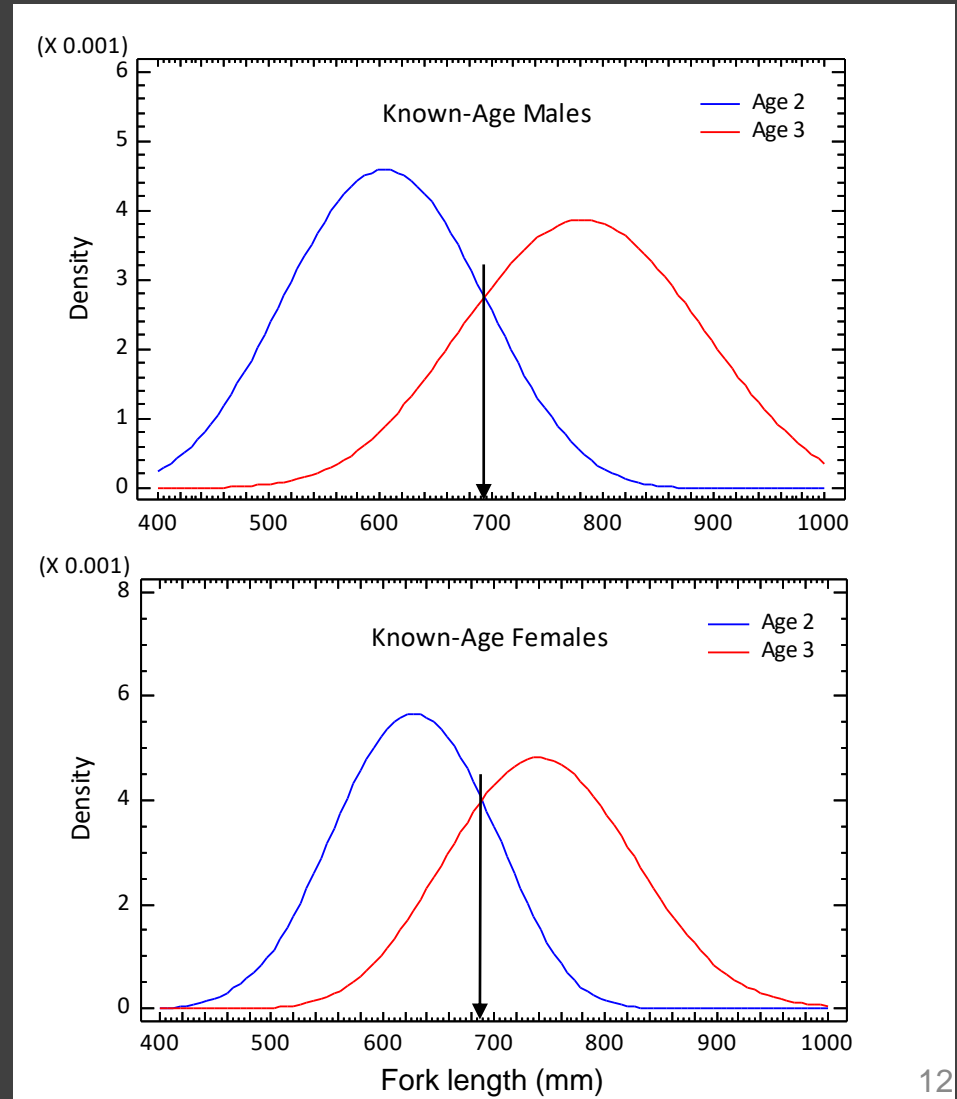




# Grilse Cutoff

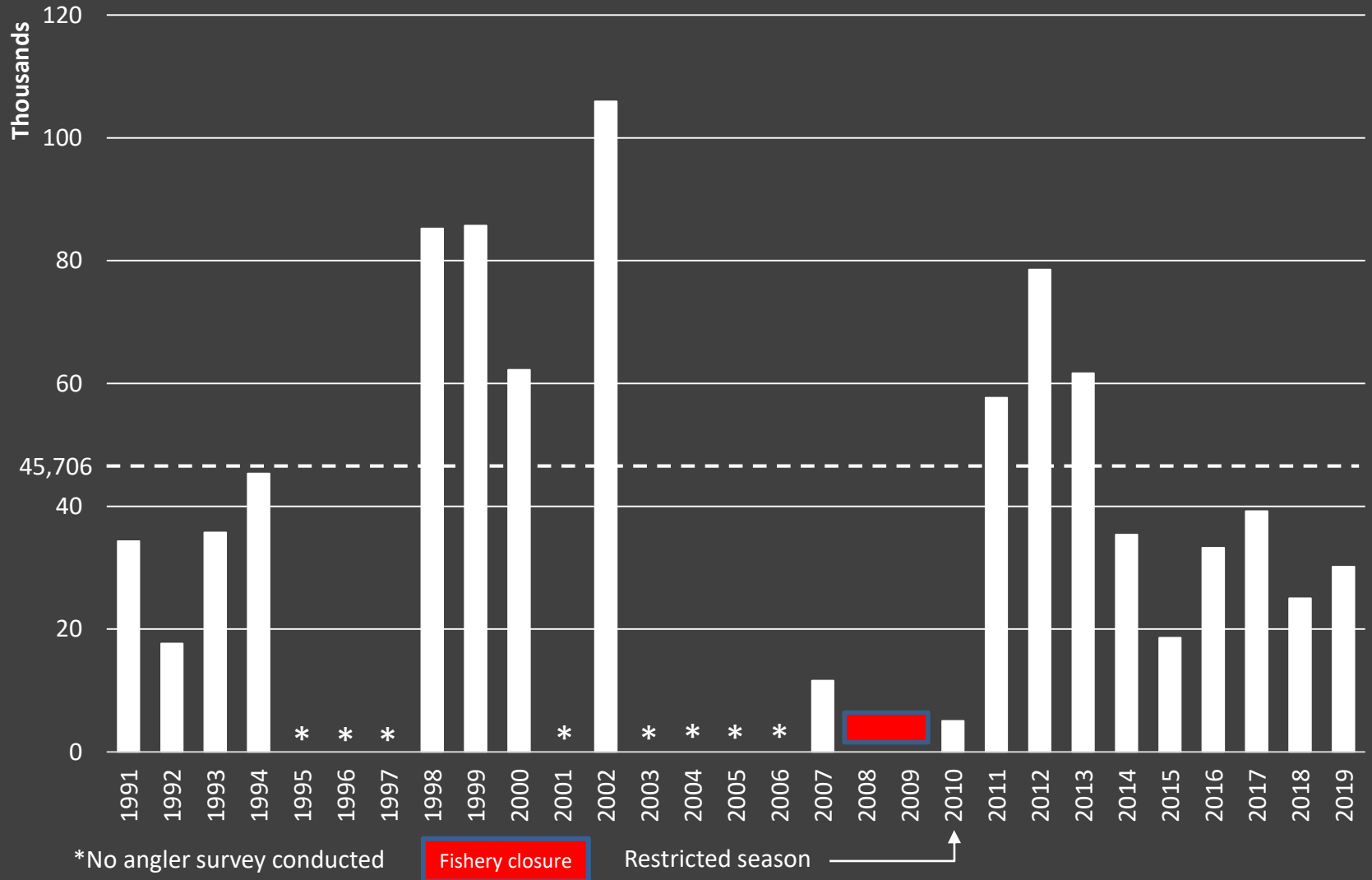
## Males vs. Females

- Males
  - FL cutoff of 694 mm
  - 40% Grilse
- Females
  - FL cutoff of 689 mm
  - 22% Grilse



