



Department of Fish and Wildlife Ocean Salmon Project

2016 California Ocean Salmon Fisheries

Presented by
Kandice Morgenstern



Ocean Salmon Project Objectives

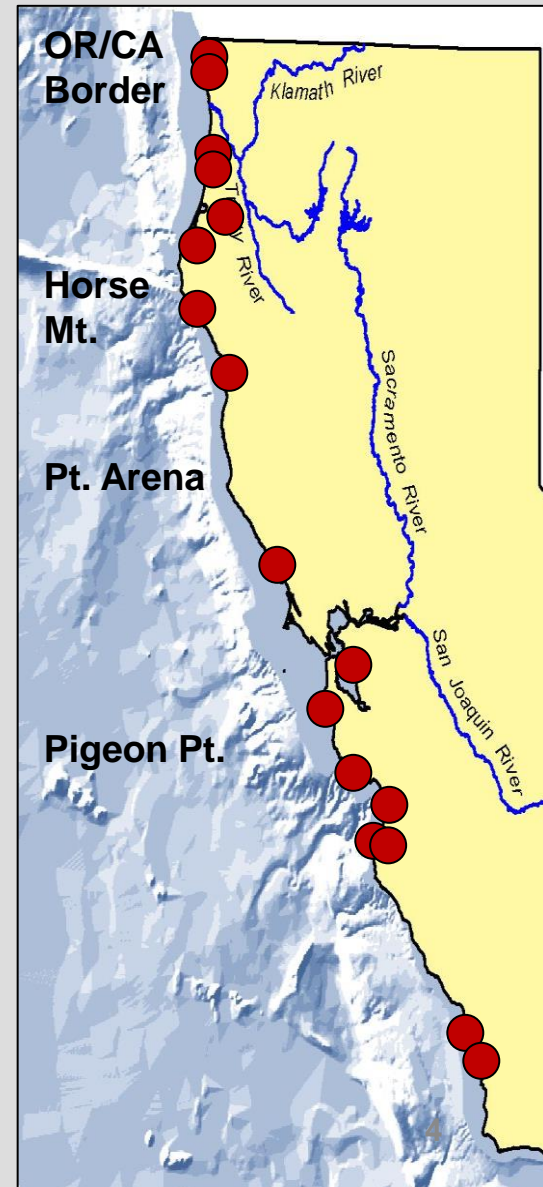
1. Estimate salmon harvest & fishing effort for each management area by half month periods for all California ocean salmon fisheries
2. Determine contribution rates of specific salmon stocks by age using coded-wire tag recoveries by fishery, time, and management area

Recreational Salmon Fishery



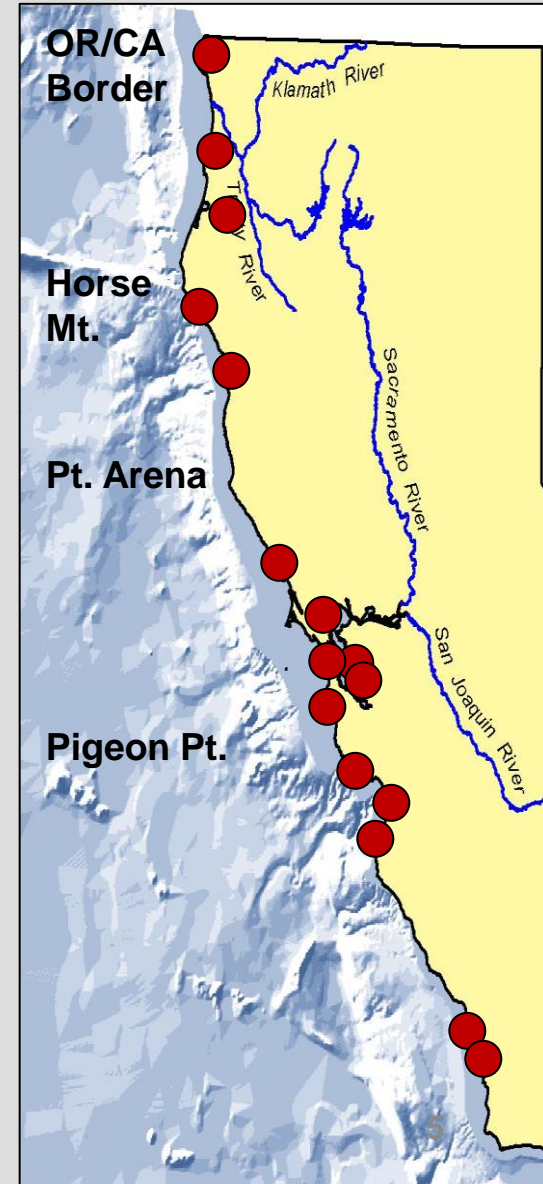
Sample Design – Private Skiff Fishery

- 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
- CRFS samples $\geq 20\%$ of all skiff days in each management area and period
 - 17 primary salmon skiff sample sites
 - Average 7 sample days per month at each site
 - 453 skiff days sampled during the 2016 ocean salmon season
- Samplers observe, identify to species, and count all salmon landed
- Each salmon inspected for missing adipose fin
- Adipose fin-clipped salmon are set aside and the heads are collected for coded-wire tag extraction



