

CENTRAL VALLEY ANGLER SURVEY

2016 Recreational Harvest of Chinook Salmon



Rob Titus, Erin Ferguson, & James Lyons

California Department of Fish and Wildlife
Fisheries Branch
Anadromous Resource Assessment
Sacramento, California



2016 Central Valley Salmon Season

Open July 16–December 16

Exceptions:

Lower American River

July 16 –December 31

Upper Sacramento River

August 1 to December 16

RBDD to Deschutes Rd Bridge

Feather River

July 16 to October 15

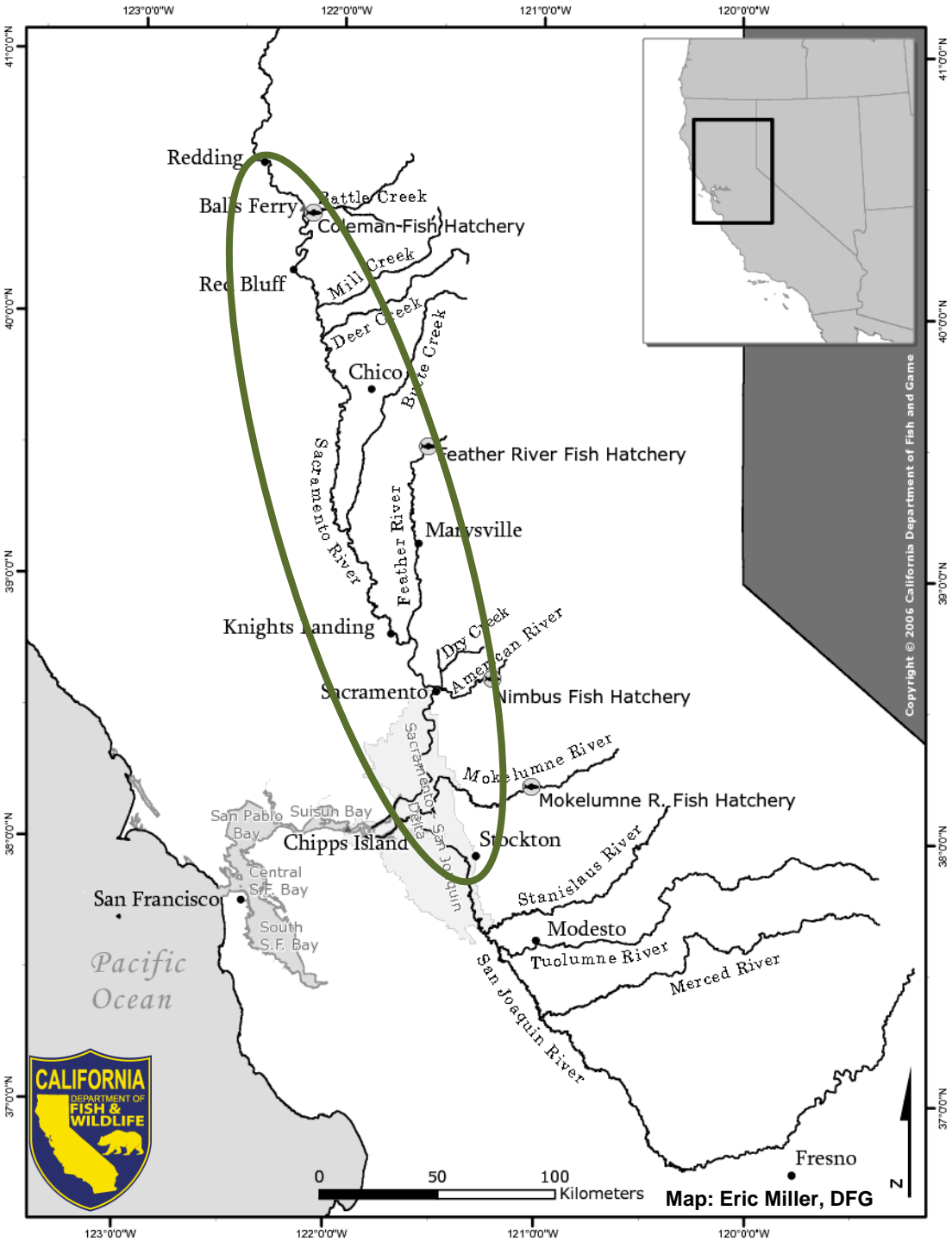
Low flow channel closed



Central Valley Angler Survey



- Estimate angler effort targeting Chinook salmon
- Estimate catch-per-unit-effort (CPUE)
- Estimate harvest of Chinook salmon
- 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

Raw Statistics

- Contacted over 6,800 fishing parties
- 1,571 salmon reported kept
- 1,482 salmon observed
 - or 4% of the estimated harvest
- 377 (25%) adipose fin-clipped salmon
- 375 (99%) heads taken for CWT recovery



Results of 2016 Central Valley Sport Fishery for Chinook Salmon*

Effort: 929,757 angler hours

Trips: 170,598 angling days

Catch: 76,781 salmon

Harvest: 36,656 salmon

Release: 40,125 salmon

Pct retention: 48 %

Harvest rate: 4 salmon per 100 angler hours



* Based on fishery statistics for the American, Feather, Mokelumne, and Sacramento rivers, July – December 2016.

Coded Wire Tag Recoveries

366 CWTs successfully recovered and read

- 39% Feather River Hatchery fall run
- 38% Coleman National Fish Hatchery fall run
- 13% Nimbus Hatchery fall run
- 5% Mokelumne River Hatchery fall run
- 2% Feather River spring run
- 3% Coleman National Fish Hatchery late-fall run
- <1% Merced River Fish Facility fall run
- 0% Winter 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
- Known non–SRFC from the recovery of coded wire tags

