

Agenda

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE 2013 SALMON INFORMATION MEETING

Sonoma County Water Agency Office
404 Aviation Boulevard
Santa Rosa, California 95403

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**Thursday, February 28, 2013
9:00 a.m. – 3:00 p.m.**

Welcome - Moderator Opening Comments & Review Agenda	Brett Kormos, CDFW (9:00 AM)
2012 California Ocean Salmon Sport & Commercial Fisheries	James Phillips, CDFW (9:15 a.m.)
2012 CV Chinook Escapement Estimates	Jennifer Simon, CDFW (9:35 a.m.)
2012 CV Chinook River Sport Fisheries	Mike Brown, CDFW (9:55 a.m.)
BREAK (15 minutes)	(10:10 a.m.)
2012 Klamath Basin Chinook Spawner Escapement, Harvest, and Age Composition	Morgan Knechtle, CDFW (10:25 a.m.)
NMFS 2013 Ocean Salmon Fishery Guidance	Heidi Taylor, NMFS (10:45 a.m.)
Abundance Forecasts & Harvest Model Results	Dr. Michael O'Farrell, NMFS (11:15 a.m.)
LUNCH BREAK (1 hour)	(11:45 a.m.)
Welcome Back / Introduction of CA Panel	Brett Kormos, CDFW (12:45 p.m.)

Panel members:

Ms. Marci Yaremko, CDFW Marine Region, PFMC-CDFW Designee

Mr. Dan Welford, CA PFMC member, Chairman

Mr. David Crabbe, CA PFMC member

Mr. Mark Helvey, NMFS SWR, PFMC-NMFS Designee

Mr. Aaron Newman, PFMC-SAS, CA Troll

Mr. Marc Gorelnik, PFMC-SAS, CA Sport Fisheries

Mr. Craig Stone, PFMC-SAS, CA Charter Boat

Mr. Dave Hillemeier, PFMC-SAS, CA Tribes

Mr. Jim Hie, PFMC-SAS, Conservation

Dr. Michael O'Farrell, NMFS SWFSC, PFMC-STT, Vice-Chair

Ms. Jennifer Simon, CDFW, PFMC-STT

Ms. Melodie Palmer-Zwahlen, CDFW, PFMC-STT

Closing Comments and Evaluation Form

Brett Kormos, CDFW
(2:45 p.m.)

Acronyms:

CDFW: California Department of Fish and Wildlife

NMFS: National Marine Fisheries Service

PFMC: Pacific Fishery Management Council

SAS: PFMC Salmon Advisory Subpanel

STT: PFMC Salmon Technical Team

SWFSC: NMFS Southwest Fisheries Science Center, Santa Cruz, CA

SWR: NMFS Southwest Region, Long Beach, CA



Department of Fish and Wildlife Ocean Salmon Project

2012 California Ocean Salmon Sport and Commercial Fisheries

Presented by
James Phillips

Project Objectives

1. Estimate salmon landings & fishing effort for each management area by half month periods for all California ocean salmon fisheries.
2. Determine contribution rates of specific salmon stocks by age using coded-wire tag recoveries by fishery, time, and management area.

Sample Design – Recreational Fishery

- **Private Skiffs**
 - Random stratified sampling design using weekday and weekend/holiday strata (i.e. skiff days)
 - Sampling unit: all skiff trips made at a sample site for an entire day
 - Sample at least 20% of all skiff days in each major port area
 - Samplers observe and count all salmon landed
- **Commercial Passenger Fishing Vessels (CPFV)**
 - Sampling unit: each CPFV trip
 - Sample 20% or more of all CPFV trips in each major port area
 - Samplers observe and count all salmon landed
- **Adipose fin clipped salmon**
 - Each salmon inspected for missing adipose fin
 - Adipose fin-clipped salmon are set aside and the heads are recovered for coded-wire-tag extraction

2012 California Recreational Season

KMZ: OR/CA Border to Horse Mt. (132 days)

	May 1	Sept 9	
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FTB: Horse Mt. to Pt. Arena (219 days)

	April 7	Nov 11	
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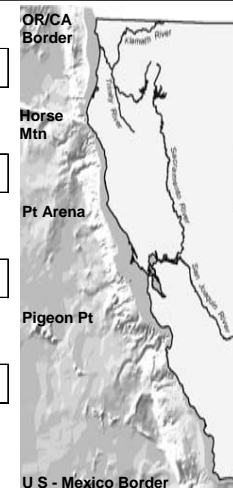
SNF: Pt. Arena to Pigeon Pt. (219 days)

	April 7	Nov 11	
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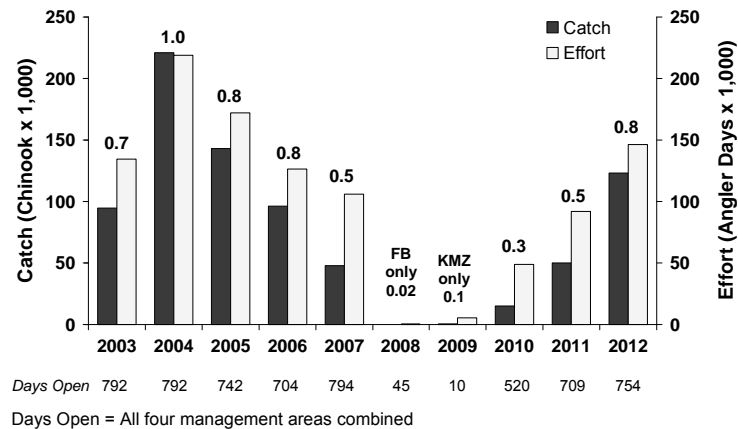
MON: Pigeon Pt. to US/Mexico Border (184 days)

	April 7	Oct 7	
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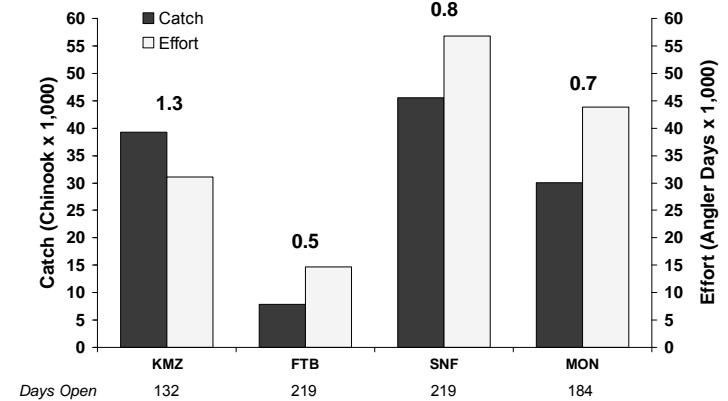
Minimum size limit 20" in KMZ and FTB, 24" in SNF and MON through July 5, 20" thereafter; 2 fish per day



Recreational Catch and Effort, 2003-2012



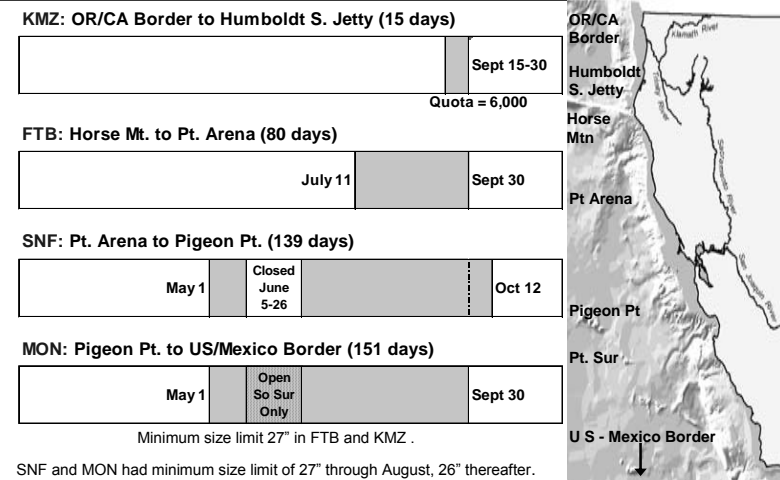
2012 Recreational Catch and Effort by Management Area



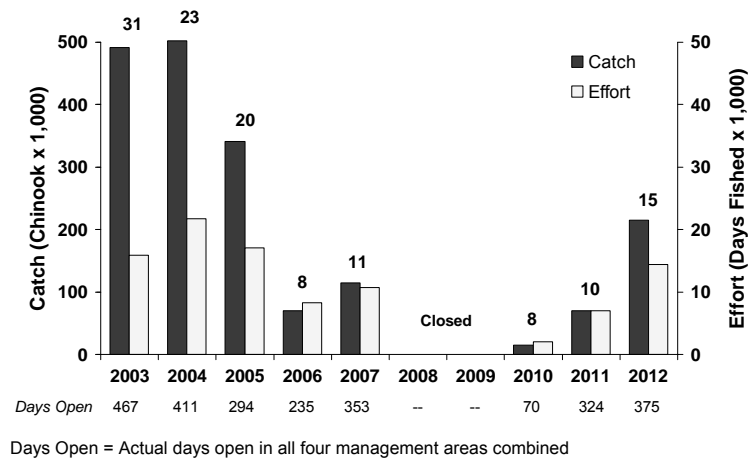
Sample Design – Commercial Fishery

- Sampling unit: each commercial landing
- Sample >20% all landings by weight in each management area
- Samplers observe and count all salmon being unloaded
- Adipose fin clipped salmon
 - Each salmon inspected for missing adipose fin
 - Adipose fin-clipped salmon are set aside and the heads are recovered for coded-wire-tag extraction

