

CP Chinook and Chum Salmon
Bycatch
Reduction Incentive Plan
Annual Report
2017

April 2018

NPFMC



AT-SEA PROCESSORS ASSOCIATION

Partners for Healthy Fisheries

Primary IPA components

- Data gathering, monitoring, reporting, information sharing.
- Identification of bycatch avoidance areas, Chinook A & B seasons, chum B season only.
- Fishing area prohibitions for vessels with poor bycatch performance.
- A-season closed area.
- Conditional B-season closed areas.



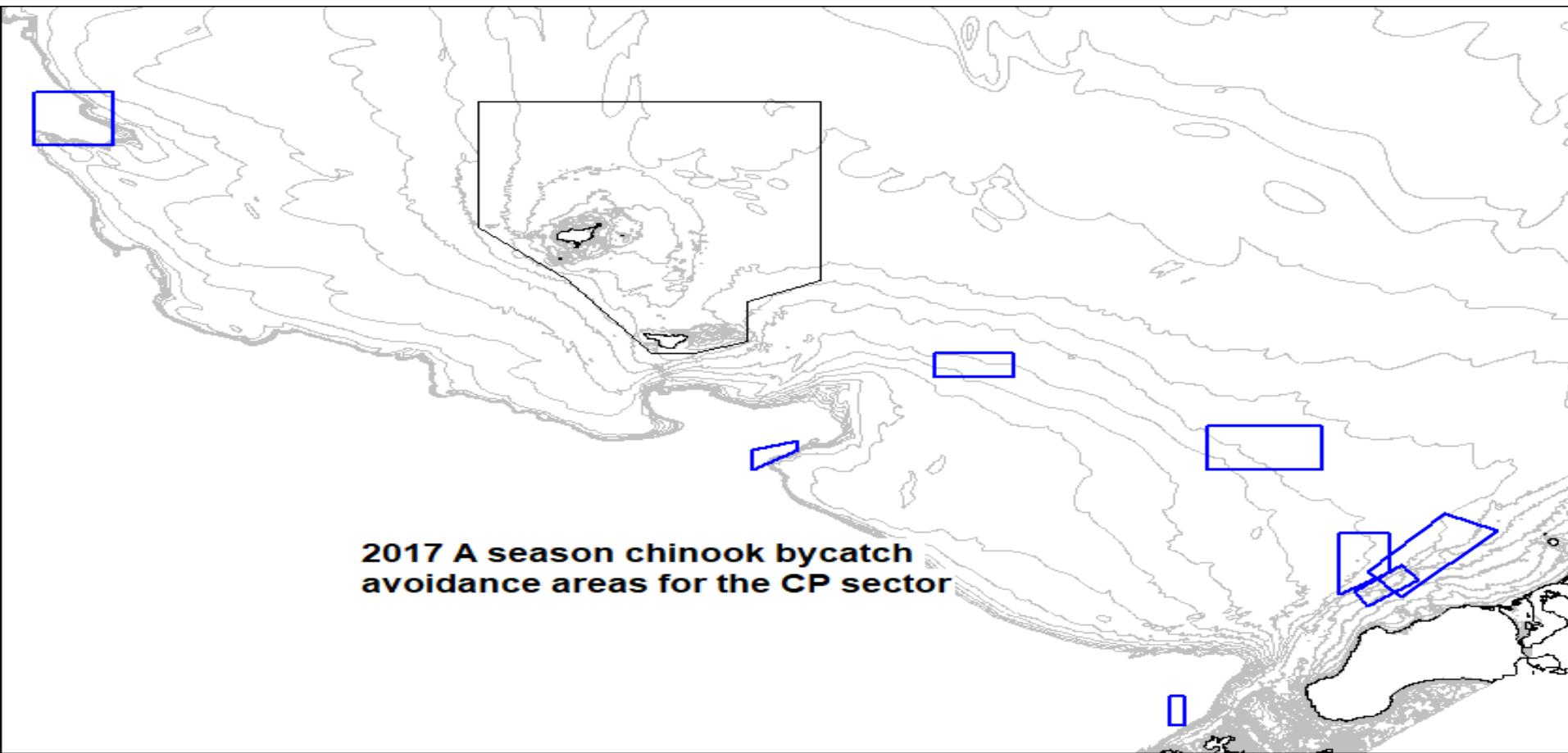
2017 CP IPA results—Chinook PSC and pollock catch

A Season		B-Season	
Pollock (mt)	Chinook (n)	Pollock (mt)	Chinook (n)
266,875	11,016	342,192	1,863

*All IPA participants (PCC, HSCC, OP, CDQ)



