

PRINCE WILLIAM SOUND (PWS) SHRIMP POT FISHERIES

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This report can be found in RC3 Tab 10

OUTLINE

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- Historical commercial fishery
- Survey
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- Current Management
- Harvest and Effort

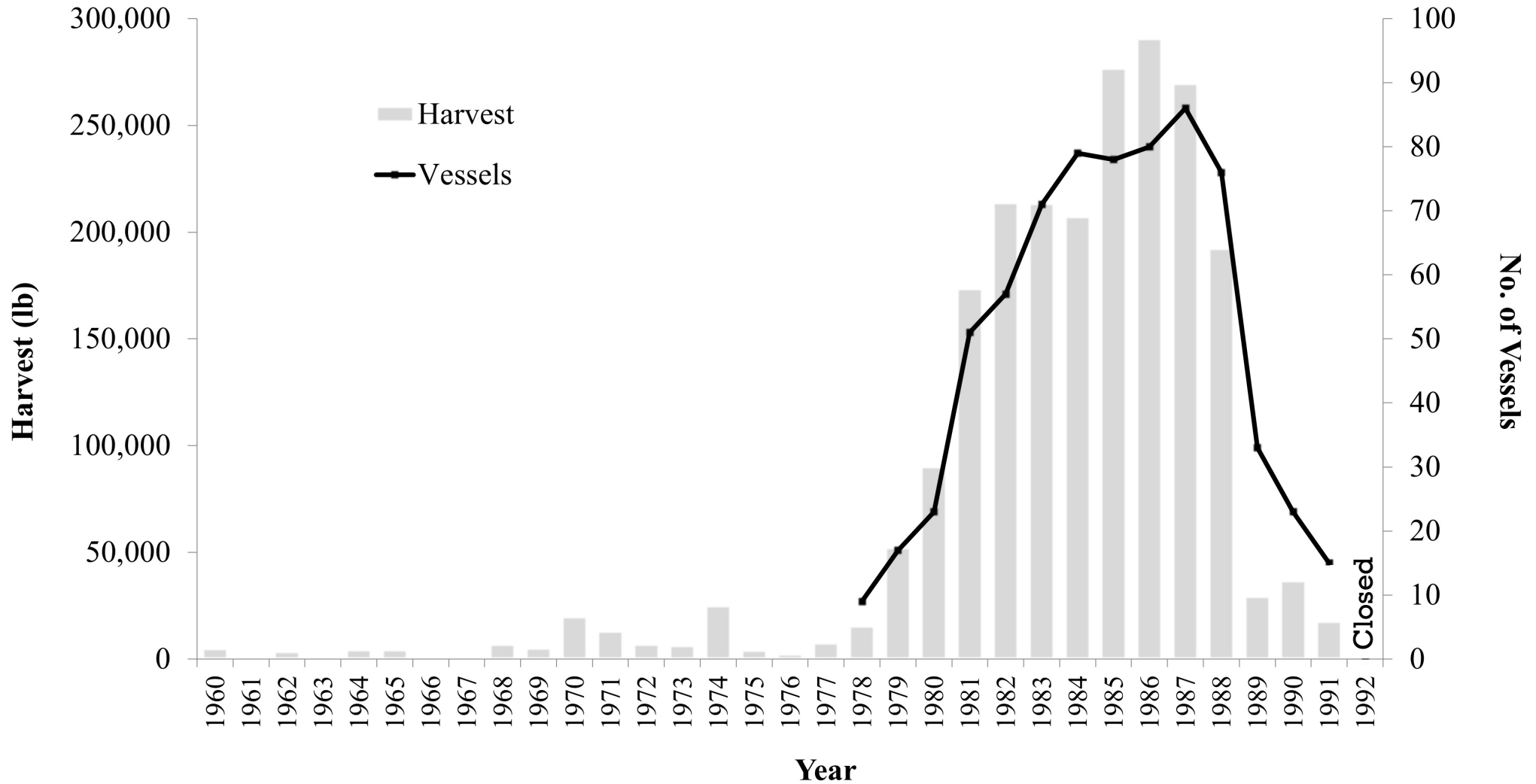


SPOT SHRIMP LIFE HISTORY

- Life span – 7 to 10 yrs
- Sexually mature – 3 yrs
- Protandrous hermaphrodites
 - Begin life as males
 - Transition to female later in life, at larger size (~35 mm carapace length)
- Females have eggs Oct - March
- Concentrated at ~ 60 fa – range 2-250 fa