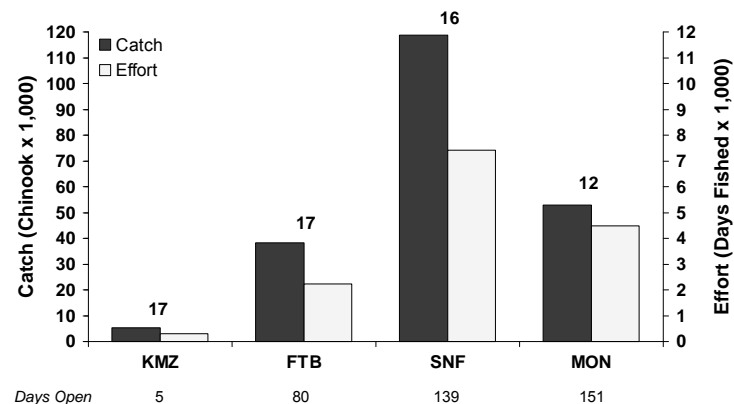
2012 California Commercial Season



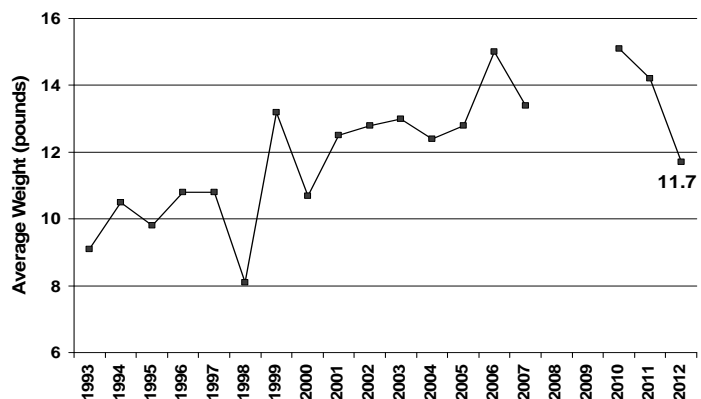
Commercial Catch and Effort, 2003-2012



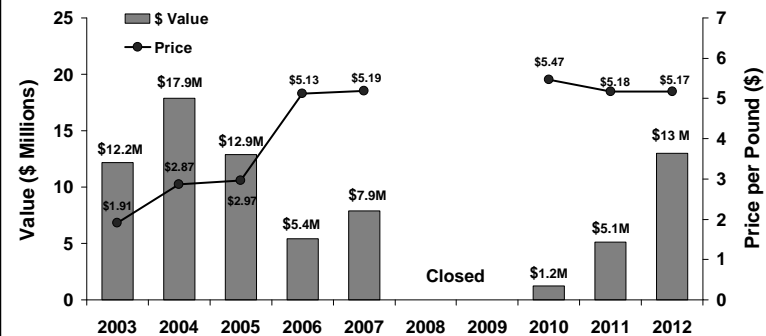
2012 Commercial Catch and Effort by Management Area



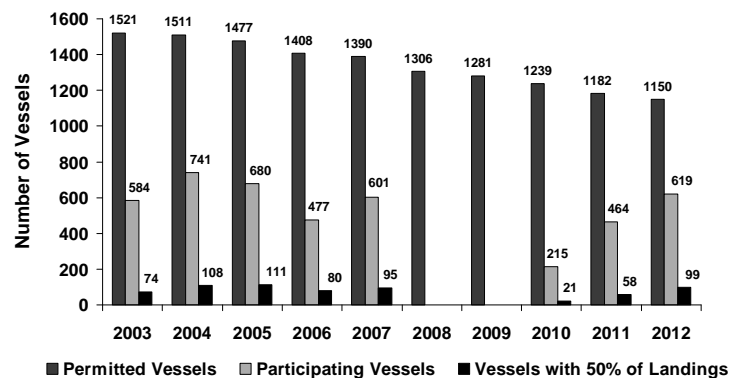
Sampled Average Weight of Commercial Salmon, 1993-2012




Commercial Ex-Vessel Value and Price per Pound, 2003-2012



Number of Vessels with Landings Compared to Permitted Vessels, 2003-2012



2012 KMZ September Quota Fishery

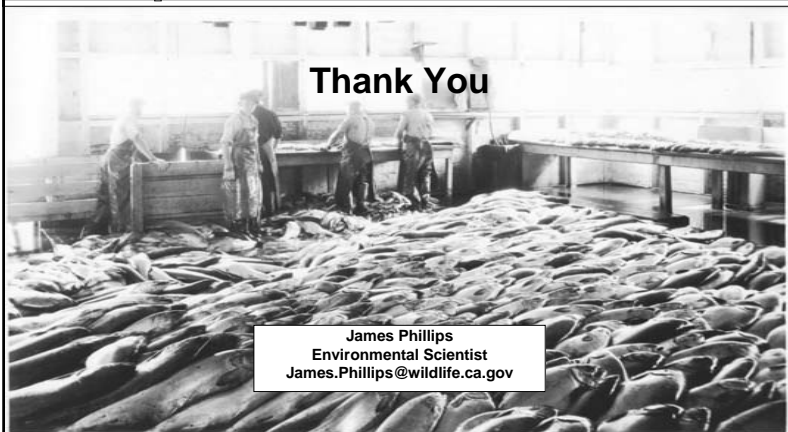
Season	Quota	Average Boats Participating Per Day	CPUE
15-19	6,000	58	17
		Average Chinook Landed Per day	Chinook Landed
		986	5,231



Department of Fish and Wildlife Ocean Salmon Project

Thank You

James Phillips
Environmental Scientist
James.Phillips@wildlife.ca.gov



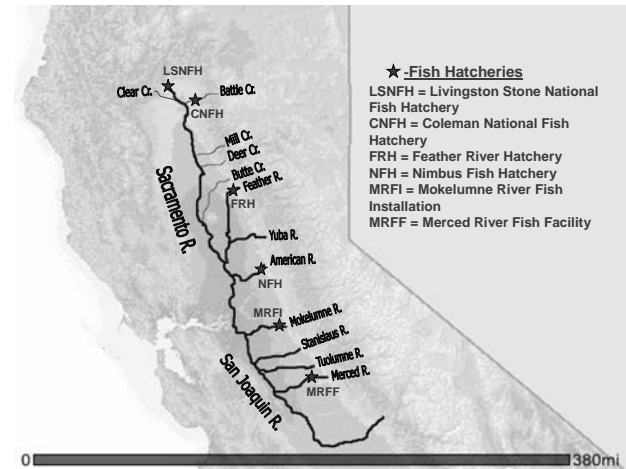


Department of Fish and Wildlife Ocean Salmon Project

2012 Central Valley Chinook Spawning Escapement

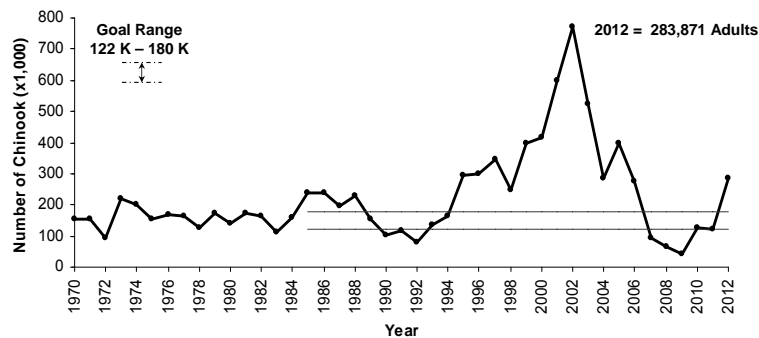
Presented by
Jennifer Simon

The Central Valley



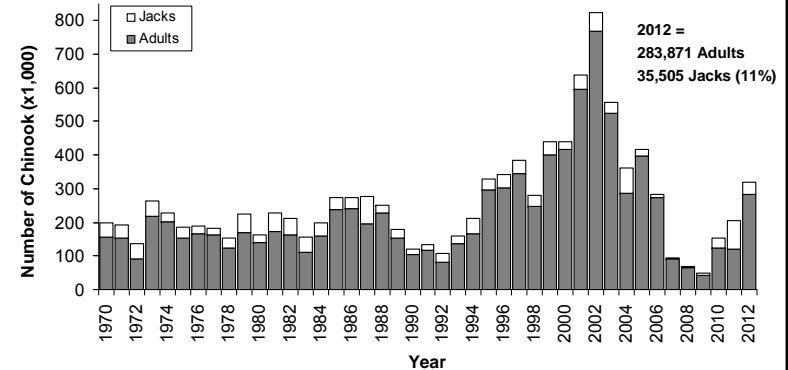
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Sacramento River Fall Chinook Adult Spawning Escapement, 1970-2012



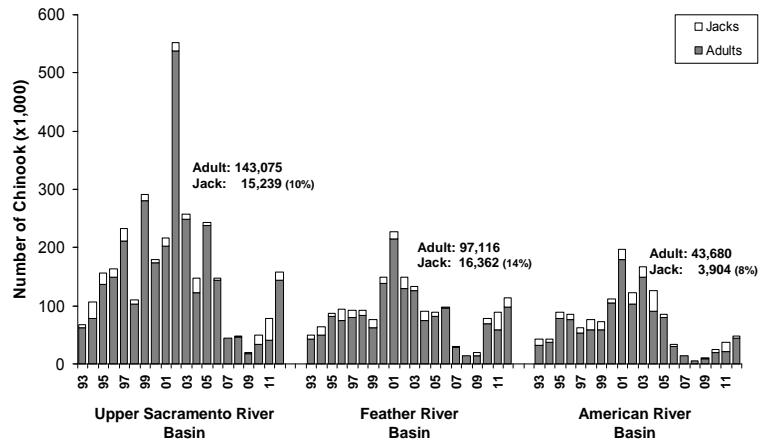
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Sacramento River Fall Chinook Adult & Jack Spawning Escapement, 1970-2012



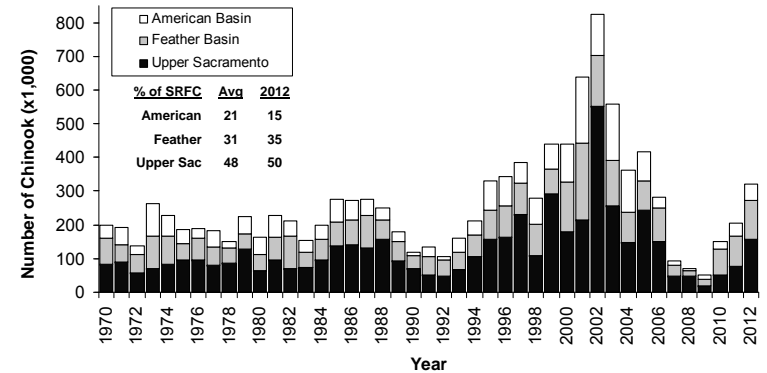
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Sacramento River Fall Chinook Basin Adult & Jack Spawning Escapement – 20 years



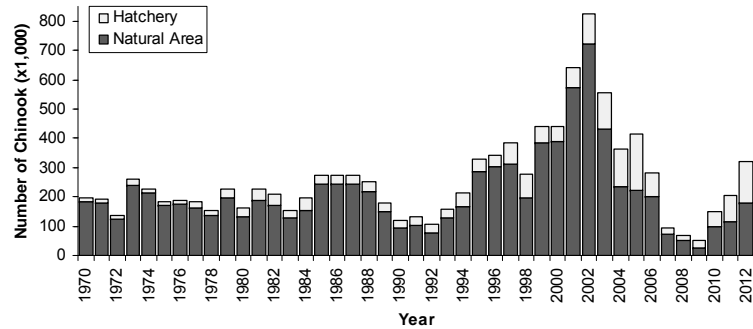
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Sacramento River Fall Chinook Basin Total Spawning Escapement, 1970-2012