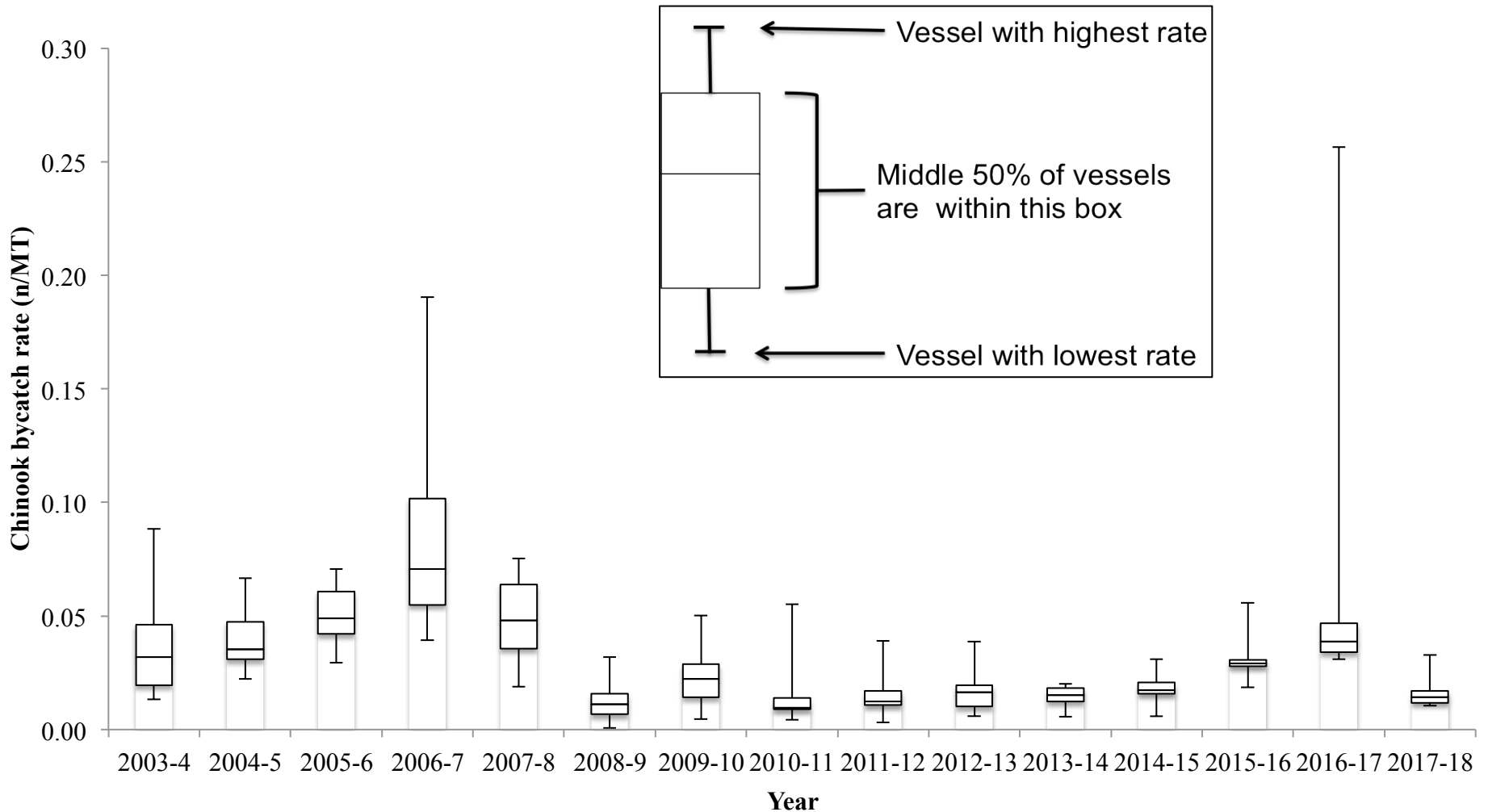
2017 CP IPA results—A-season Bycatch Avoidance Areas



Week	1/27	2/03	2/10	2/17	2/24	3/03	3/10	3/17	3/24	3/31	4/07
Number of CPs excluded from BAAs	10	11	7	12	12	9	11	12	10	10	1