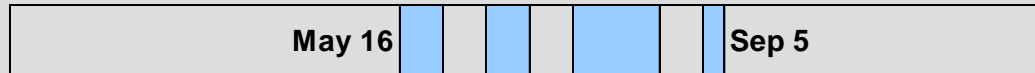
Sample Design – CPFV Fishery

- **Commercial Passenger Fishing Vessels (CPFV)**
 - Sampling unit: each CPFV trip
 - Sample $\geq 20\%$ of all salmon-targeting CPFV trips in each management area and period
 - Approximately 100 CPFVs target salmon at 16 primary sample sites
 - Samplers observe, identify to species, and count all salmon landed
 - Each salmon inspected for missing adipose fin
 - Adipose fin-clipped salmon are set aside and the heads are collected for coded-wire tag extraction

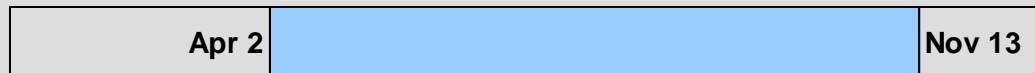


2016 California Recreational Season

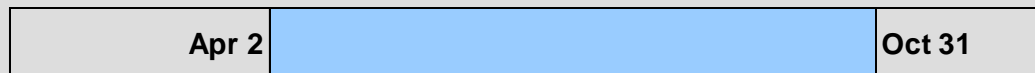
Klamath Management Zone: OR/CA Border to Horse Mt. (68 days)



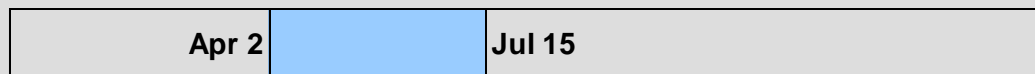
Fort Bragg: Horse Mt. to Pt. Arena (226 days)



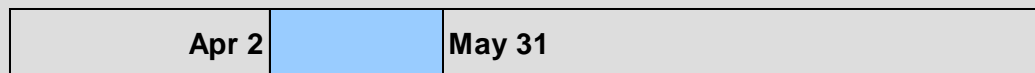
San Francisco: Pt. Arena to Pigeon Pt. (213 days)



Monterey North: Pigeon Pt. to Pt. Sur (105 days)



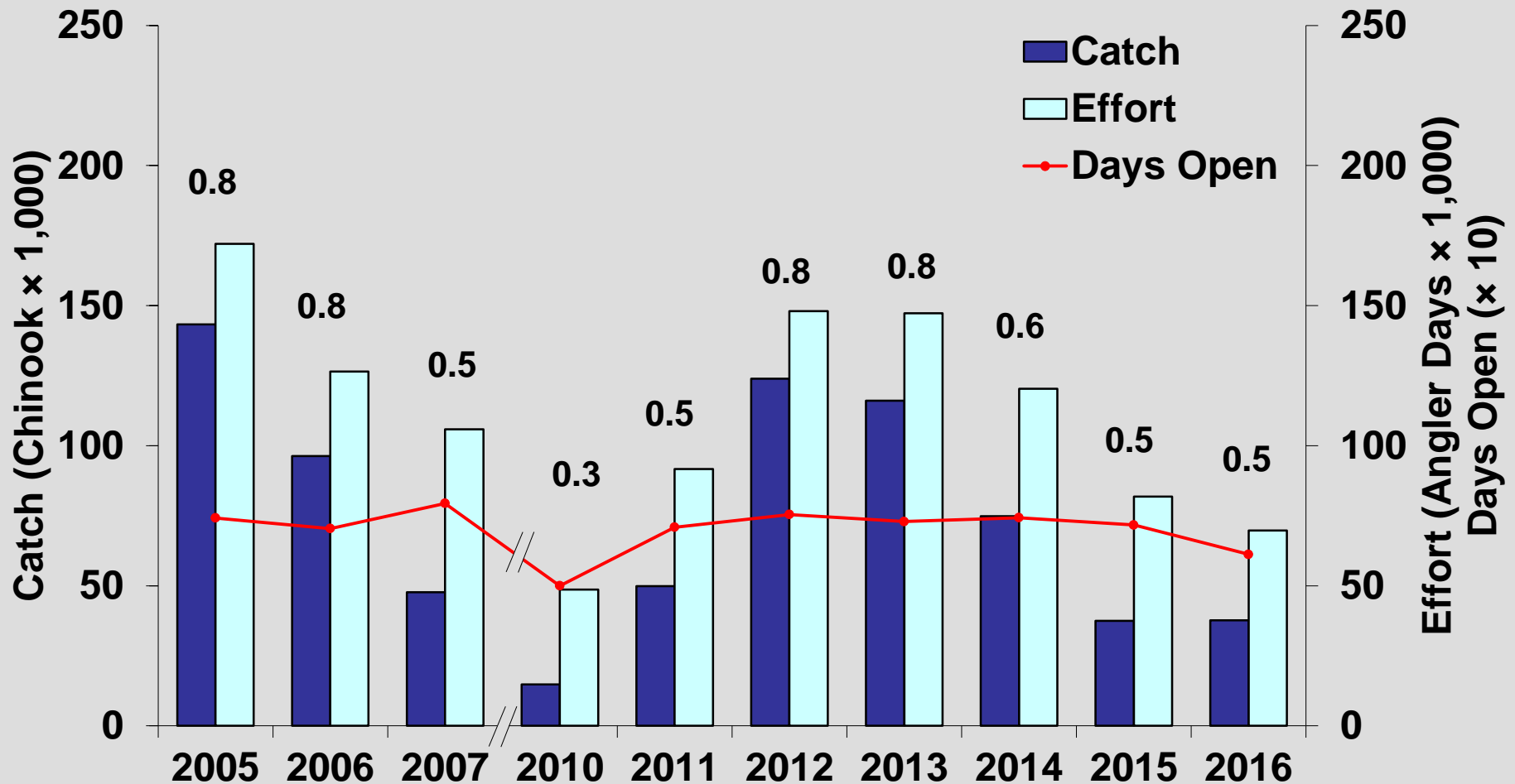
Monterey South: Pt. Sur to U.S./Mexico Border (60 days)