PWS Commercial Shrimp Pot Historical Fishery





PWS SHRIMP POT SURVEY

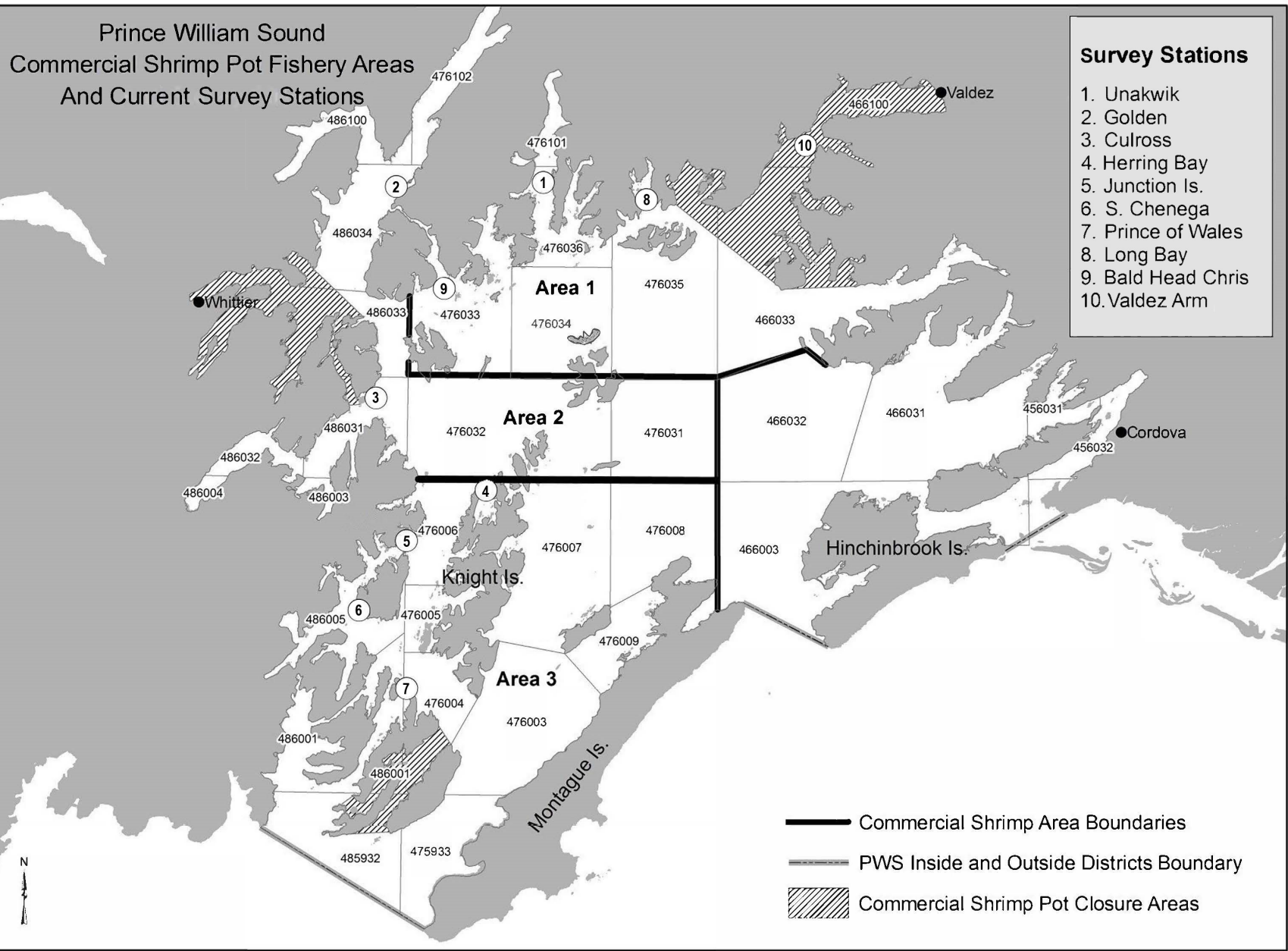




PWS SHRIMP POT SURVEY

- R/V Solstice
- Annually since 1992
- October 12-23
- 10 Survey sites
 - 4 stations at each site
 - 11 pots at each station
- ~400 pots each survey
- Spot shrimp sampling
 - Biological information
 - Catch per unit effort
- Bycatch sampling