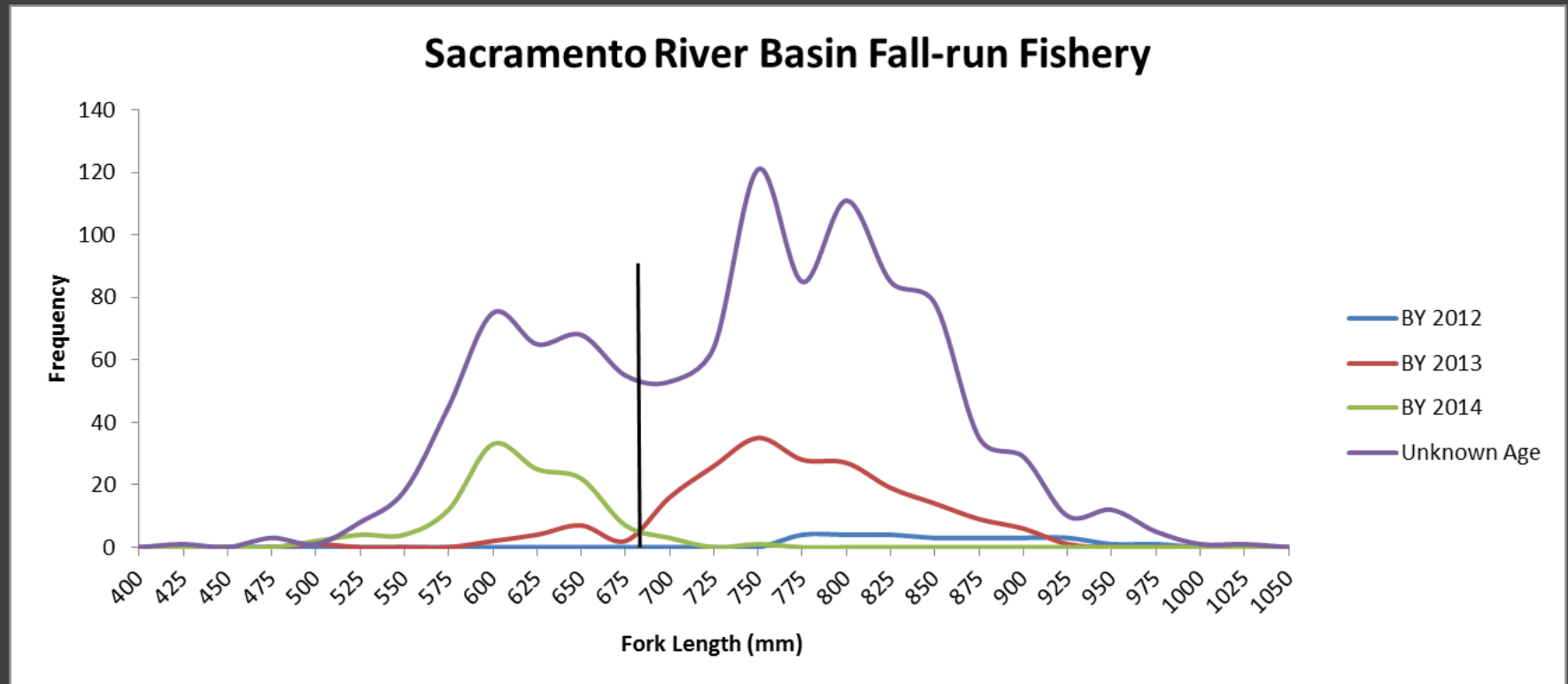
SRFC Inland Harvest

SRFC comprised 93% of all Chinook Salmon harvest in the Central Valley in 2016



Fork Length Frequency Analysis

Conducted for each management zone to determine the size break between 2-year-old (grilse) and older (adult) SRFC



Grilse Composition Varied Between Management Zones

- 48% Lower Sacramento