Minimum size limit 20" north of Pt. Arena and in San Francisco after April 30. 24" south of Pigeon Pt. and in San Francisco through April 30; 2 fish per day

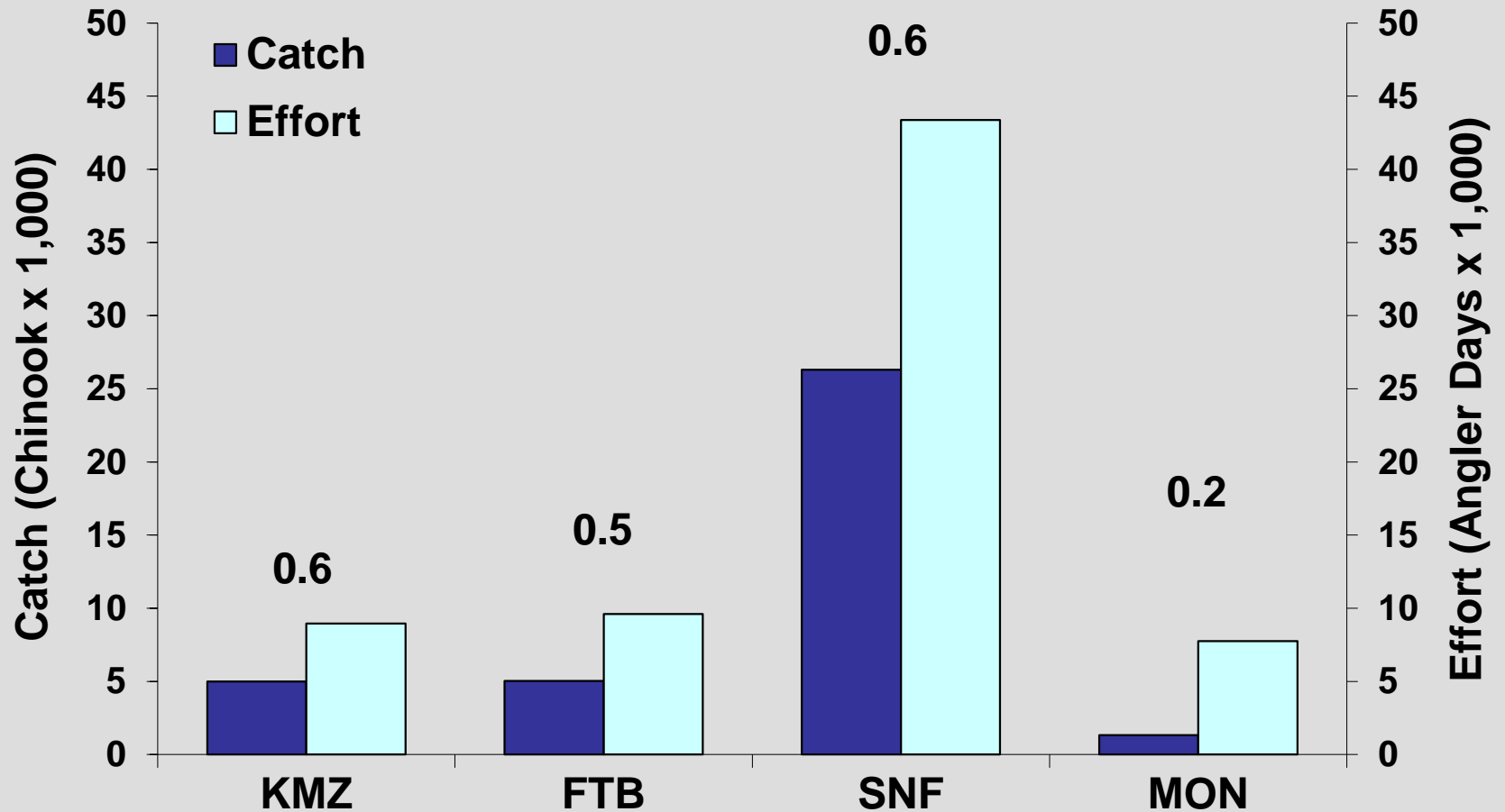


Recreational Catch and Effort, 2005-2016



Days Open = All four management areas combined (Monterey treated as one area)

2016 Recreational Catch and Effort by Management Area



<i>Days Open</i>	68	226	213	105	TOTAL
<i>Total Chinook</i>	5,000	5,037	26,308	1,335	37,680
<i>Angler Days</i>	8,953	9,607	43,366	7,761	69,687



Commercial Salmon Fishery

Sample Design – Commercial Fishery

- **Sample $\geq 20\%$ of all landings by weight in each management area and period**
- **Sampling unit: each commercial landing**