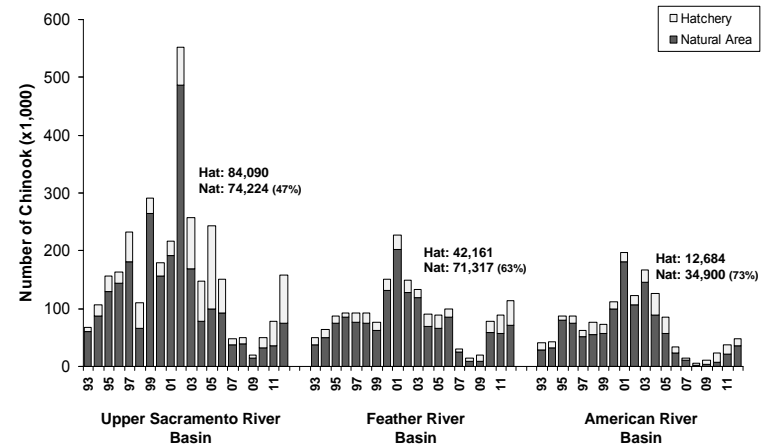
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Sacramento River Fall Chinook Hatchery & Natural Area Spawning Escapement, 1970-2012



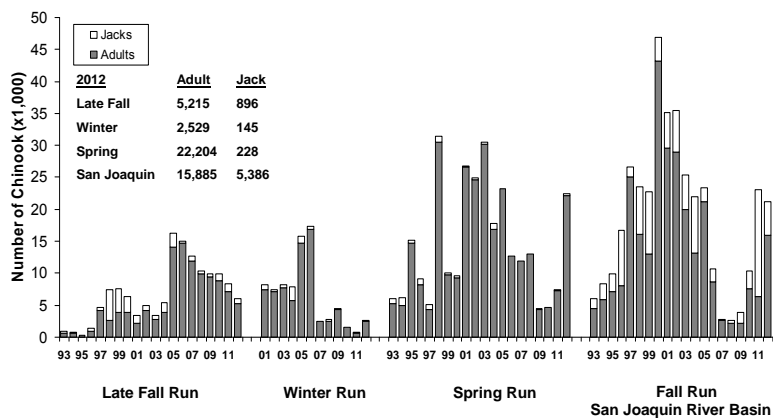
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Sacramento River Fall Chinook Basin Hatchery & Natural Area Spawning Escapement



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Other Central Valley Chinook Stocks Spawning Escapement – 20 years



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2012 Sacramento River Fall Chinook Hatchery and Natural Area Escapement

		Jacks	Adults	Total	% Jack	% Nat	% SRFC Total
Upper Sacramento River Basin	Hatchery	7,786	76,304	84,090	9%		26%
	Natural	<u>7,453</u>	<u>66,771</u>	<u>74,224</u>	<u>10%</u>	47%	<u>23%</u>
		15,239	143,075	158,314	10%		50%
Feather River Basin (including Yuba River)	Hatchery	8,533	33,628	42,161	20%		13%
	Natural	<u>7,829</u>	<u>63,488</u>	<u>71,317</u>	<u>11%</u>	63%	<u>22%</u>
		16,362	97,116	113,478	14%		35%
American River Basin	Hatchery	1,660	11,024	12,684	13%		4%
	Natural	<u>2,244</u>	<u>32,656</u>	<u>34,900</u>	<u>6%</u>	73%	<u>11%</u>
		3,904	43,680	47,584	8%		15%
Total 2012 SRFC Escapement		35,505	283,871	319,376	11%	56%	100%

2012 Other Central Valley Chinook Stocks Hatchery and Natural Area Escapement

		Jacks	Adults	Total	% Jack	% Nat
Central Valley Late Fall Chinook	Hatchery	720	2,437	3,157	23%	
	Natural	<u>176</u>	<u>2,778</u>	<u>2,954</u>	<u>6%</u>	48%
		896	5,215	6,111	15%	
Sacramento River Winter Chinook	Natural	<u>145</u>	<u>2,529</u>	<u>2,674</u>	<u>5%</u>	100%
		145	2,529	2,674	5%	
Central Valley Spring Chinook	Hatchery	228	3,510	3,738	6%	
	Natural	---	<u>18,694</u>	<u>18,694</u>	---	83%
		228	22,204	22,432	---	
San Joaquin Fall Chinook	Hatchery	2,547	5,010	7,557	34%	
	Natural	<u>2,839</u>	<u>10,875</u>	<u>13,714</u>	<u>21%</u>	64%
		5,386	15,885	21,271	25%	



Department of Fish and Wildlife Ocean Salmon Project

Thank You.

Jennifer Simon
Environmental Scientist
CDFW-Ocean Salmon Project
Jennifer.Simon@wildlife.ca.gov
(707) 576-2878

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***CENTRAL VALLEY ANGLER SURVEY:
2012 Recreational Harvest of Chinook Salmon***

Mike Brown and Rob Titus

California Department of Fish and
Wildlife

Fisheries Branch

Anadromous Resource Assessment

Sacramento, California



2012 Central Valley Salmon Season



- Lower American River: Open July 16th- December 31th
- Lower Feather River: Open July 16th- December 16th
Excluding the low flow channel
- Sacramento River – Open July 16th- December 16th
Carquinez Bridge to Deschutes Road Bridge
- Mokelumne River: Open July 16th- December 31th

CENTRAL VALLEY ANGLER SURVEY



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



Sampling Design:

- 19 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, harvest and stock identification



Data collection via:

- *Roving angler counts*
- *Roving angler interviews*
- *Access point interviews*
- *Coded Wire Tag (CWT) Recovery*

Overview of 2012 Central Valley Sport Fishery for Chinook Salmon*

- **Effort:** 1,480,412 angler hours
- **Trips:** 289,194 angling days
- **Total catch:** 117,076 salmon
- **Harvest:** 83,136 salmon
- **Release:** 33,940 salmon
- **Pct retention:** 71%
- **Harvest rate:** 6 salmon per 100 angler hours



* Based on fishery statistics for the American, Feather, Mokelumne and Sacramento rivers, July – December 2012.

Raw Statistics

- Contacted 10,253 fishing parties
- 4,580 salmon reported kept
- 4,043 Salmon observed
or 4.9% of the Estimated Harvest
- 966 adipose fin-clipped salmon
- 953 heads taken for CWT recovery, or 99%



Coded Wire Tag Recoveries

933 CWTs successfully recovered and read

- 38% Coleman National Fish Hatchery fall-run
- 20% Feather River Hatchery fall-run
- 19% Mokelumne River Hatchery fall-run*
- 16% Nimbus Hatchery fall-run
- 5% Coleman National Fish Hatchery late-fall-run
- 3% Feather River spring-run
- 2% Merced River Fish Facility fall-run
- 0% Winter-run

* 2009 Mokelumne River Hatchery production was 100% marked and coded wire tagged.

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 CWTs

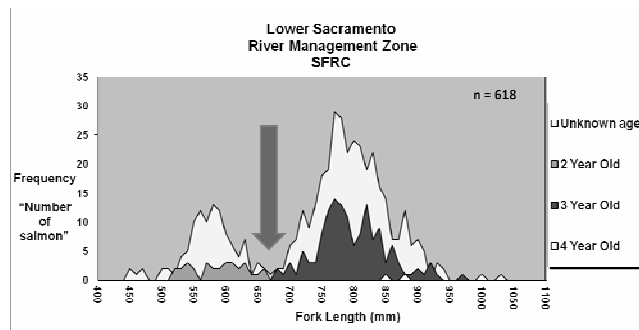
SRFC Inland Harvest

- 81,206 SRFC in 2012, or 98% of all Chinook salmon harvest in the Central Valley.



Fork Length Frequency Analysis

- Conducted for each management zone to determine the delineation between two year old (grilse) and older SRFC Chinook salmon.



Grilse cut off criteria and composition varied between management zones

- 22% < 660mm Feather River
- 22% < 670mm Lower Sacramento River
- 13% < 680mm Upper Sacramento River
- 21% < 700mm American River



Final SRFC Harvest Estimate

Overall 19% of the harvest were grilse

- 62,189 adult SRFC
- 14,429 grilse SRFC

Contact Information

- Mike Brown
DFW / Central Valley Angler Survey
(916) 227-4989
Mike.Brown@wildlife.ca.gov



SUMMARY OF THE 2012 CENTRAL VALLEY CHINOOK SALMON SPORT FISHERY

Prepared by Mike Brown and Rob Titus
California Department of Fish and Wildlife
Fisheries Branch
8175 Alpine Avenue, Suite F
Sacramento, CA 95826
contact: Rob.Titus@wildlife.ca.gov

Season

Fishing for Chinook salmon in Central Valley rivers opened on 16 July 2012 on the Feather, American, and Mokelumne rivers and on the Sacramento River from the Carquinez Bridge to the Red Bluff Diversion Dam. An additional Sacramento River reach from the Red Bluff Diversion Dam to the Deschutes Road Bridge opened on 1 August 2012. Closing dates varied from 16 December through 31 December 2012. The varied closing dates were chosen to avoid contact with endangered winter-run Chinook salmon. The daily bag limit was 2 Chinook salmon with a 2 Chinook salmon possession limit for each licensed angler. The fishery was monitored by California Department of Fish and Wildlife's Central Valley Angler Survey, using a simple, random stratified sampling design that included both roving and access interview components, and the collection of coded-wire tags (CWT) from adipose fin-clipped salmon for stock identification.

Fishery Results

Estimated angling effort in the Central Valley salmon fishery totaled 1,480,412 hours, corresponding to about 289,194 fishing trips. This level of effort was 95% of the average observed prior to the fall-run Chinook salmon decline in 2007. Total harvest in the Central Valley river fishery was estimated at 83,136 salmon with an additional 33,940 salmon caught and released. Retention rate of salmon was 71.0% of the catch. Based on observations of adipose fin-clipped salmon, 23.9% of the harvest consisted of Chinook salmon of hatchery origin. Of the 953 CWTs recovered and read, 74.0% were Sacramento Basin fall-run Chinook salmon, 21.0% were San Joaquin Basin fall-run Chinook salmon, and 3.0% were Feather River Hatchery spring-run Chinook salmon.