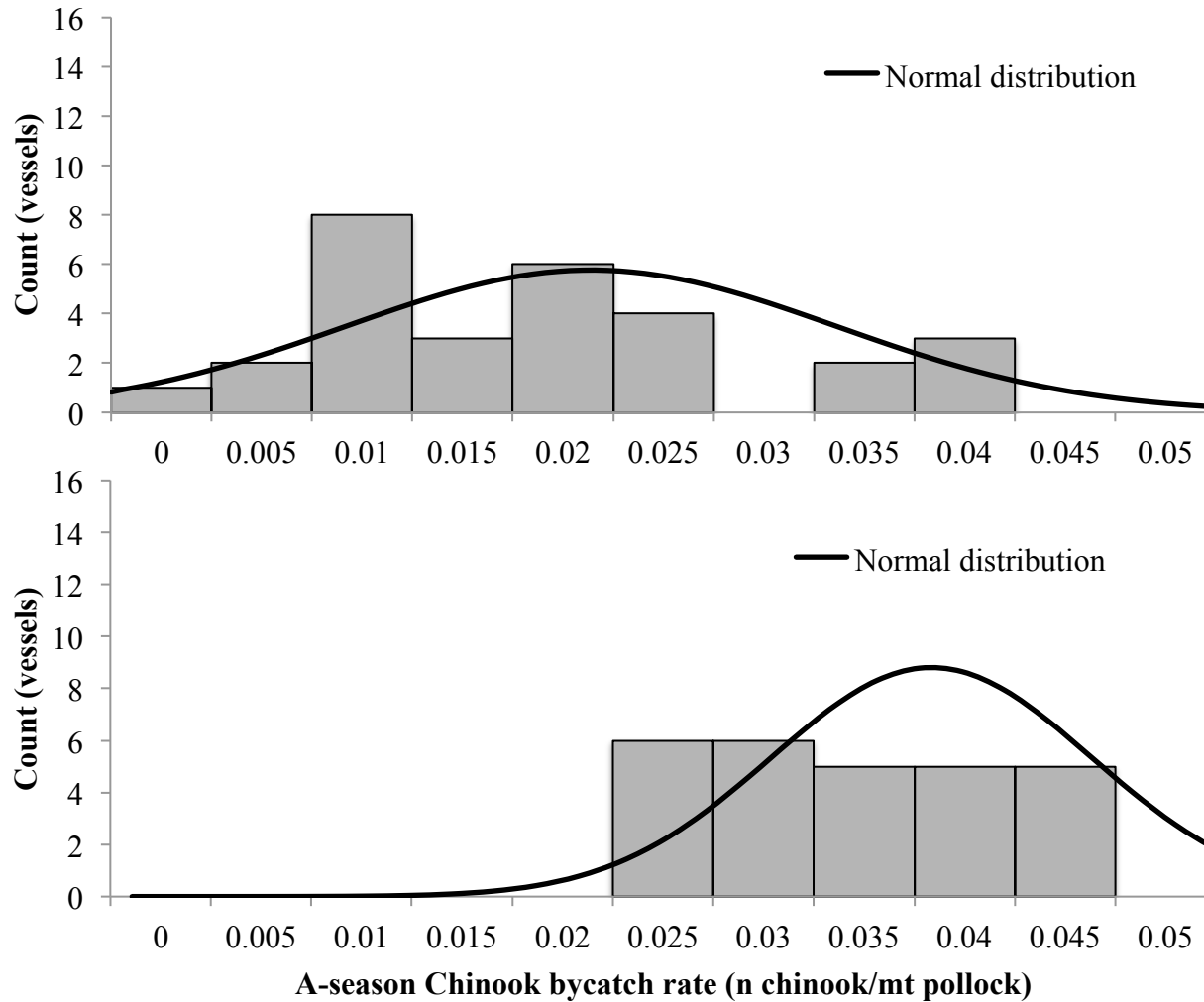
2017 CP IPA results—Effects of Incentive Measures



Vessel Chinook bycatch rate distribution by year for 1 Sept-1 March.