- **Samplers observe, identify to species, and count all salmon being offloaded**
- **Each salmon inspected for missing adipose fin and all marked fish are set aside and the snouts are taken for coded-wire tag recovery**
- **Determine average weight and days fished from sampled landings by catch area and sample period**

2016 California Commercial Season

Klamath Mgmt. Zone: OR/CA Border to Humboldt S. Jetty (15 days)

	Sep 9-27, F-Tues Quota = 1,000
--	-----------------------------------

Fort Bragg: Horse Mt. to Pt. Arena (73 days)

June 13		Sep 30
---------	--	--------

San Francisco: Pt. Arena to Pigeon Pt. (110 days)

May 6					* Oct 14
-------	--	--	--	--	----------

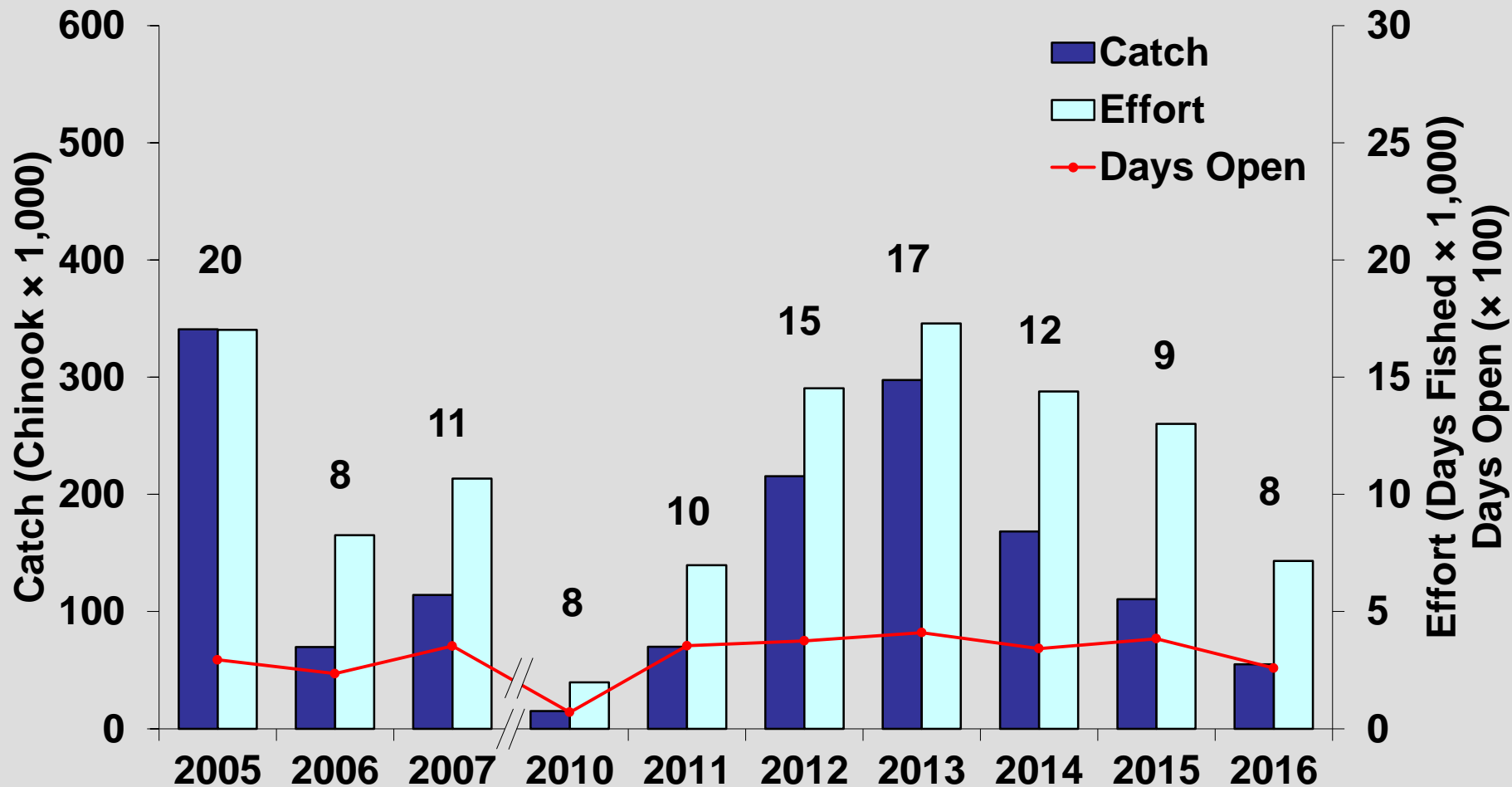
Monterey: Pigeon Pt. to U.S./Mexico Border (61 days)