The estimated harvest of just Sacramento Basin fall-run Chinook salmon was 81,206. Fork length (FL) frequency analysis (see figure below) was used to determine the delineation between 2-year-old (grilse) and older (adult) Sacramento Basin fall-run Chinook. The size break between the two age groups ranged from 660 to 700 mm FL in different parts of the basin, resulting in 19% of the overall harvest consisting of grilse. Grilse percentage ranged from 13% to 22% in sub-basins. The total estimated harvest of Sacramento Basin fall-run Chinook consisted of 14,429 grilse and 62,189 adults.

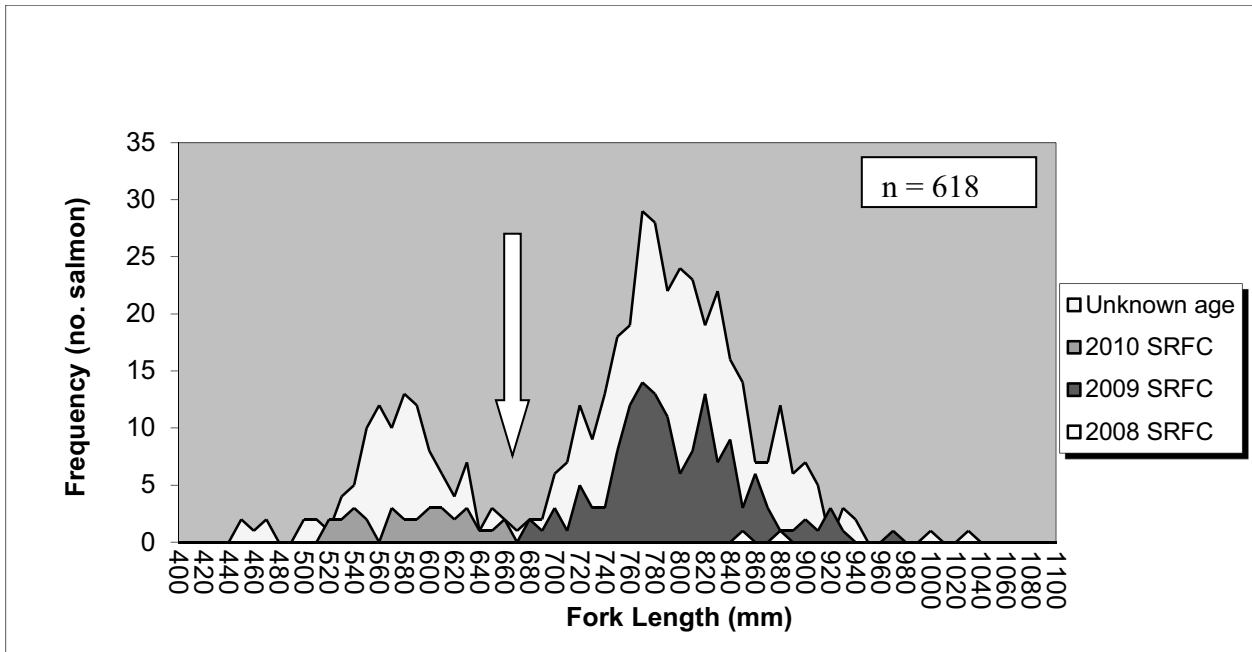
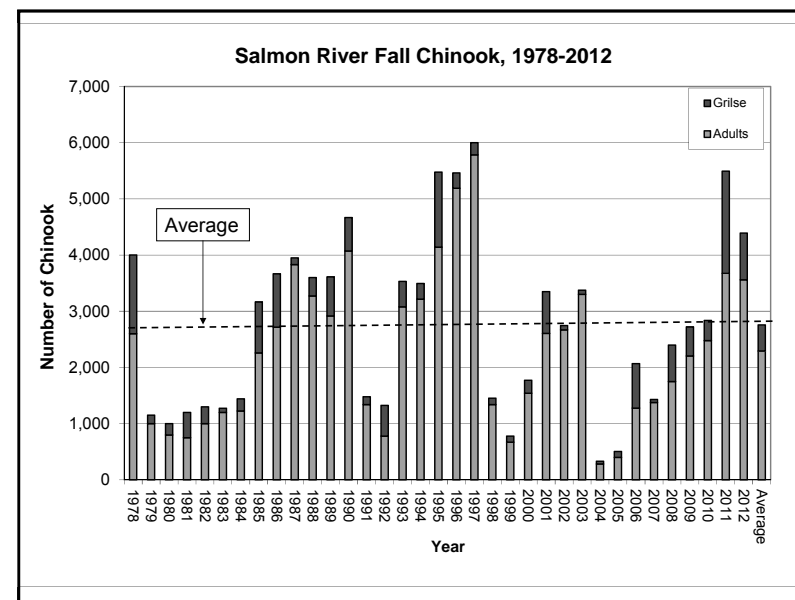
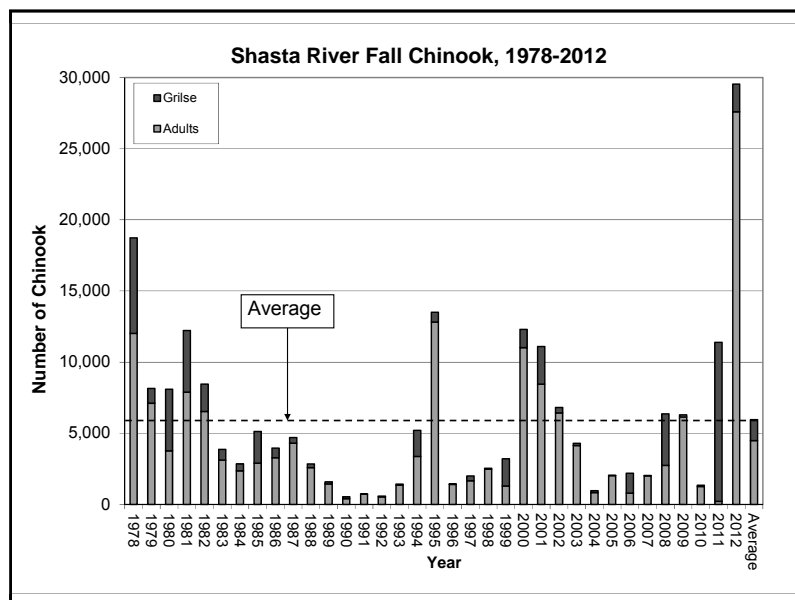
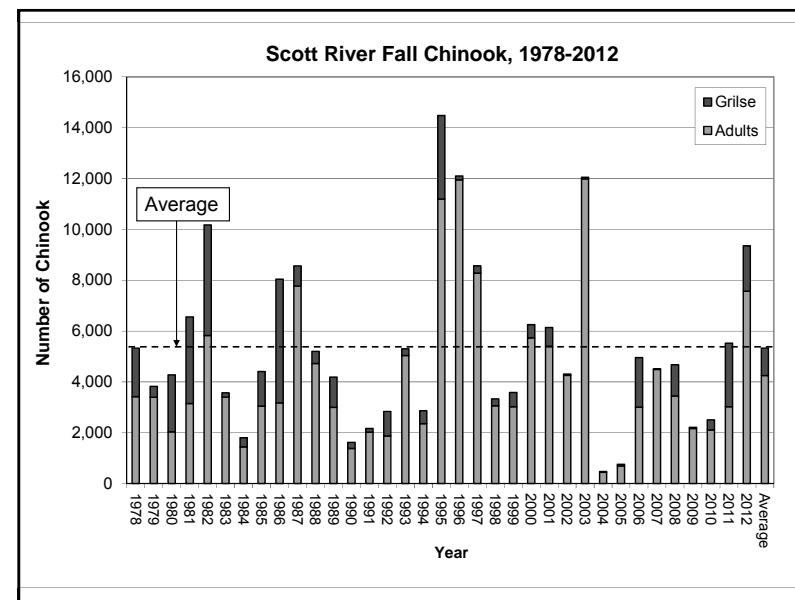
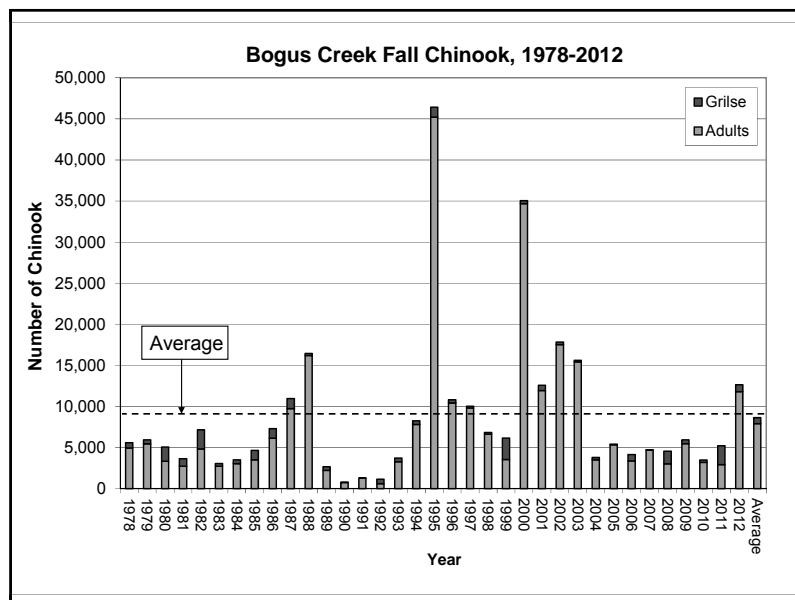


Figure. Fork length frequency distribution of Sacramento Basin fall-run Chinook salmon harvested in the lower Sacramento River during 2012. Years refer to progeny of a given brood year based on CWT recoveries in 2012.

Acknowledgment

California Department of Fish and Wildlife would like to thank the angling public for their cooperation in working with the Central Valley Angler Survey to provide data on their angling effort and catch, and for surrendering salmon heads for tag recovery.

Note: All statistics presented in this summary are preliminary and subject to change as they are finalized.