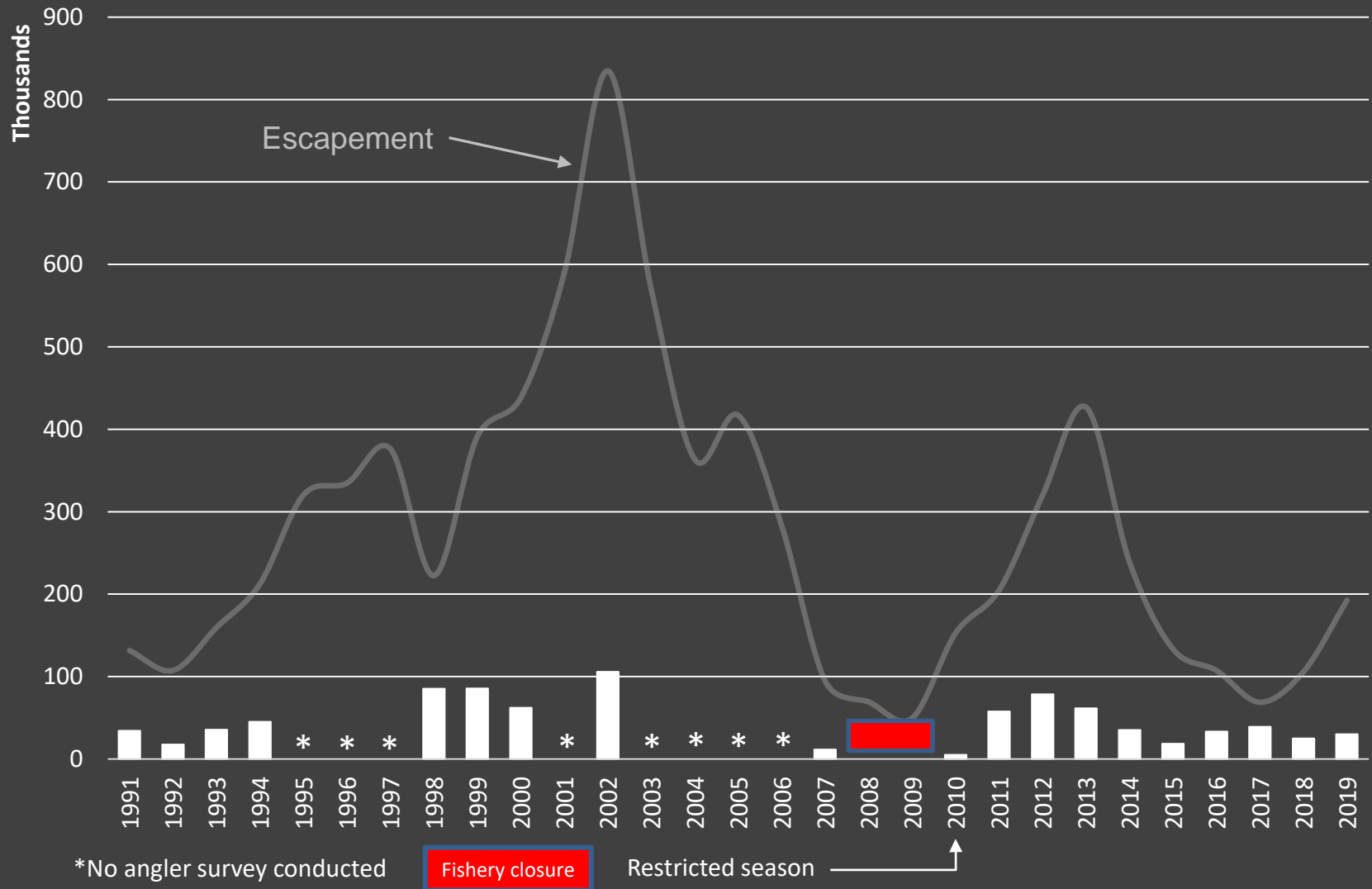
# SRFC Harvest Trend

Grilse + Adults



# SRFC Harvest Trend

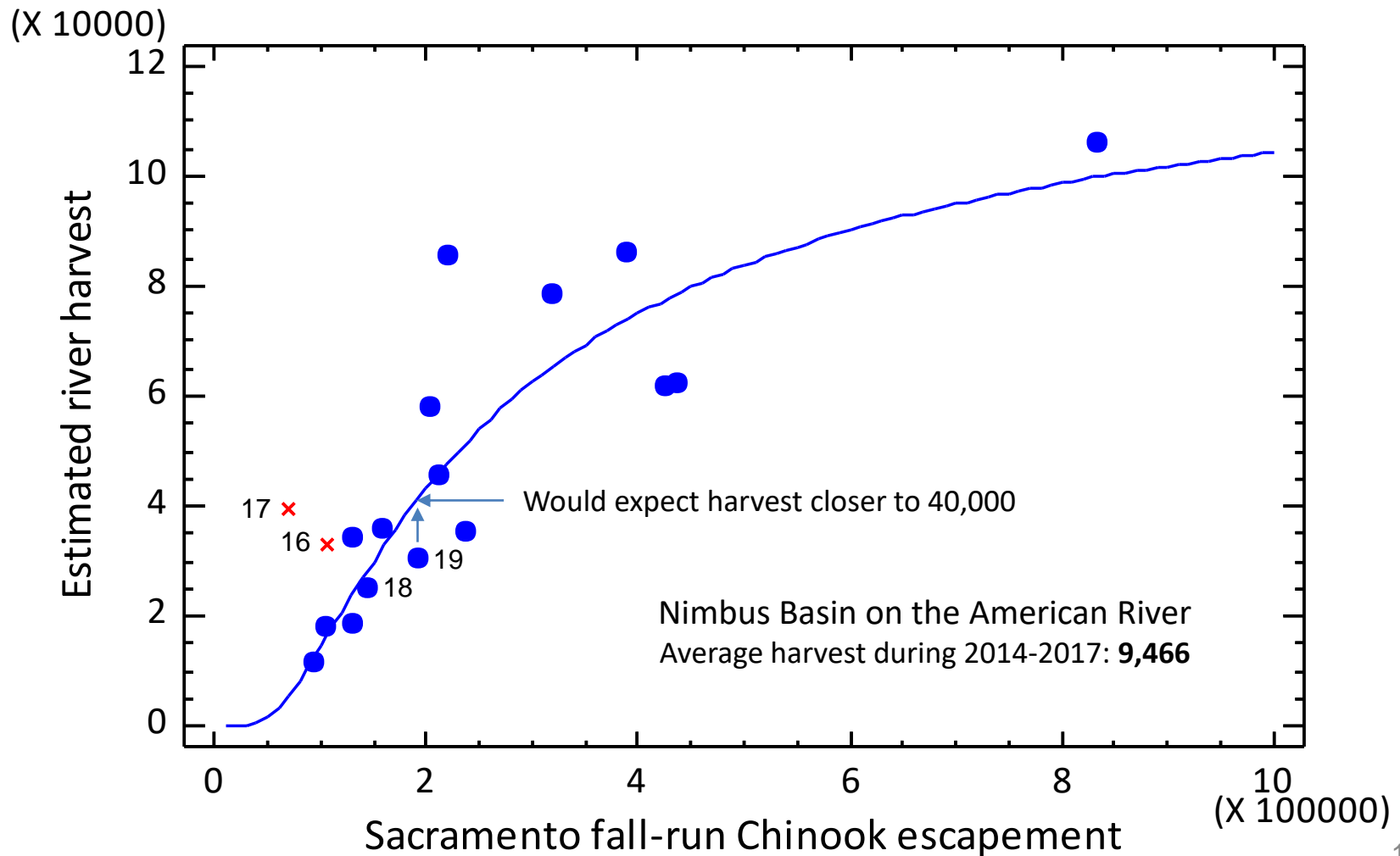
Grilse + Adults





# River harvest was lower than expected in 2019 relative to escapement

River harvest = 30,158, Escapement = 192,476



# 2019 Sacramento River Late–Fall–Run Chinook Salmon Season

- Restricted to the Upper Sacramento River  
  
Knights Landing to Deschutes Road Bridge
- Open November 1 – December 16
- Daily bag limit of 2 Chinook Salmon, 4 possession limit



# Sacramento River Late–Fall–Run Chinook Salmon Fishery



- *Effort:* 14,080 angler hours
- *Trips:* 3,378 angler trips
- *Catch rate:* 2.4 salmon per 100 angler hours
- *Harvest:* 336 salmon



# 2019 Mokelumne River Fall–Run Chinook Salmon Season

- Camanche Dam to Elliot Road
  - Open July 16 – October 15
- Elliot Road to Woodbridge Irrigation District Dam (including Lodi Lake)
  - Open July 16 – December 31
- Woodbridge Irrigation District Dam to the Lower Sacramento Road bridge
  - Closed to all fishing all year
- The Lower Sacramento Road bridge to the mouth
  - Open July 16 – December 16



\*Daily bag limit of 2 Chinook salmon, possession limit of 4 salmon

# Mokelumne River Fishery

## San Joaquin Fall–Run Chinook Salmon (SJRFC)



- *Effort:* 14,930 angler hours
- *Trips:* 3,582 angler trips
- *Catch rate:* 0.8 salmon per 100 angler hours
- *Harvest:* 118 salmon

# Hatchery vs. Natural Origin

Percent hatchery vs. natural origin by management zone<sup>1</sup>

	Hatchery	Natural
American River	68%	33%
Lower Sacramento River	66%	34%
Feather River	63%	37%
Upper Sacramento River	56%	44%
Mokelumne River	0%	100%*
*No coded-wire tag recoveries in the Mokelumne River		
System-wide	61%	39%

<sup>1</sup> Based on expansions of coded-wire tag recoveries.



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