- 30% American River
- 34% Feather River
- 3% Upper Sacramento



Final SRFC Harvest Estimate

Overall, 33% of the harvest were grilse

23,018 adults

11,223 grilse

34,241 Total SRFC



2016 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



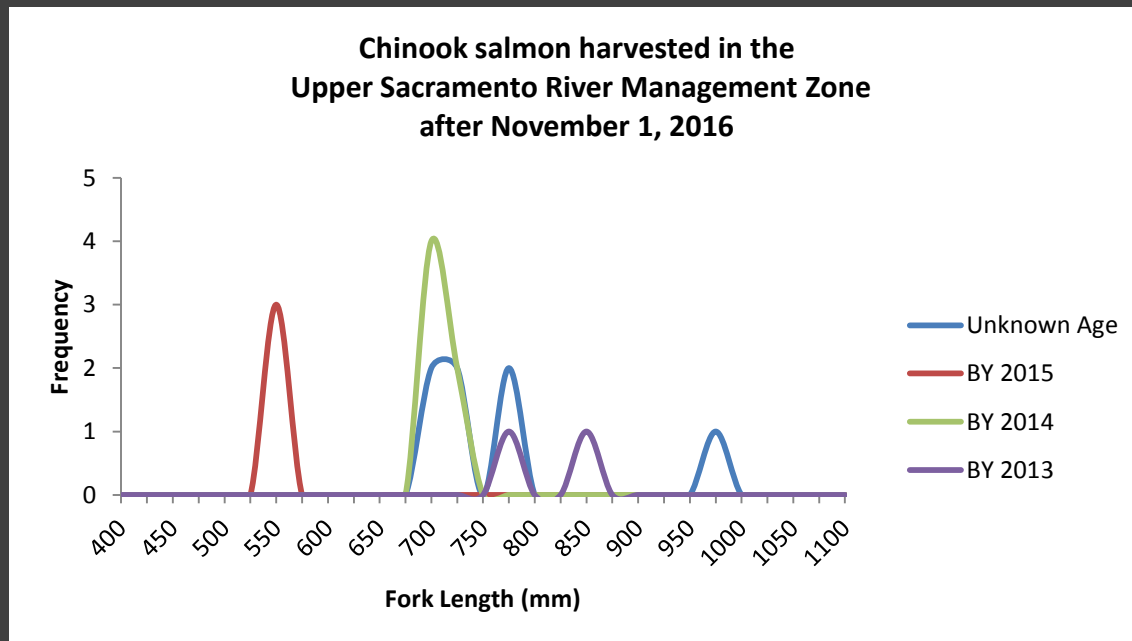
Sacramento River Late-Fall-Run Chinook Salmon Fishery