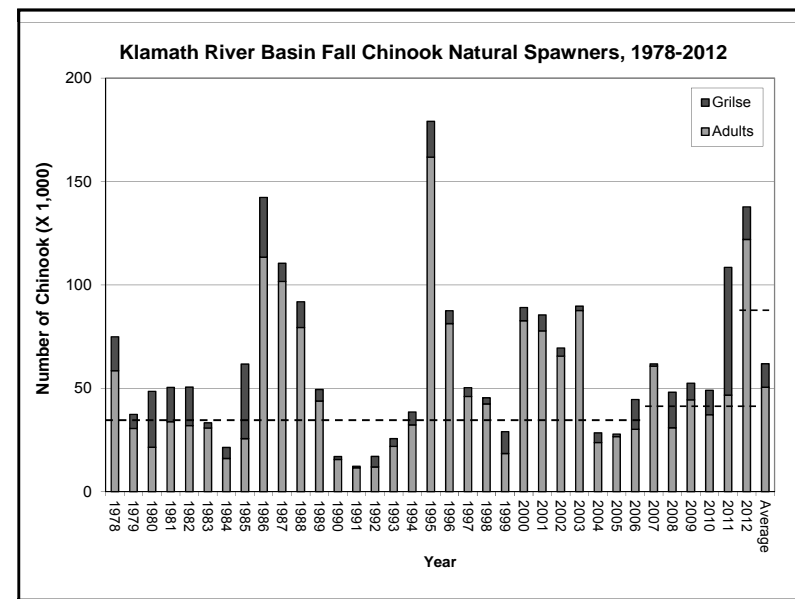
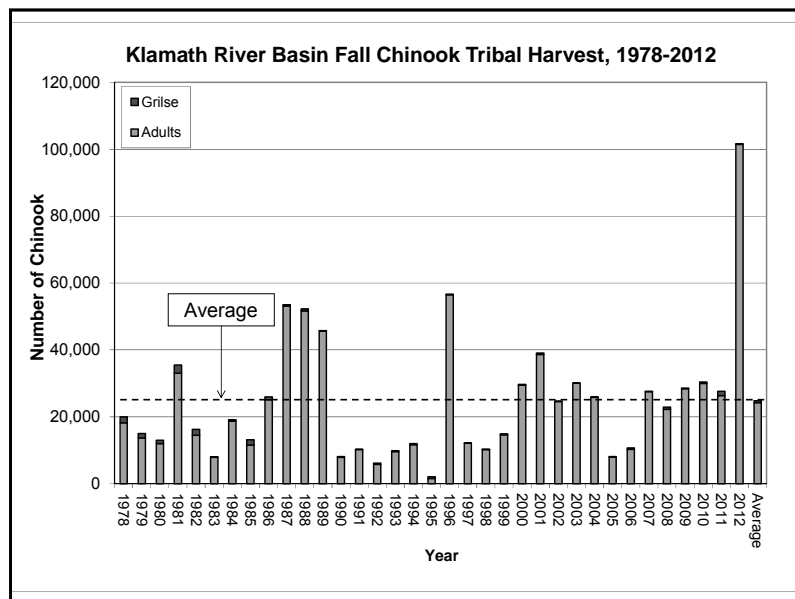
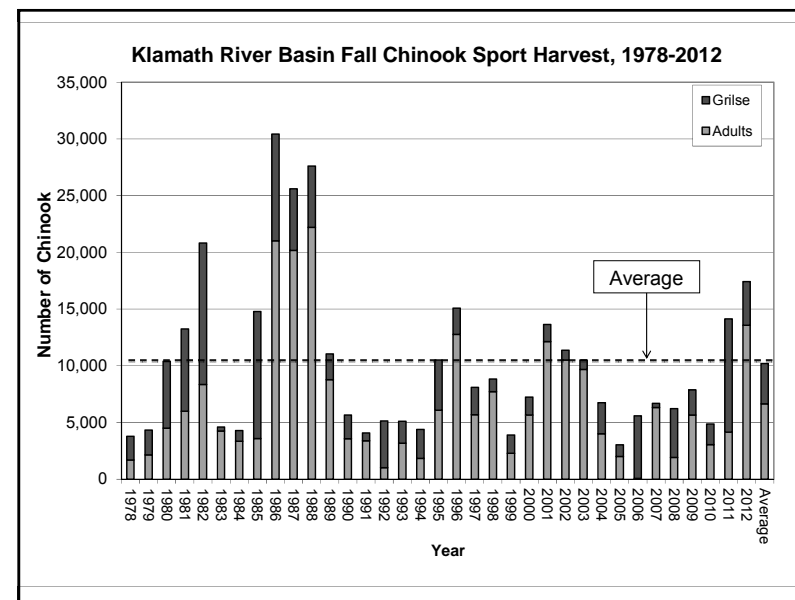
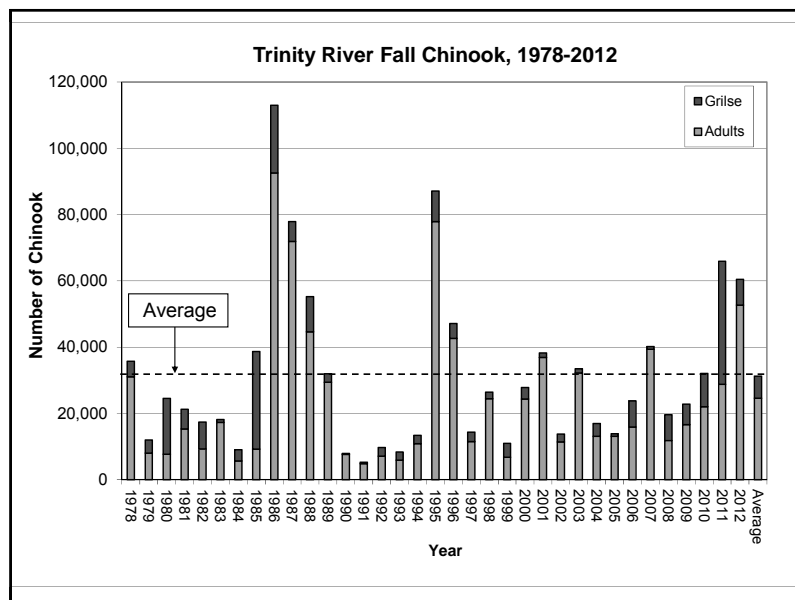


Table 5. Age composition of the 2012 Klamath Basin fall Chinook run.

Escapement & Harvest	2	3	AGE 4	5	Total Adults	Total Run
Hatchery Spawners						
Iron Gate Hatchery (IGH)	1,537	36,485	1,992	0	38,478	40,015
Trinity River Hatchery (TRH)	92	14,965	2,494	2	17,461	17,553
Hatchery Spawner subtotal	1,629	51,450	4,486	2	55,939	57,568
Natural Spawners						
Salmon River Basin	829	2,633	925	4	3,561	4,390
Scott River Basin	1,783	5,608	1,938	23	7,569	9,352
Shasta River Basin	1,944	27,591	2	0	27,593	29,537
Bogus Creek Basin	839	11,390	403	0	11,792	12,631
Klamath River mainstem (IGH to Shasta R)	817	7413	788	0	8,202	9,019
Klamath River mainstem (Shasta R to Indian Cr)	684	5990	610	0	6,600	7,284
Klamath Tributaries (above Trinity River)	629	2,813	441	0	3,253	3,883
Blue Creek	<u>406</u>	<u>329</u>	<u>393</u>	<u>39</u>	<u>761</u>	<u>1,167</u>
Klamath Basin subtotal	7,931	63,767	5,500	66	69,333	77,263
Trinity River (mainstem above WCW)	7,562	38,697	12,422	134	51,253	58,815
Trinity River (mainstem below WCW)	88	452	145	2	598	686
Trinity Tributaries (above Reservation; below WCW)	77	393	126	1	520	597
Hoopla Reservation tributaries	<u>47</u>	<u>239</u>	<u>77</u>	<u>1</u>	<u>316</u>	<u>363</u>
Trinity Basin subtotal	7,774	39,781	12,770	138	52,689	60,461
Natural Spawners subtotal	15,705	103,548	18,270	204	122,022	137,724
Total Spawner Escapement	17,334	154,998	22,756	206	177,961	195,292
Recreational Harvest						
Klamath River (below Hwy 101 bridge)	382	2,132	539	25	2,696	3,078
Klamath River (Hwy 101 to Weitchpec)	3,183	4,512	633	30	5,174	8,357
Klamath River (Weitchpec to IGH)	237	3,820	147	0	3,967	4,204
Trinity River Basin (above WCW)	32	1,051	242	0	1,293	1,325
Trinity River Basin (below WCW)	24	359	85	0	444	468
Subtotals	3,858	11,874	1,646	55	13,574	17,432
Tribal Harvest						
Klamath River (below Hwy 101)	72	69,688	22,139	1,689	93,516	93,588
Klamath River (Hwy 101 to Trinity mouth)	59	2,433	1,274	108	3,815	3,874
Trinity River (Hoopla Reservation)	55	2,784	1,350	11	4,145	4,200
Subtotals	186	74,905	24,763	1,808	101,476	101,662
Total Harvest	4,044	86,779	26,409	1,863	115,050	119,094
Totals						
Harvest and Escapement	21,378	241,777	49,165	2,069	293,011	314,386
Recreational Angling Dropoff Mortality 2.04%	79	242	34	1	277	356
Tribal Net Dropoff Mortality 8.7%	16	6,513	2,153	158	8,824	8,840
Total River Run	21,473	248,532	51,352	2,225	302,109	323,582



NMFS 2013 Salmon Fishery Guidance

California Department of Fish and Wildlife
Salmon Information Meeting
February 28, 2013

Heidi Taylor, Sustainable Fisheries Division
Dan Lawson, Protected Resources Division

Preliminary NMFS guidance for salmon stocks off California; final guidance will be provided at the March 2013 Pacific Fishery Management Council meeting.