May 1		June 30
-------	--	---------

- Statewide closures during July, end of August
- Minimum size limit 27", except 26" in SF after Aug and 28" in KMZ
- * Oct 1-14 fishery: open between Pt. Reyes and Pt. San Pedro; Mon-Fri

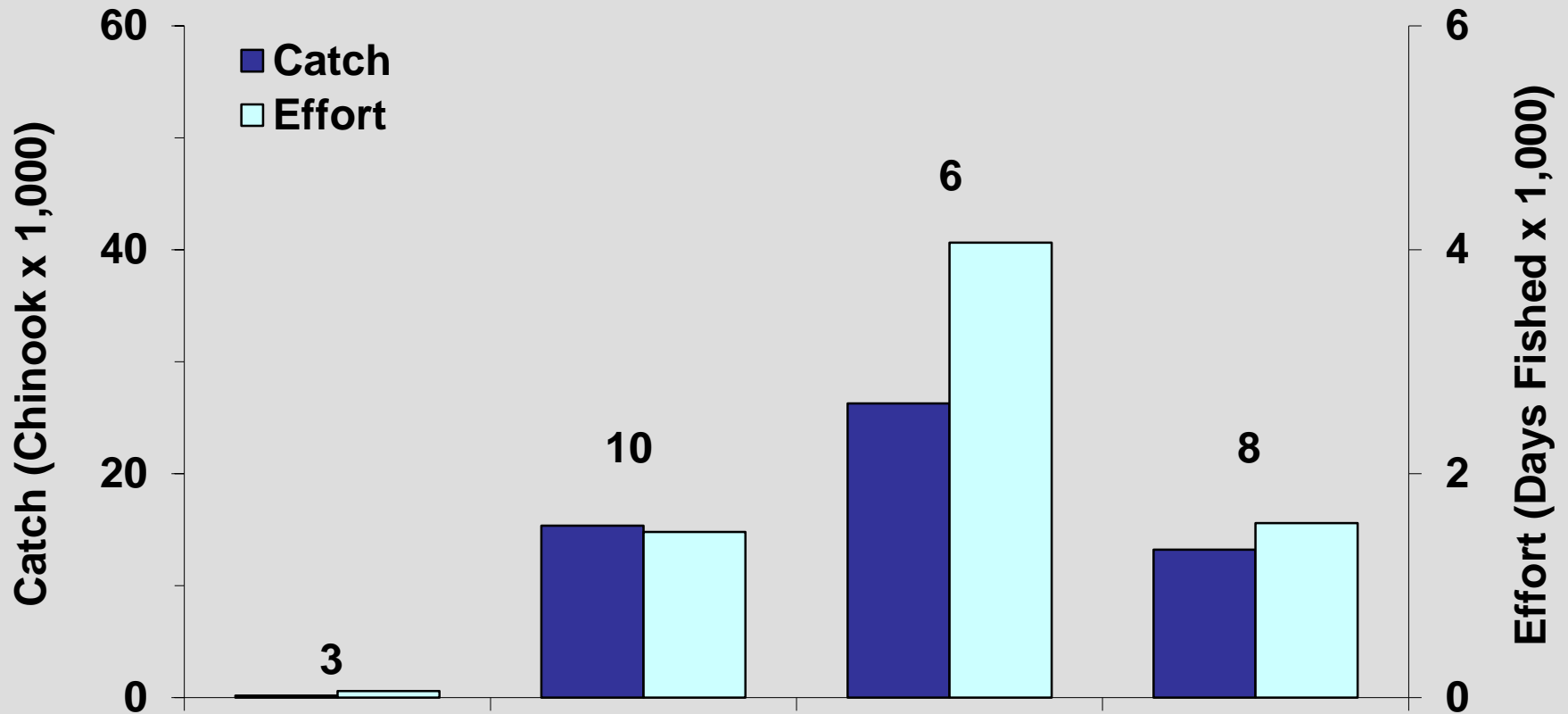


Commercial Catch and Effort, 2005-2016



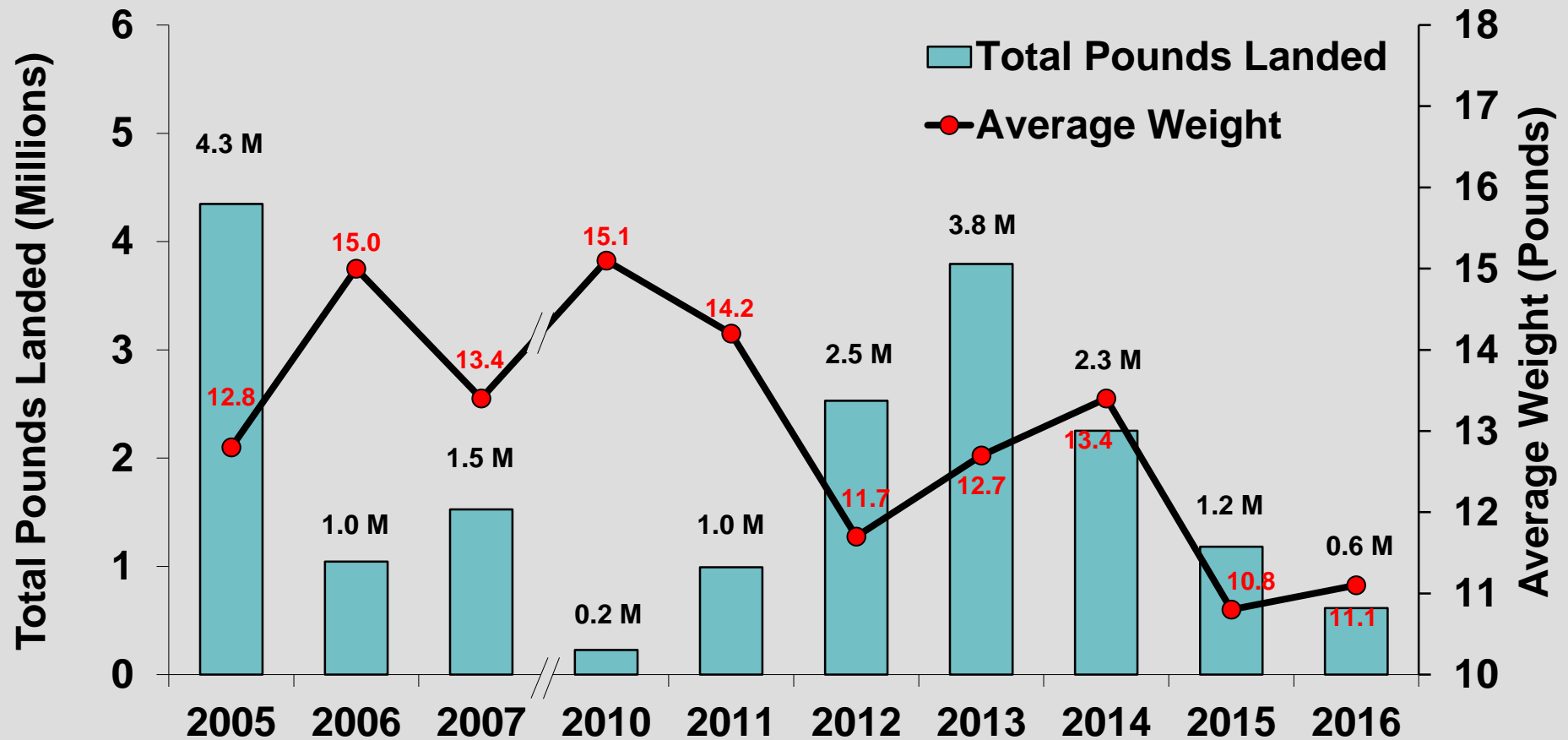
Days Open = All four management areas combined (Monterey treated as one area)