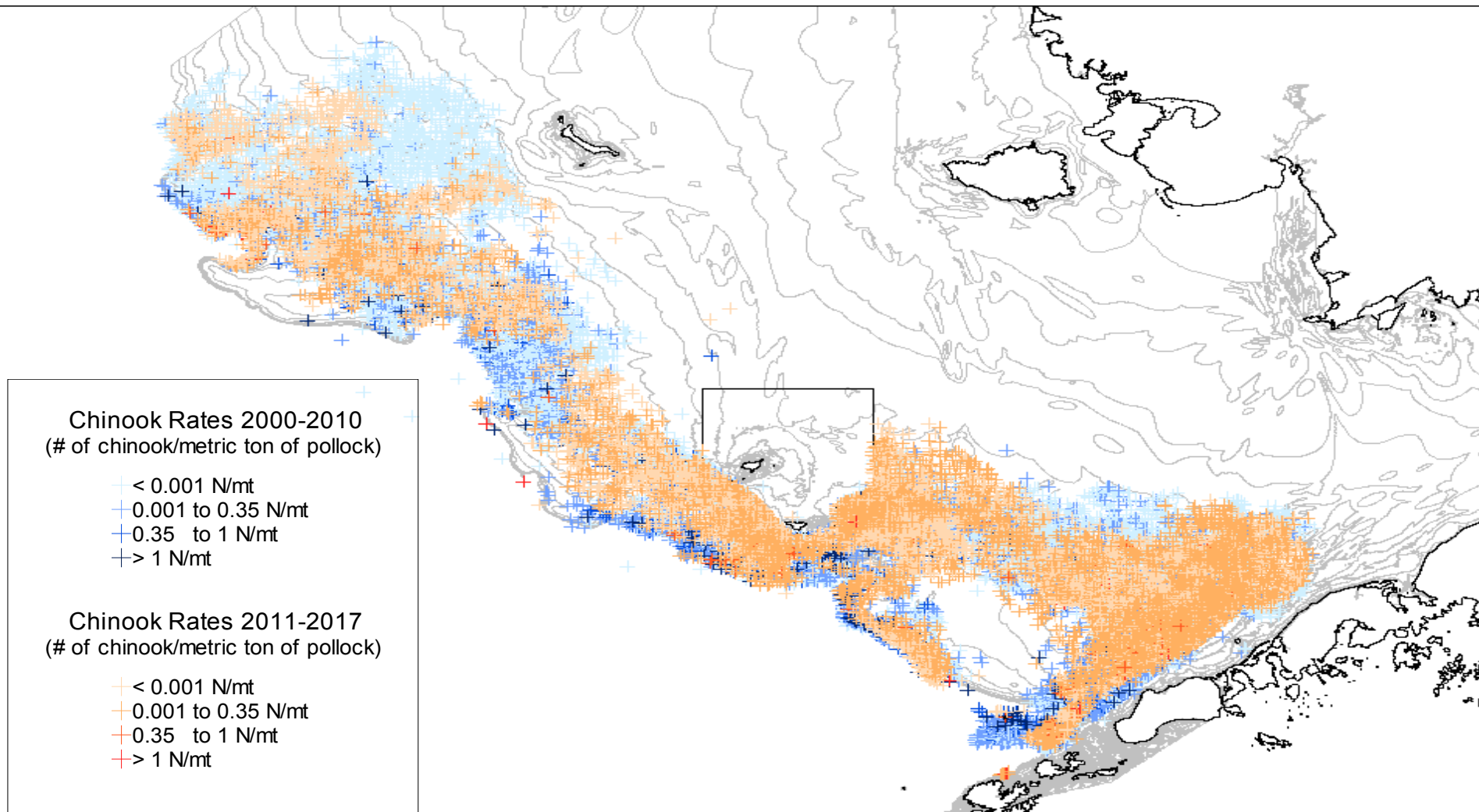
2017 CP IPA results—Effects of Incentive Measures