Endangered Species Act (ESA) Listed Stocks



Central Valley Chinook Stock Complex **Sacramento River Fall Chinook (SRFC)-Indicator**

- Overfished in 2010
- Rebuilt for 2013 salmon season
- Exceeded S_{ACL} in 2012

Southern Oregon/Northern California Chinook Stock Complex **Klamath River Fall Chinook (KRFC)-Indicator**

- Not overfished/no overfishing
- Exceeded S_{ACL} in 2012

Guidance for 2013

- The 2013 ocean fishery designed to meet/exceed:

Stock	2013 S_{ACL}
SRFC	250, 262 natural and hatchery spawners
KRFC	73, 751 natural spawners



Sacramento River Winter Chinook

- ESA – Endangered
- Jeopardy Biological Opinion completed on April 30, 2010
- RPA required a new management framework for fishery impacts by the start of the 2012 fishing year
- Guidance for 2013 includes:
 - Continuation of previous consultation standards on minimum size limits and seasonal windows
 - Impact rate cap (preseason impact rate prediction not to be exceeded) on age-3 winter-run using the winter-run harvest model (WRHM)
 - Similar to harvest models for Klamath and Sacramento
 - Circle hook restrictions while mooching in the recreational fishery between Horse Mountain and Point Conception should continue
- Impact rate cap for 2013 = 12.9%

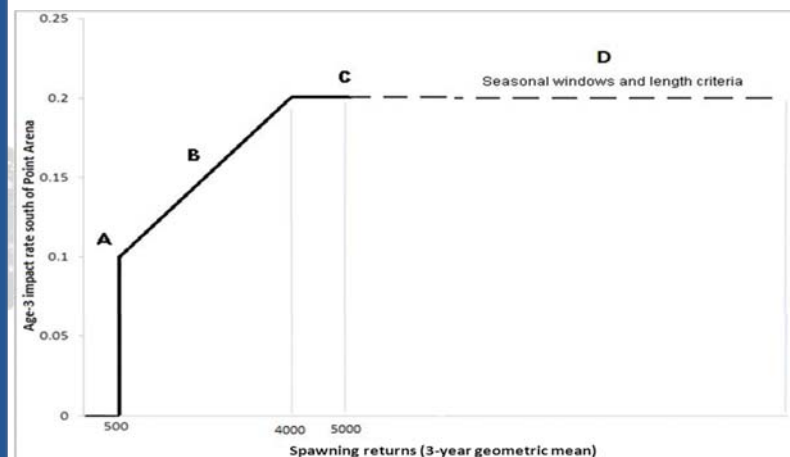


Framework Key Points

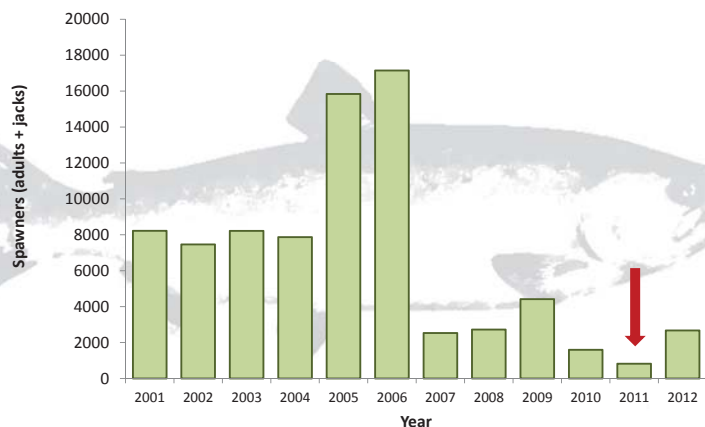
- Framework impact rate cap applies to fisheries south of Point Arena
- Framework is designed to limit exploitation of winter-run when at low abundance
- Data Sources
 - Winter-run abundance and trend data
 - Simulation and harvest management strategy evaluations (MSE)
 - Viability criteria for Central Valley salmon (Lindley *et al.* 2007)
 - Precautionary principals associated with endangered salmonid species.



Winter-run Management Framework



Geometric mean of last 3-years of spawning escapement: (2010-2012) = 1,521



Winter-run spawner escapement from carcass surveys



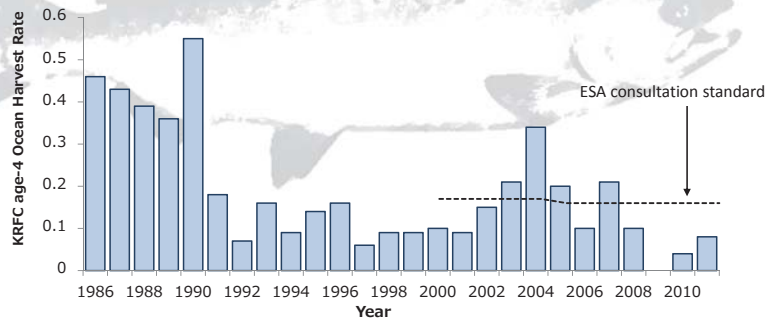
Central Valley Spring Chinook stock

- ESA – Threatened, 2000 Biological Opinion
- Abundance trends from Deer, Mill, Butte Creeks
 - Increasing last 2 years
- Based on Opinion, NMFS concludes new 2012 management guidance for Sacramento winter run and Salmon FMP provides sufficient protection for 2013 season



California Coastal Chinook

- ESA – Threatened, 2000 Biological Opinion
- Indicator stock – Klamath River Fall Chinook (KRFC)
- **Consultation standard**-forecast KRFC age-4 ocean harvest rate $\leq 16\%$



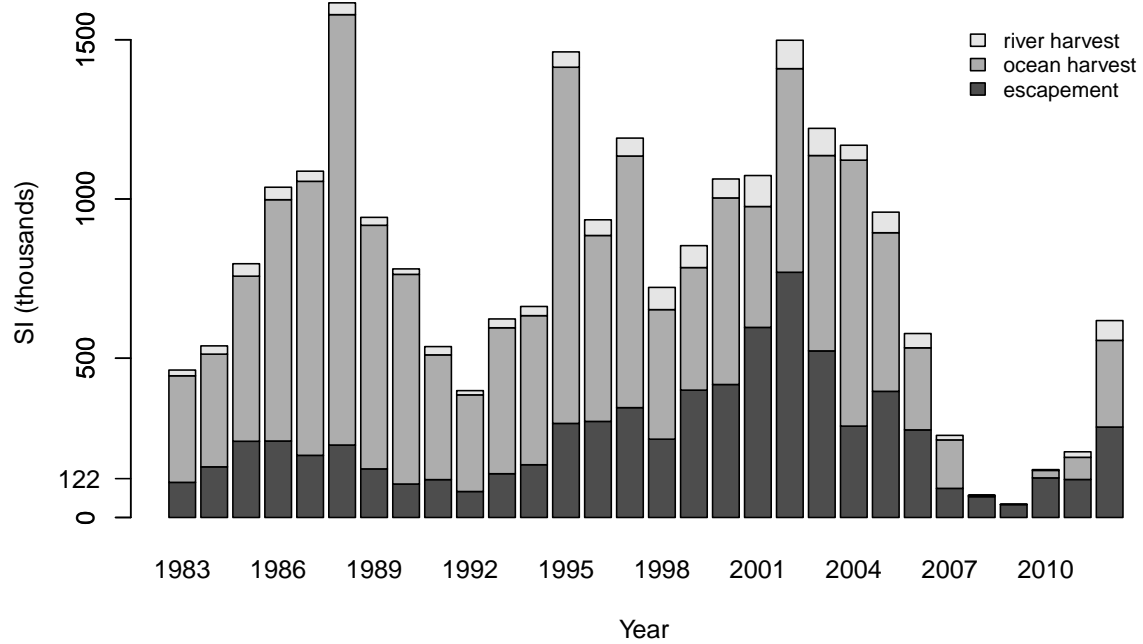
California Coastal Chinook

- Tech memo released in 2012 from SWFSC:
 - Current data
 - Considerations for future changes in management
- April 2013 joint session between the STT and SAS
 - Consider information for improvements to management strategy
 - Sacramento winter-run
 - California Coastal Chinook

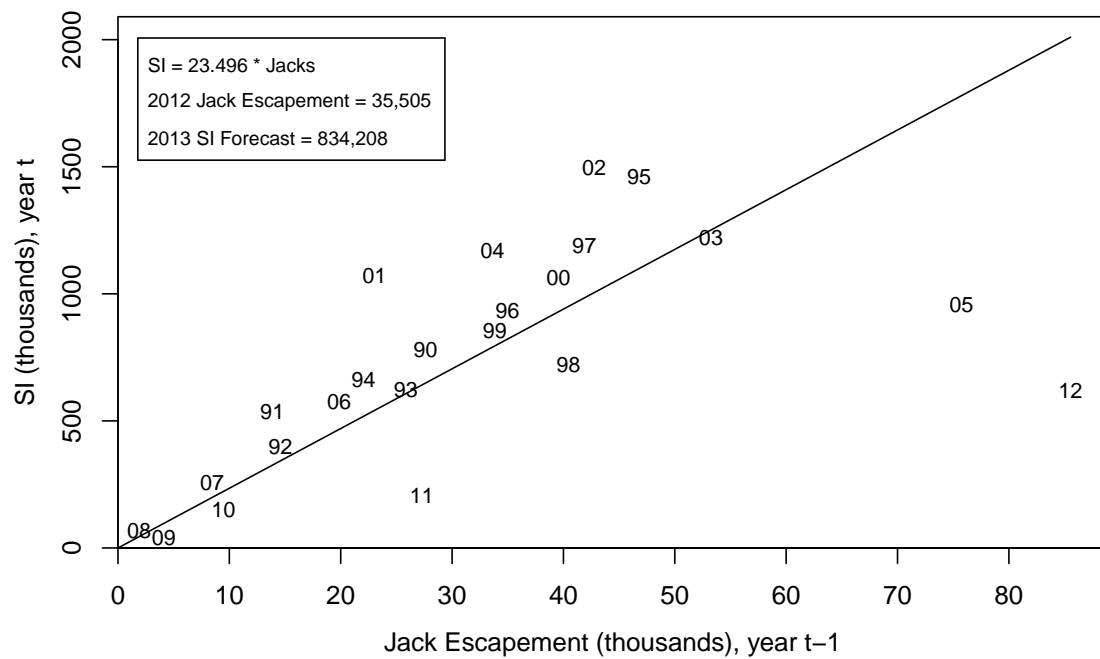
Coho

- Prohibit coho-directed fisheries off CA
- Prohibit coho retention in Chinook-directed fisheries off CA
- **Southern Oregon/ Northern California Coho**
 - ESA – Threatened
 - Indicator stock – Rogue/Klamath coho hatchery stock
 - 1999 supplemental Biological Opinion
 - Ocean exploitation rate $\leq 13\%$ on Rogue/Klamath coho hatchery stock
- **Central California Coastal (CCC) Coho**
 - ESA – Endangered
 - Limited info on harvest rates or hooking mortality
 - incidental to Chinook fisheries