2016 Commercial Catch and Effort by Management Area

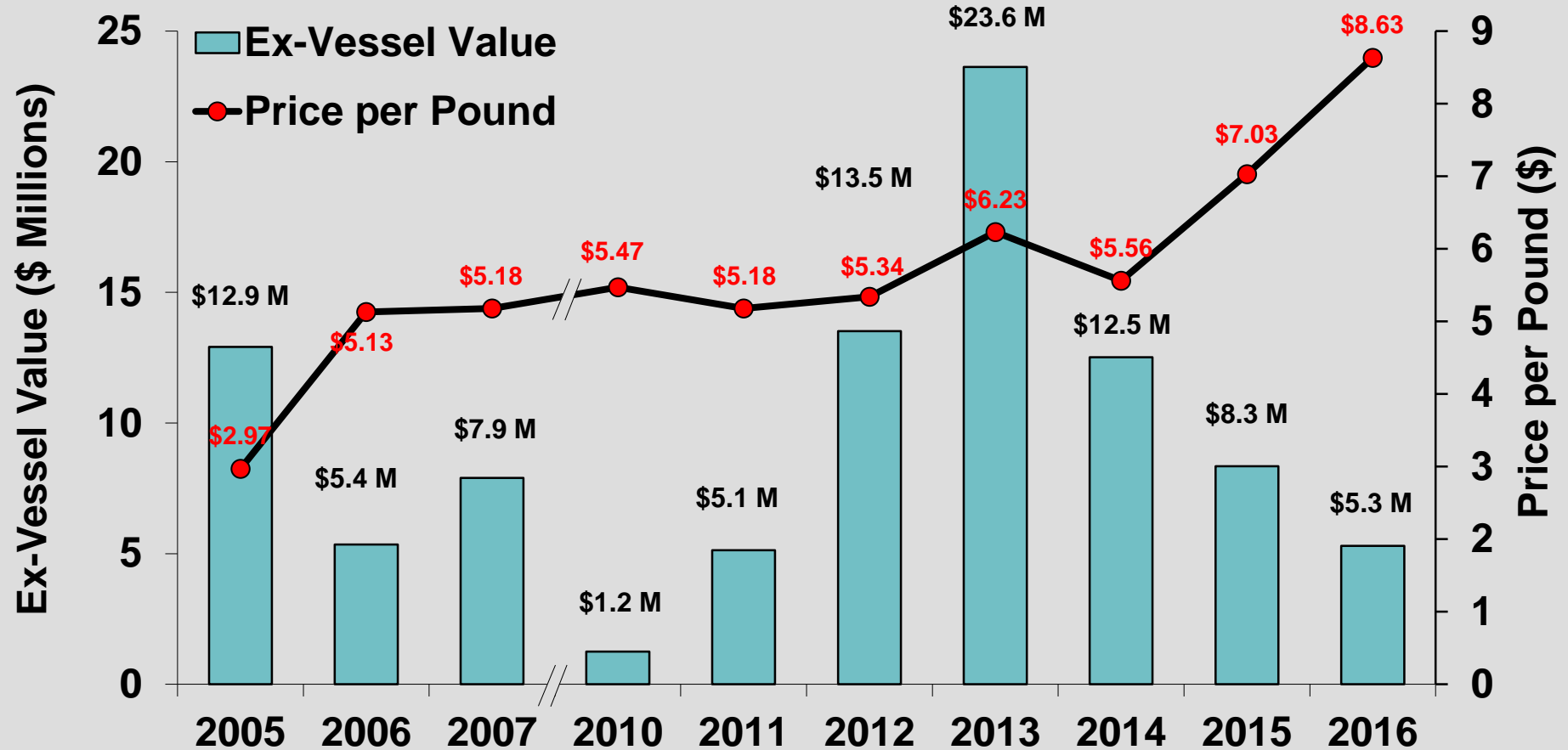


<i>Days Open</i>	15	73	110	61	TOTAL
<i>Total Chinook</i>	196	15,353	26,275	13,227	55,051
<i>Days Fished</i>	59	1,479	4,063	1,559	7,160