- *Effort:* 9,651 angler hours
- *Trips:* 1,771 angler trips
- *Harvest:* 130 salmon
- *Harvest rate:* 1.3 salmon per 100 angler hours

SRLFC Summary Statistics

- Expanded estimate: 130 salmon
- 55% catch was of known hatchery origin
 - 100% SRLFC
- Fork Length Frequency Analysis
 - Grilse cutoff difficult to determine ($n = 20$)



2016 Mokolumne River Fall–Run Chinook Salmon Season

- Camanche Dam to Highway 12 overcrossing
 - Survey excluded Lake Lodi and a middle reach
- Open July 16 – December 16
- Daily bag limit of 2 Chinook Salmon, possession of 4



Mokelumne River Fishery

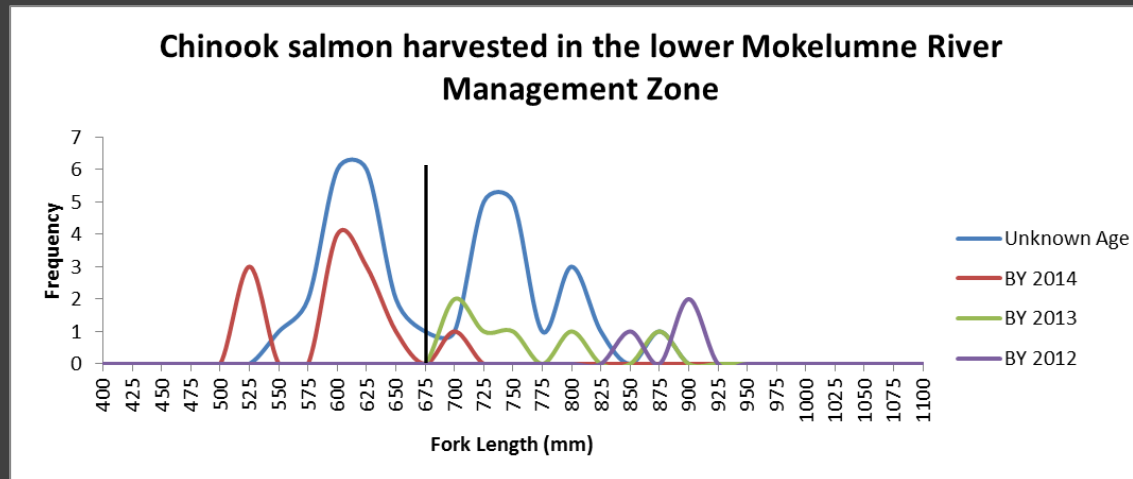
San Joaquin Fall-Run Chinook Salmon (SJRFC)



- *Effort:* 23,823 angler hours
- *Trips:* 4,371 angler trips
- *Harvest:* 1,006 salmon
- *Harvest rate:* 4.2 salmon per 100 angler hours

Mokelumne River Summary Statistics

- Expanded estimate: 2,076 salmon*
- 30% catch was of known hatchery origin
 - 45% San Joaquin River Fall-run Chinook Salmon
 - 55% SRFC
- Fork Length Frequency Analysis
 - Grilse cutoff at 675 mm, or 50% grilse



- Final SJRFC Estimate: 1,038 adult, 1,038 grilse

*Includes SJRFC caught in the LSRMZ and ARMZ

Contact Information

- Erin Ferguson
CDFW/Central Valley Angler Survey,
Sacramento
(916) 227-5029
Erin.Ferguson@wildlife.ca.gov
- James Lyons
CDFW/Central Valley Angler Survey,
Red Bluff
(530) 529-3295
James.Lyons@wildlife.ca.gov