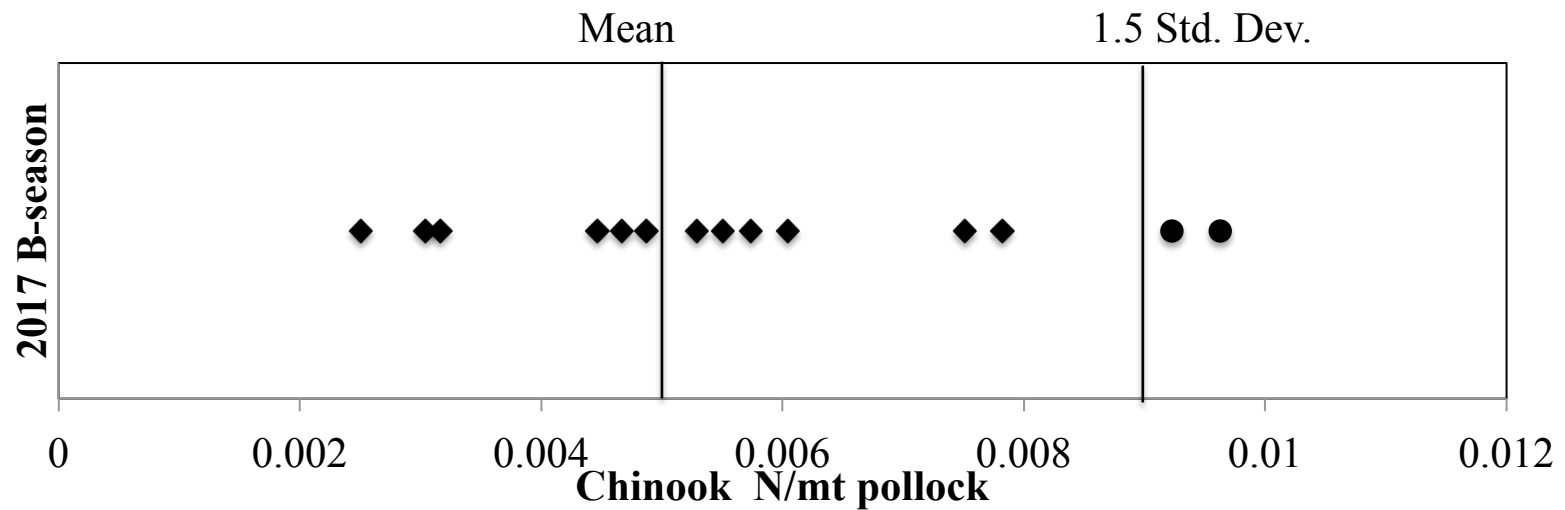
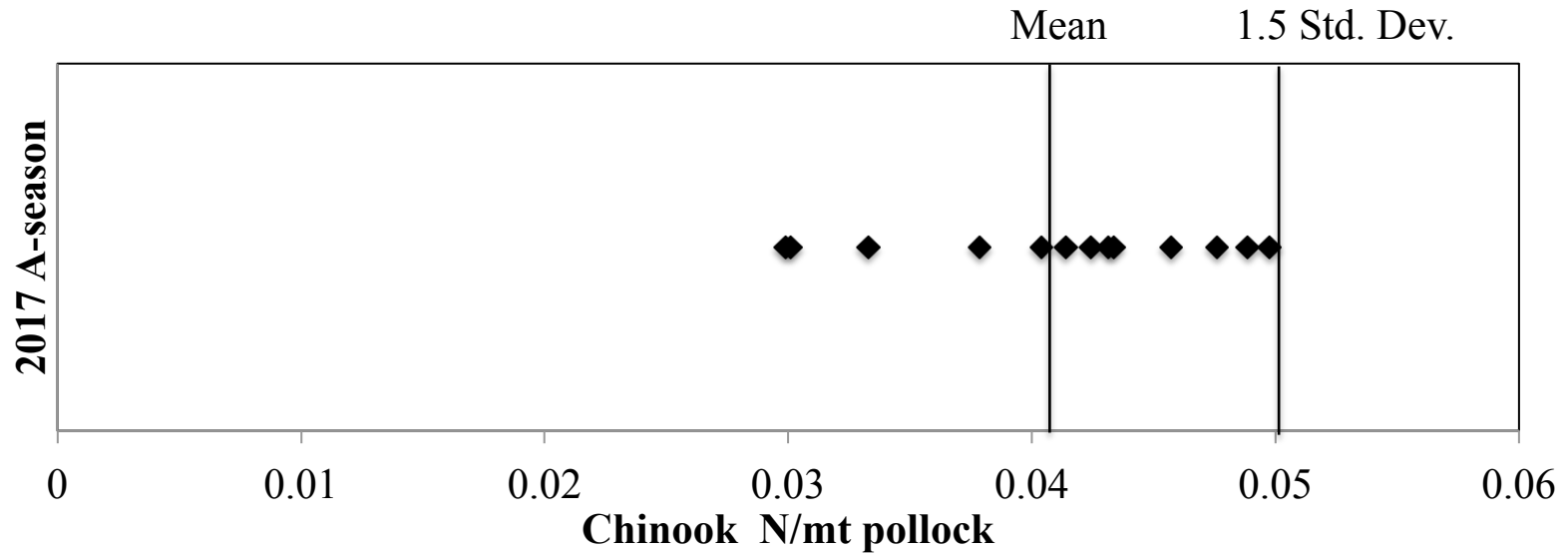
Upper panel: A-Season CP Vessel Chinook Bycatch Rate Frequency Distribution for 2009-2010 with a variance of 0.011 and Lower panel: Distribution for 2016-2017 with variance equal to 0.007.