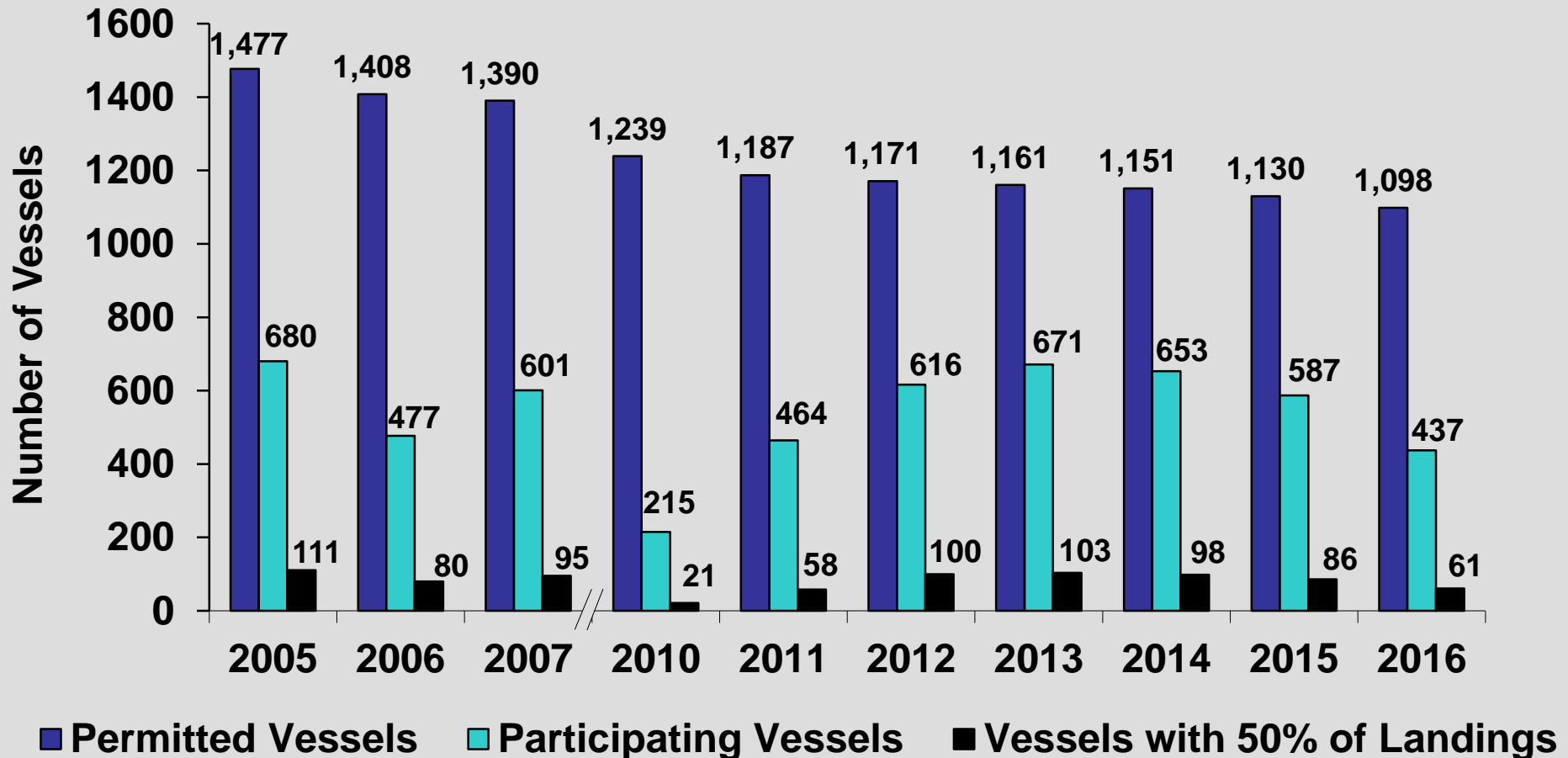
Total Commercial Pounds Landed and Average Weight, 2005-2016



Commercial Ex-Vessel Value and Price per Pound, 2005-2016



Number of Vessels with Landings Compared to Permitted Vessels, 2005-2016



2016 Klamath Management Zone September Quota Fishery

Season	Chinook Quota	Total Chinook Landed	Average Chinook Landed Per Day
Sep 9-13, 16-20, 23-27 (15 Days)	1,000	196	13



Average Boats Participating Per Day	Average Daily Catch Per Boat
4	3.3

2016 Fall Ocean Fisheries Impacts on Age-4 Klamath River Fall Chinook

Area	Recreational	Commercial
Northern Oregon	0	0
Coos Bay	0	0
KMZ - Oregon	38	0
KMZ - California	67	0
Fort Bragg	0	0
San Francisco	0	0
Monterey	0	-
Total	105	0

- 105 age-4 Klamath River fall Chinook were harvested during 2016 fall ocean fisheries (September – November)
- Equates to a 1% age-4 harvest rate, which will be deducted from the 16.0% allowable harvest rate when determining the 2017 season structure

Hatchery Contribution to 2016 CA Ocean Fisheries

Hatchery Chinook Stock	Recreational (75%) N = 2,729 CWTs	Commercial (63%) N = 3,102 CWTs
Sacramento River Fall	79%	82%
San Joaquin River Fall	19%	16%
Central Valley Spring	1%	0.7%
Klamath River Fall	0.3%	0.7%
Pacific Northwest Stocks	0.3%	0.2%
Central Valley Late-Fall	0.2%	0.3%
Other Northern California Stocks	0.0%	0.3%
Sacramento River Winter	0.1%	0.1%

Sacramento River Hatchery Fall Chinook, Contribution by Hatchery – CA Ocean Fisheries

Sacramento River Hatchery	Recreational	Commercial
Feather River Hatchery <i>~7 million fall Chinook released annually</i>	38.4%	38.1%
Coleman National Fish Hatchery <i>~12 million fall Chinook released annually</i>	44.2%	44.9%
Nimbus Fish Hatchery <i>~4 million fall Chinook released annually</i>	17.4%	17.0%



Department of Fish and Wildlife Ocean Salmon Project

Thank You

**Kandice Morgenstern
Environmental Scientist
Kandice.morgenstern@wildlife.ca.gov**