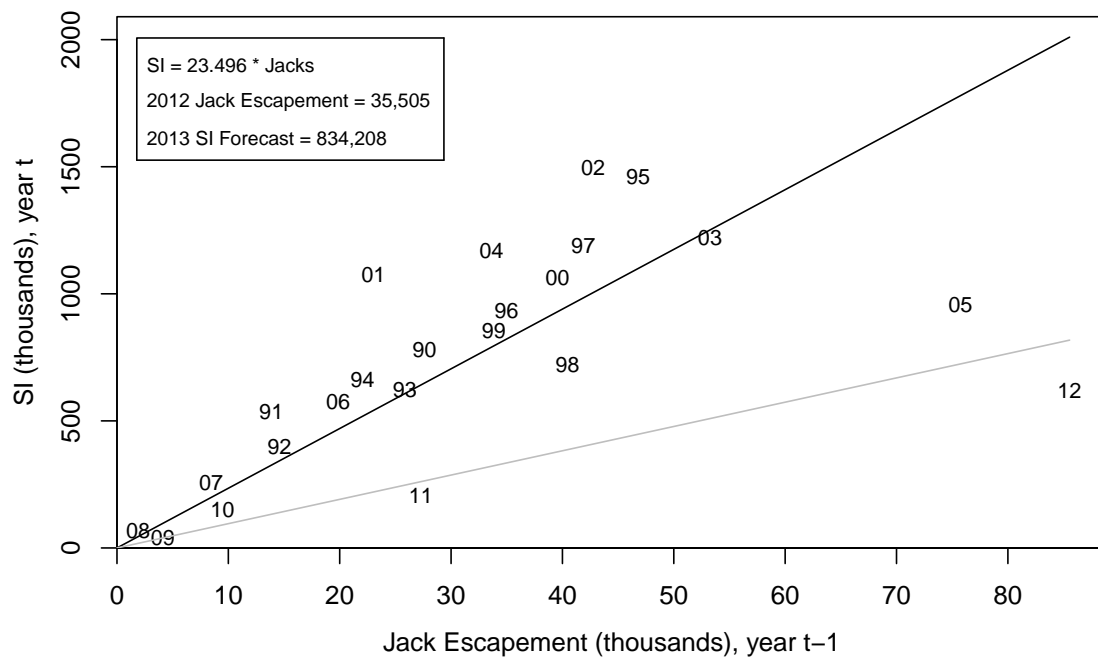
Sacramento Index (SI) time series



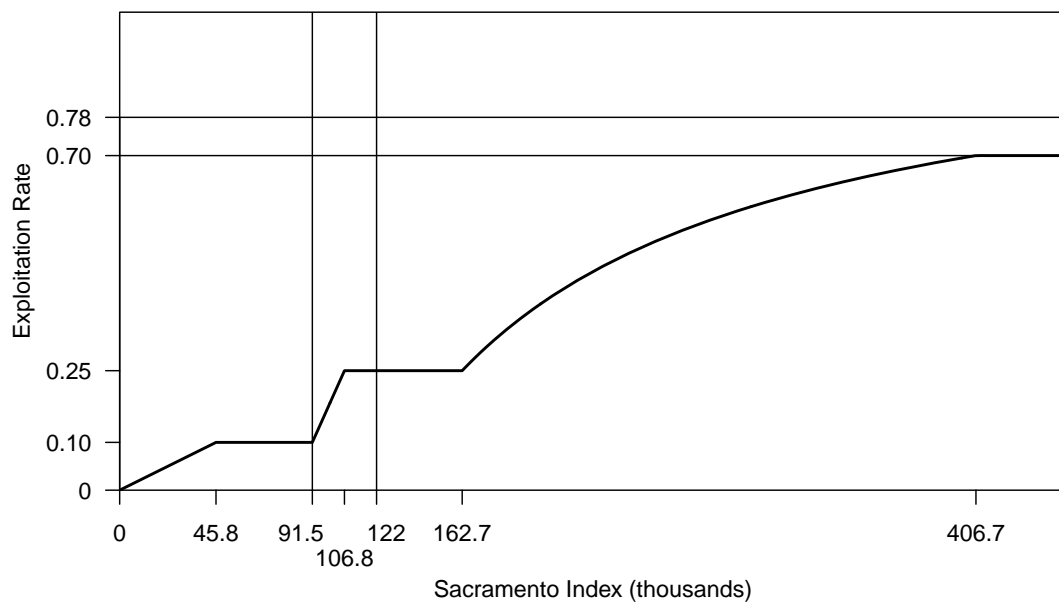
2013 SI forecast: 834,208



2013 vs. 2012 forecast

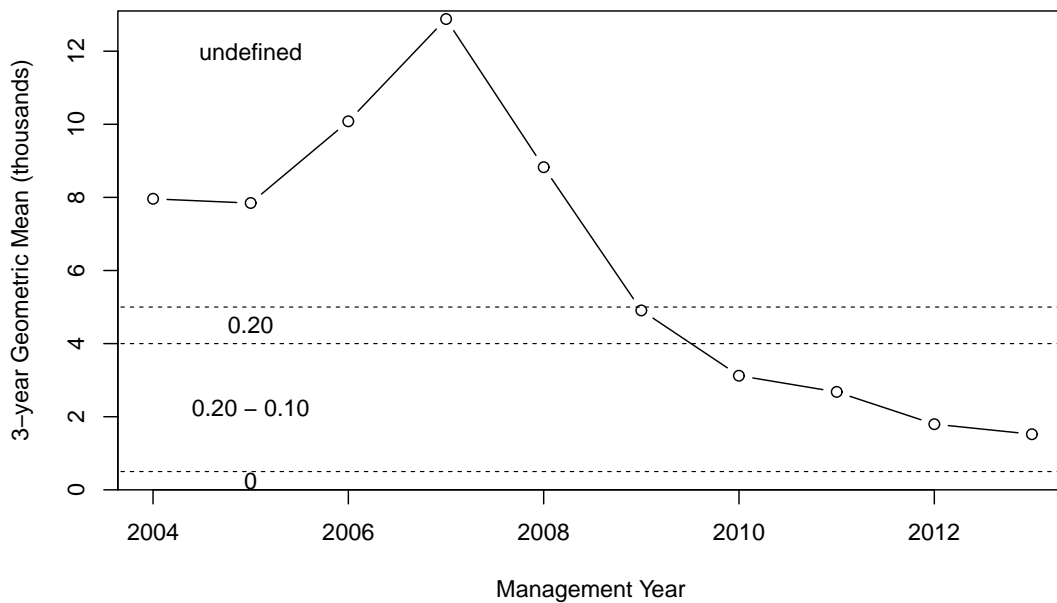


Management context



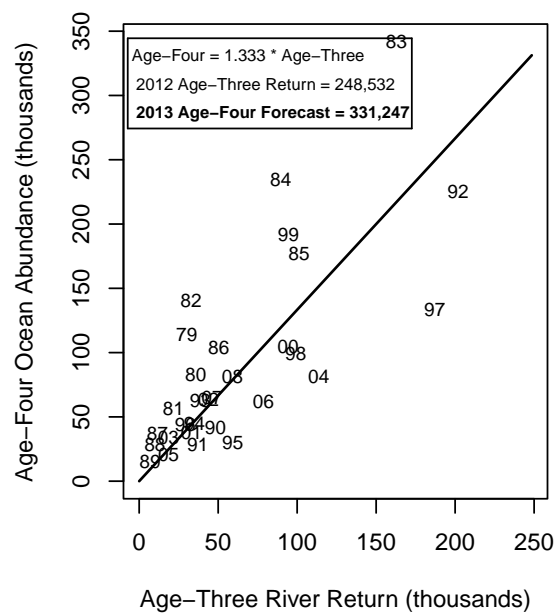
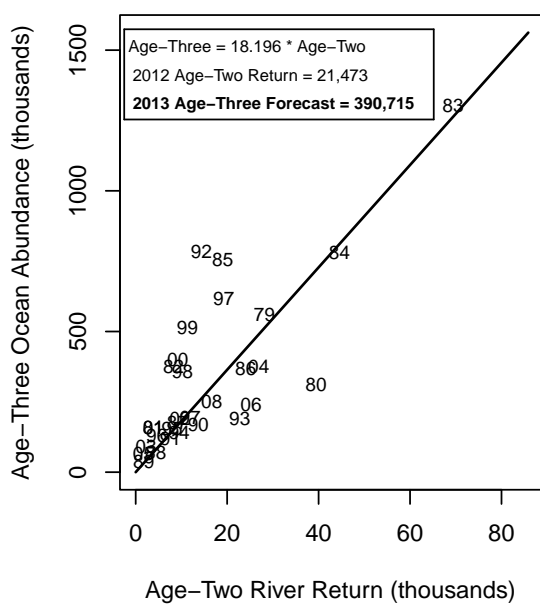
- ▶ Abundance forecast large
- ▶ Must target an escapement of at least 250,262 (max 70% exploitation rate)
- ▶ Unlikely to constrain 2013 fisheries
- ▶ 2012 regs: prediction of 442,767 spawners

Sacramento River winter Chinook



- ▶ Maximum allowable age-3 impact rate: 12.9%
- ▶ 2012 regs: 15.9% age-3 impact rate prediction
- ▶ Will constrain fisheries south of Point Arena

2013 Klamath abundance forecast: 727,682



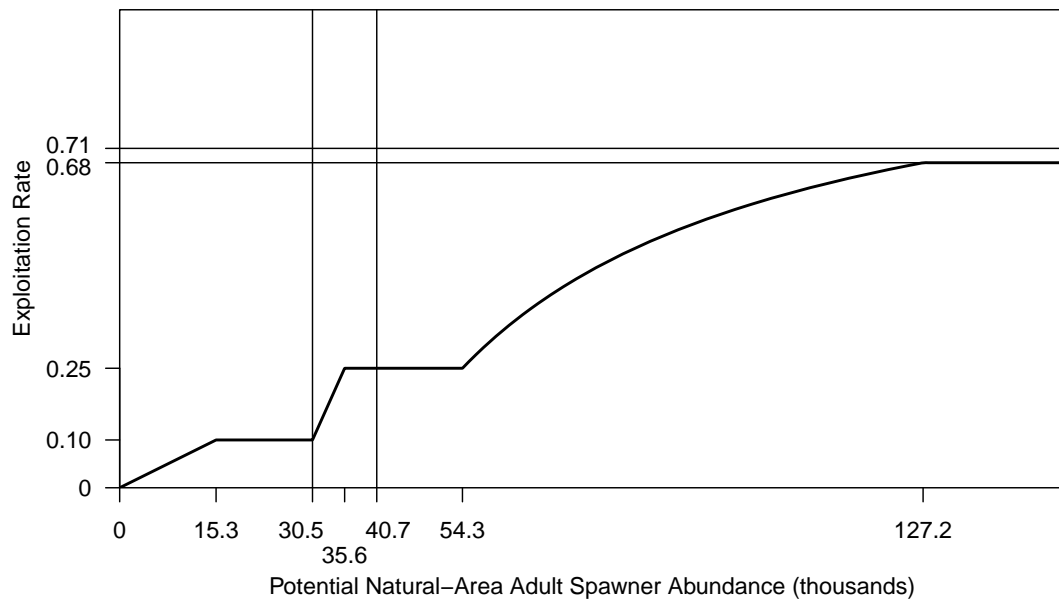
KRFC 2013 abundance forecast:

age-3: 390,715

age-4: 331,247

age-5: 5,720

Management context



- ▶ Potential spawner abundance forecast large (230,473)
- ▶ Must target an escapement of at least 73,751 (max 68% exploitation rate)

Management context, contd.