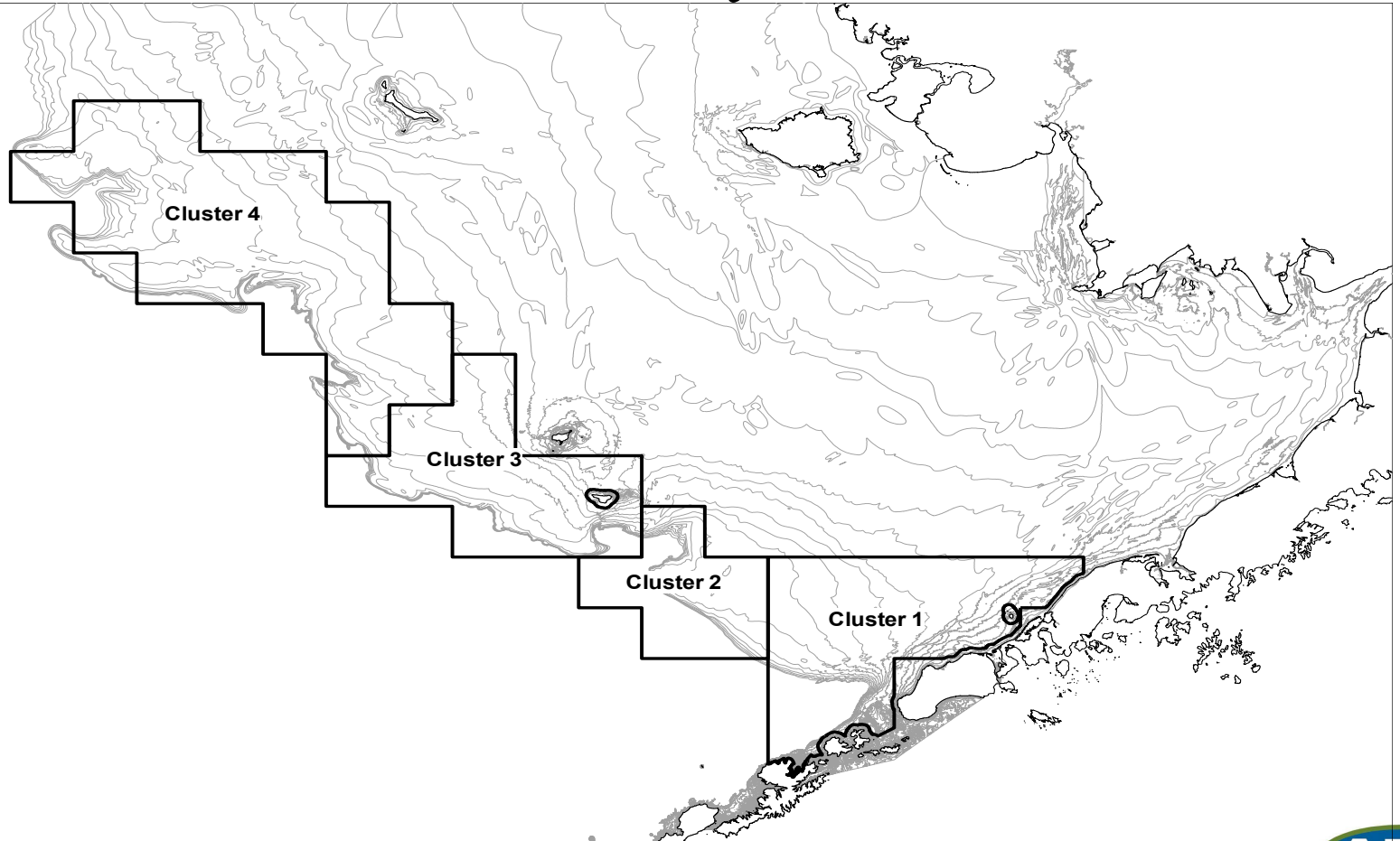
2017 CP IPA results—Effects of Incentive Measures



2017 Fleet Bycatch Distribution



2017 CP IPA results—Avoiding areas and times when chum salmon are most likely to return to WAK river systems



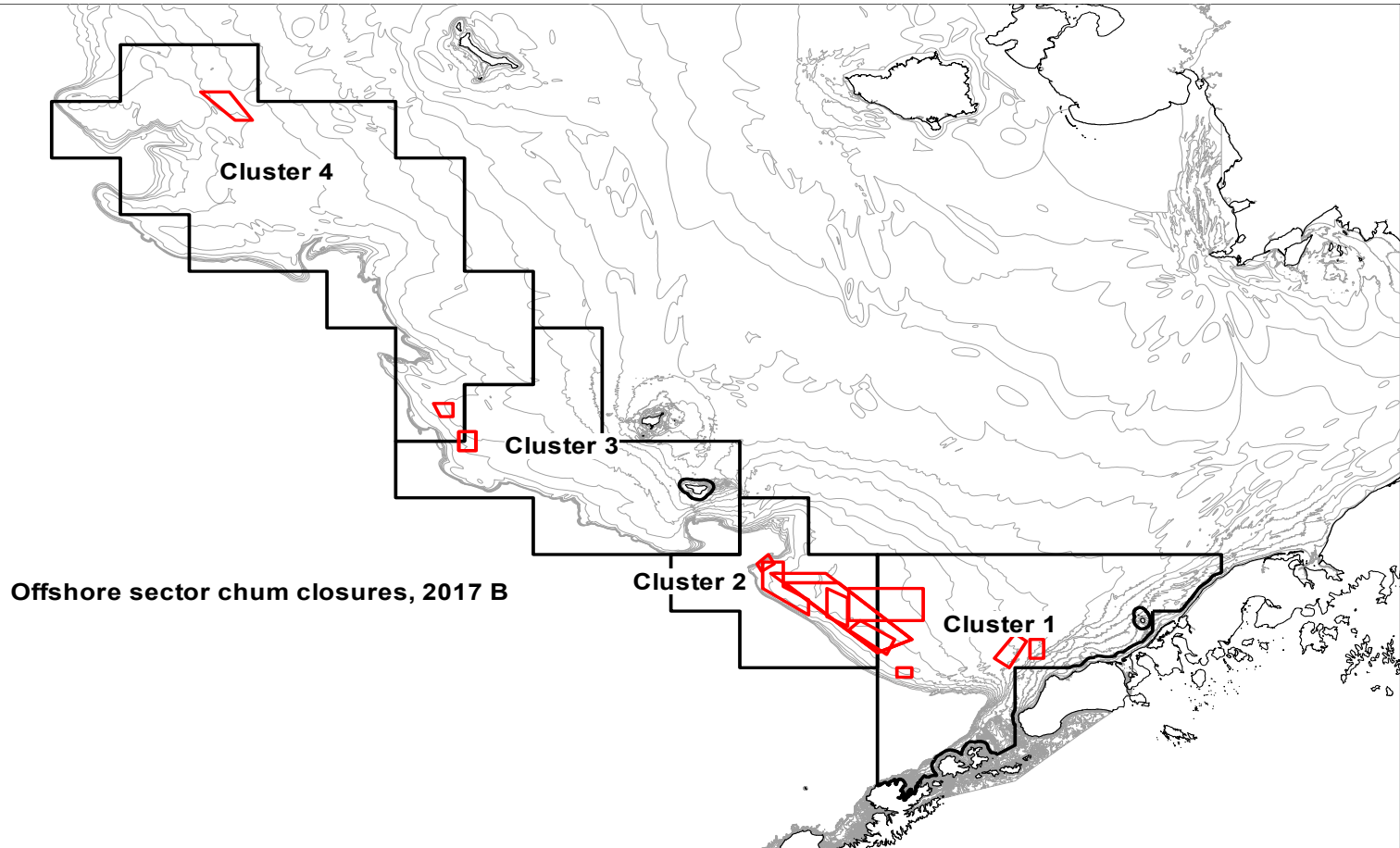
2017 CP IPA results—Avoiding areas and times when chum salmon are most likely to return to WAK river systems

Estimated percent of **WAK and Yukon river origin chum salmon** in various spatial and temporal clusters as defined by Kondzela, et. al. 2017. *Genetic Stock Analysis of Chum Salmon from the Prohibited Species Catch of the 2015 Bering Sea Walleye Pollock Trawl Fishery and Gulf of Alaska Groundfish Fisheries*

Cluster	Early Season (through Aug. 18th)	Late Season (after August 18th)
1	32.0%	22.3%
2	17.2%	6.5%
3	23.8%	18.3%
4	11.1%	3.4%