2012 regs:

- ▶ Tribal allocation: 50% of total harvest
- ▶ River recreational allocation: 42% of non-tribal harvest
- ▶ Natural-area adult spawners = 57,669
- ▶ Exploitation Rate = 0.75
- ▶ Age-4 ocean harvest rate = 15.5

2012 regs with more 'typical' river recreational allocation

- ▶ Tribal allocation: 50% of total harvest
- ▶ River recreational allocation: 15% of non-tribal harvest
- ▶ Natural-area adult spawners = 116,708
- ▶ Exploitation Rate = 0.49
- ▶ Age-4 ocean harvest rate = 15.5



Coastal Monitoring Program Overview For the Salmonid Strategic Plan

California's salmonid populations have experienced marked declines leading to listing of almost all of California's anadromous salmonids under the California Endangered Species Act (CESA) and Federal Endangered Species Act (ESA). Both CESA and ESA listings require recovery plans that call for monitoring to provide some measure of progress toward recovery. In addition, there are related monitoring needs for other management activities such as hatchery operations and fisheries management.

The California Coastal Salmonid Population Monitoring Program (CMP) is designed to provide a comprehensive monitoring program for anadromous salmonids in coastal basins to inform recovery, conservation, and management activities. The scientific foundation of the CMP is made up of a rigorous sampling design incorporating standardized field protocols to allow for valid evaluations of status and trends of fish populations across spatial (within a basin, among basins, independent populations, diversity strata) and temporal (annual variation, short-term trends, long-term trends) scales. The CMP calls for standardized field protocols, data collection, and data reporting – the goal is being open access of collected data from a web-based platform.

The CMP provides a sampling framework to collect information at the appropriate life stages and spatial scales to evaluate adult salmonid abundance both at larger regional scales and at the population level. Productivity is calculated as the trend in abundance over time. CMP design also allows basic assessments of connectivity through the collection of juvenile distribution and relative abundance data. Measurement of diversity are based on local evaluation of essential life history variants and both broad and focused assessments of genetic diversity patterns.

Adult abundance monitoring will be approached differently between the Northern and Southern areas due to differences in species composition, abundances, and habitat conditions. In the Northern Area, adult numbers will be estimated mostly through expanded redd surveys and in the Southern Area adults will be counted at fixed stations. Surveys will be selected in a random, spatially balanced manner. Spatial balance is important because salmonid numbers from samples near each other tend to be similar, so that more information relevant to a regional scale evaluation is obtained from samples that are spaced out. Other methods (e.g., live fish counts for Chinook salmon) will be used where necessary. Species characteristics and environmental features make steelhead in the Southern Area difficult to monitor, and due to the low abundance and difficult sampling conditions, fixed stations will be used to count adult Southern Area steelhead.

Life Cycle Monitoring (LCM) stations will provide estimates of freshwater and ocean survival, essential to understanding whether changes in salmonid numbers are due to recovery from improvements in freshwater habitat conditions or changes in ocean conditions. An LCM station will include an absolute measure of adult abundance from a counting facility, a spawning survey estimate of adult abundance, and an estimate of outmigrating smolts. The adult counts and outmigrant smolt counts will provide estimates of fish in and fish out, that can be used to provide relative estimates of freshwater and marine survival. The counting station data and adult survey estimates will be used to develop an estimation factor between redds and adults for calibration of adult surveys conducted in other watersheds. The LCM sites are also expected to be magnets for other kinds of recovery-oriented research, particularly studies of fish habitat-productivity relationships and evaluations of habitat restoration effectiveness.

Monitoring is necessary to provide data that will be analyzed to inform management decisions, and those data must be made available in a timely manner to managers in a usable form. The data management structure is one of the most important parts of the CMP, ensuring that consistent data standards and protocols are applied across and within monitoring areas and that data flow is coordinated from the field to a central data collection center. It will also ensure that data reporting necessary for common analytical activities occurs in a timely manner and will provide a data source for other analytical needs.

References:

Adams, P., L. Boydstun, S. Gallagher, M. Lacy, T. McDonald, K. Shaffer 2011. California Coastal Salmonid Population Monitoring: Strategy, Design, and Methods. Fish Bulletin 180 California Department of Fish and Game. pp82.

For additional information:

<http://www.calfish.org/Programs/CaliforniaCoastalMonitoring/tabid/186/Default.aspx>

<http://www.dfg.ca.gov/fish/Fishing/Recognition/SIWR/>

<http://www.dfg.ca.gov/marine/>

CDFW Fisheries Branch: (916) 327-8840

Salmon 2013 Preseason Process: Calendar of Events

March 6, 2013 - California Fish and Game Commission Meeting

Mt. Shasta Hatchery Museum, #3 North Old Stage Road, Mt. Shasta CA, 96067
The public may address and/or ask questions of the Commission relating to the implementation of its policies or any other matter within the jurisdiction of the Commission.

March 6-11, 2013 - Pacific Fishery Management Council Meeting

Hotel Murano, 1320 Broadway Plaza, Tacoma, WA 98402
The PFMC will address inseason action for fisheries opening prior to May 1 and will adopt preliminary alternatives on March 8, adopt tentative alternatives for STT analysis on March 9, and final alternatives for public review on March 11.

March 12-16, 2013 - Pacific Fishery Management Council Workshop

The STT completes *Preseason Report II: Proposed Alternatives & Environmental Assessment Part 2 for 2013 Ocean Salmon Fishery Regulations*, available online March 20, 2013 at: www.pcouncil.org

March 26, 2013 - Pacific Fishery Management Council Hearing – California

Red Lion Eureka, 1929 Fourth Street, Eureka, CA 95521
The PFMC will receive comments from the public related to the ocean salmon fishery management alternatives adopted in March. More information is available online at: www.pcouncil.org

April 6-11, 2013 - Pacific Fishery Management Council Meeting

Sheraton Portland Airport Hotel, 8235 Northeast Airport Way, Portland, OR 97220
The Council meets to adopt final regulatory measures. Results from the public hearings and information developed at the Council meeting are considered during the course of the week. The Council will tentatively adopt final regulatory measures for analysis by the STT on April 7. Final adoption of recommendations to NMFS is tentatively scheduled to be completed on April 11.

April 12-20, 2013 – Pacific Fishery Management Council Workshop

The PFMC and STT complete *Preseason Report III: Analysis of Council-Adopted Management Measures and Environmental Assessment Part 3 for 2013 Ocean Salmon Fishery Regulations*, available on-line April 22 at: www.pcouncil.org

April 17-18, 2013 - Fish and Game Commission Meeting

Flamingo Conference Resort & Spa, 2777 Fourth Street, Santa Rosa, CA 95405
The public may address and/or ask questions of the Commission relating to the implementation of its policies or any other matter within the jurisdiction of the Commission.

Who Can I Contact Regarding the Upcoming Salmon Season?

Contact a member of the Pacific Fishery Management Council's **Salmon Advisory Sub-panel**:

Jim Hie Conservation	Pacific Marine Conservation Council 1423 Vista Ave. Napa, CA 94559	Telephone: (707) 695-8661 Fax: (707) 265-0304 Email: jnahie@att.net
Dave Hillemeier, California Tribes	Yurok Tribe PO Box 1027, Klamath, CA 95548	Telephone: (707) 482-1350 Fax: (707) 482-1377 Email: Dave@yuroktribe.nsn.us
Aaron Newman California Troll	Humboldt Fisherman's Marketing Assoc. 3150 F Street Eureka, CA 95503	Telephone: (707) 496-5158 Fax: n/a Email: kay6V71@aol.com
Marc Gorelnik California Sport Fisheries	Coastside Fishing Club 8042 Terrace Drive, El Cerrito, CA 94530	Telephone: (415) 409-9529 Fax: (415) 795-4529 Email: marc@gorelniklaw.com
Craig Stone California Charter Boat	Emeryville Sportfishing 3310 Powell St. Emeryville, CA 94608	Telephone: (510) 654-6040 Fax: (510) 654-2106 Email: emvlsport@aol.com

To make comments directly to the **Pacific Fishery Management Council** regarding the upcoming salmon season, please visit the PPMC web site at: www.pcouncil.org/contact/. Or, contact the PPMC staff officer for salmon Mike Burner (Mike.Burner@noaa.gov)

To make comments directly to the **Fish and Game Commission** regarding the upcoming salmon season, please visit the Commissions web site at: www.fgc.ca.gov/contact/.

Online Resources:

Review of 2012 Ocean Salmon Fisheries (includes in-river escapement data)

Available online at:

www.pcouncil.org/salmon/stock-assessment-and-fishery-evaluation-safe-documents/

Preseason Report I: Stock Abundance Analysis for 2013 Ocean Salmon Fisheries Available online March 1, 2013 at:

www.pcouncil.org/salmon/stock-assessment-and-fishery-evaluation-safe-documents/preseason-reports/

Klamath Basin Age Composition and Stock Projection Reports

Available online March 1, 2013 at:

www.pcouncil.org/salmon/background/document-library/

EVALUATION

To improve future *Salmon Information Meetings* and to better meet your needs, please complete this evaluation.

1. Indicate the interest group with which you are affiliated.

- | | |
|---|--|
| <input type="checkbox"/> Fishing Dependant Business | <input type="checkbox"/> Tribal |
| <input type="checkbox"/> Ocean Commercial | <input type="checkbox"/> Conservation |
| <input type="checkbox"/> Ocean Sport | <input type="checkbox"/> Resource Management |
| <input type="checkbox"/> River Sport | <input type="checkbox"/> Other (please describe) |

2. What information did you find most useful?

- | | |
|--|---|
| <input type="checkbox"/> Review of 2012 Sport Fishery and Commercial Fishery | <input type="checkbox"/> NMFS Guidance for CA Stocks |
| <input type="checkbox"/> Review of 2012 Central Valley (CV) System | <input type="checkbox"/> Klamath and Sacramento Ocean Harvest Model Results |
| <input type="checkbox"/> Review of 2012 CV Chinook River Sport Fishery | <input type="checkbox"/> Public Comment to CA Salmon Management Panel |
| <input type="checkbox"/> Review of 2012 Klamath River Fall Chinook (KRFC) | |

3. What information would you like presented in the future?

4. What meeting organization comments or suggestions do you have?

5. Additional comments or suggestions about the meeting are appreciated.

Any formal recommendations or comments that you would like forwarded to your representatives for the 2013 salmon management process?

Name _____ Affiliation _____

[illegible]

(Optional) Please provide your contact information so your representatives can ask follow up questions.

E-mail: _____ Phone: _____