2017 CP IPA results—B-season Bycatch Avoidance Areas



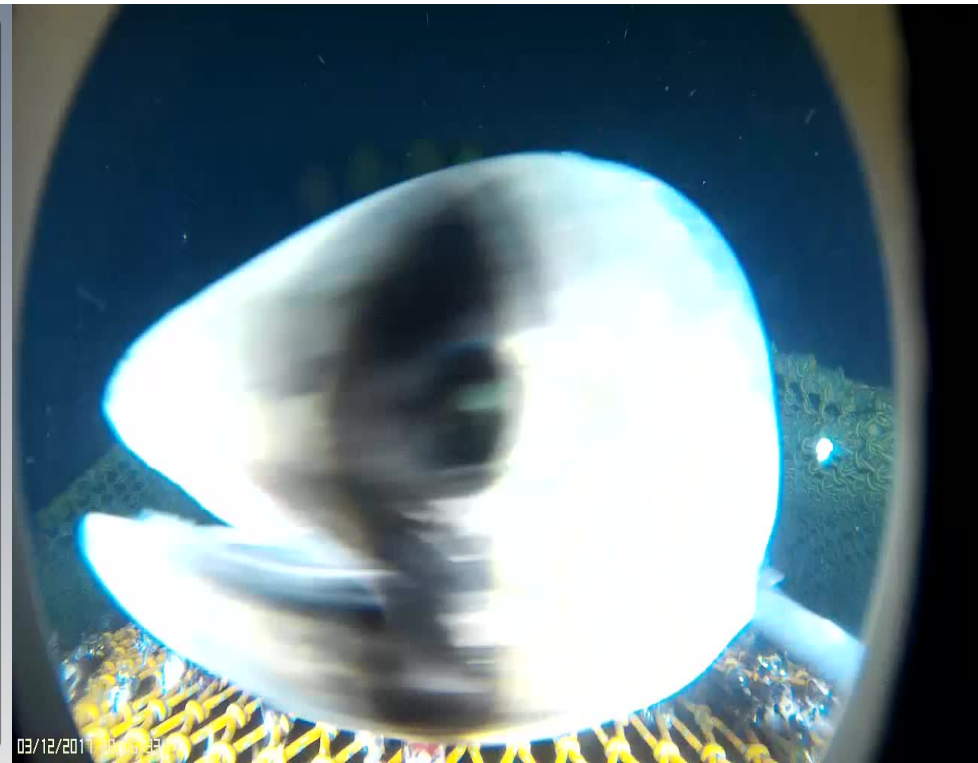
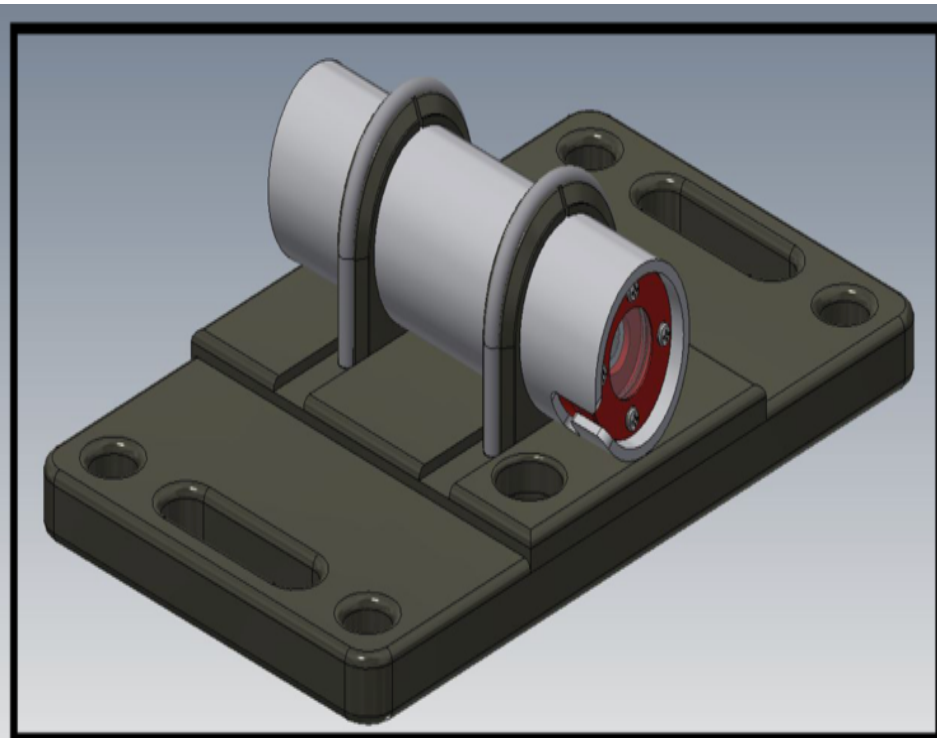
Week	6/30	7/7	7/14	7/21	7/28	8/04	8/11	8/18	9/01	9/08	9/15
Number of CPs excluded from BAAs	0	5	13	14	14	11	8	2	1	1	5

2017 CP IPA results—Summary of B-season Bycatch Avoidance Areas

Area (nm ²)	Closure type	Date/duration	Cluster	Period
91	Chum	7 day 0630_2017	1	Early
70	Chum	7 day 0707_2017	4	Early
174	Chum	7 day 0707_2017	1	Early
203	Chum	7 day 0707_2017	2	Early
829	Chum	7 day 0714_2017	1 & 2	Early
49	Chum	7 day 0714_2017	1	Early
1342	Chum	4 day 0721_2017	1 & 2	Early
108	Chum	4 day 0721_2017	3 & 4	Early
1156	Chum	3 day 0725_2017	1 & 2	Early
108	Chum	3 day 0725_2017	3 & 4	Early
1156	Chum	7 day 0728_2017	1 & 2	Early
356	Chum	7 day 0804_2017	2	Early
50	Chum	7 day 0825_2017	2	Late
228	Chum	7 day 0825_2017	1 & 2	Late
199	Chum	7 day 0915_2017	4	Late

Ongoing salmon bycatch mitigation efforts

- MacMarine prototype titanium trawl camera Mobius ActionCam HD wide-angle lens
- Sexton prototype Aluminum trawl camera
- Underwater LED lights attract both chum and Chinook salmon in field experiments



Thank You

Questions?