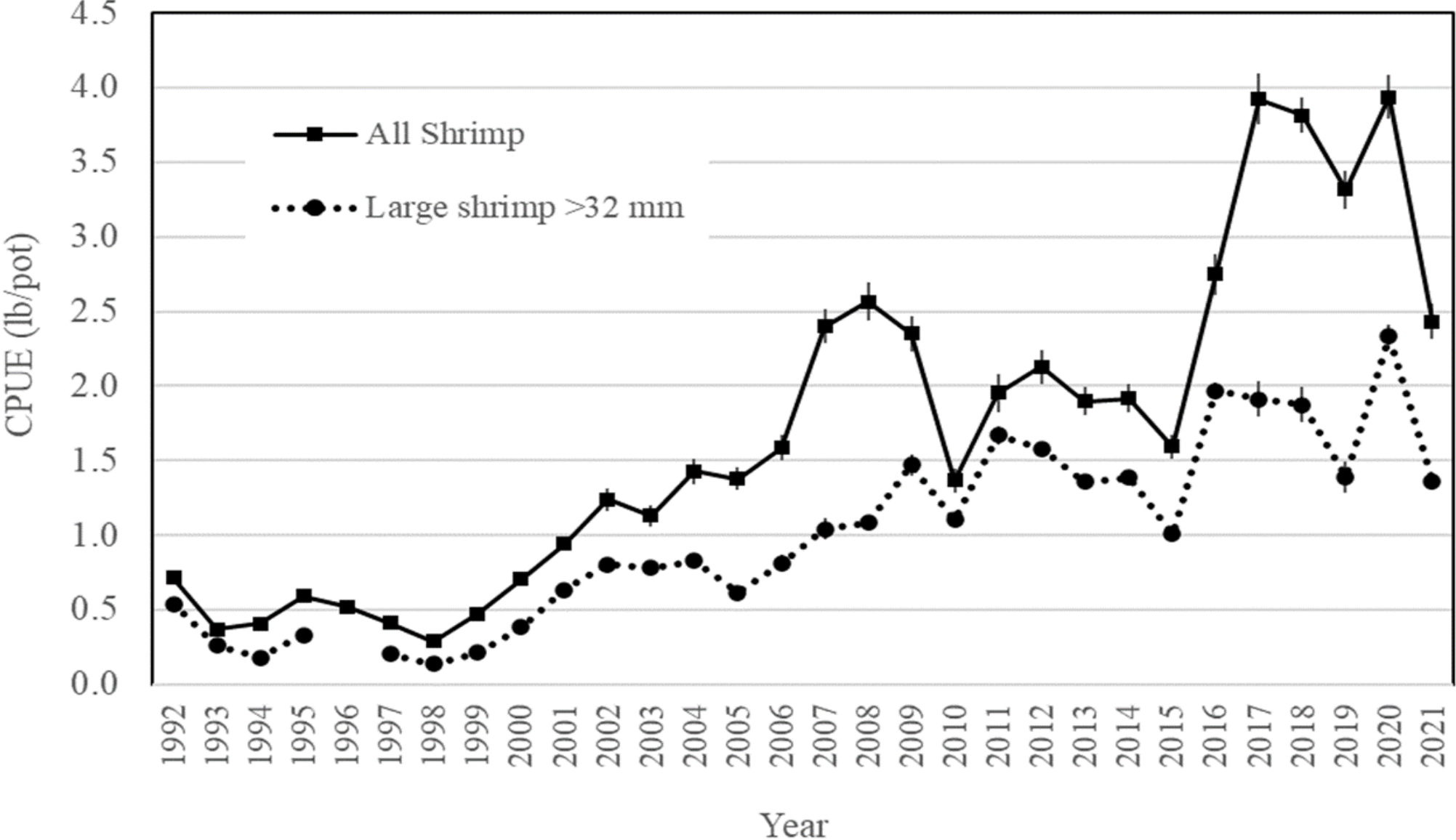




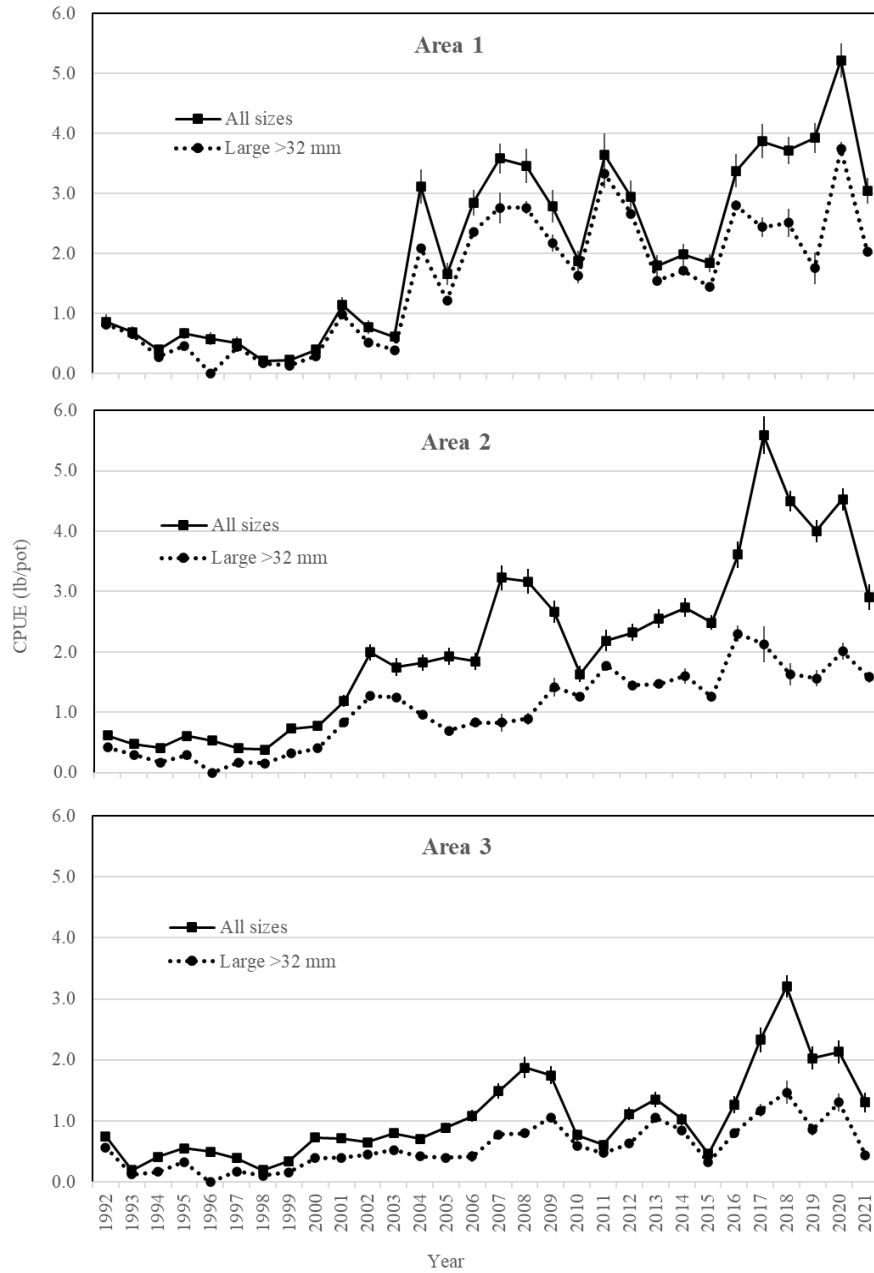
PWS Commercial Shrimp Pot Areas and Survey Locations



PWS Shrimp Pot Survey Results



PWS Shrimp Pot Survey Results



- Surplus Production Model
 - Relative survey abundance
 - Survey CPUE
 - Total catch weight
 - Previous year's harvest from commercial and noncommercial fisheries
- Model provides total allowable harvest (TAH) and GHLs for commercial (40%) and noncommercial fisheries (60%)
- More intensive analysis of model in 2021

Guideline Harvest Level (GHL) Development



- Open access fishery
- Total allowable harvest (TAH) must be at least 110,000 lb for a commercial fishery to open
- Allocation is 40% of TAH
- Season dates April 15 - September 15
- Registration deadline April 1
- Gear limits
 - Determined by number of vessel registrants
 - 20 - 50 pots since 2010, can change inseason
 - In regulation, 100 pot maximum



PWS Commercial Shrimp Pot Fishery

Current Management

- Limited hours of gear operation
- Stringent reporting requirements
 - Pre-trip
 - Landing
- Triennial rotation of fishing areas
- Registration is exclusive
- No more than 50% of GHL from any one statistical area



PWS Commercial Shrimp Pot Fishery

Current Management

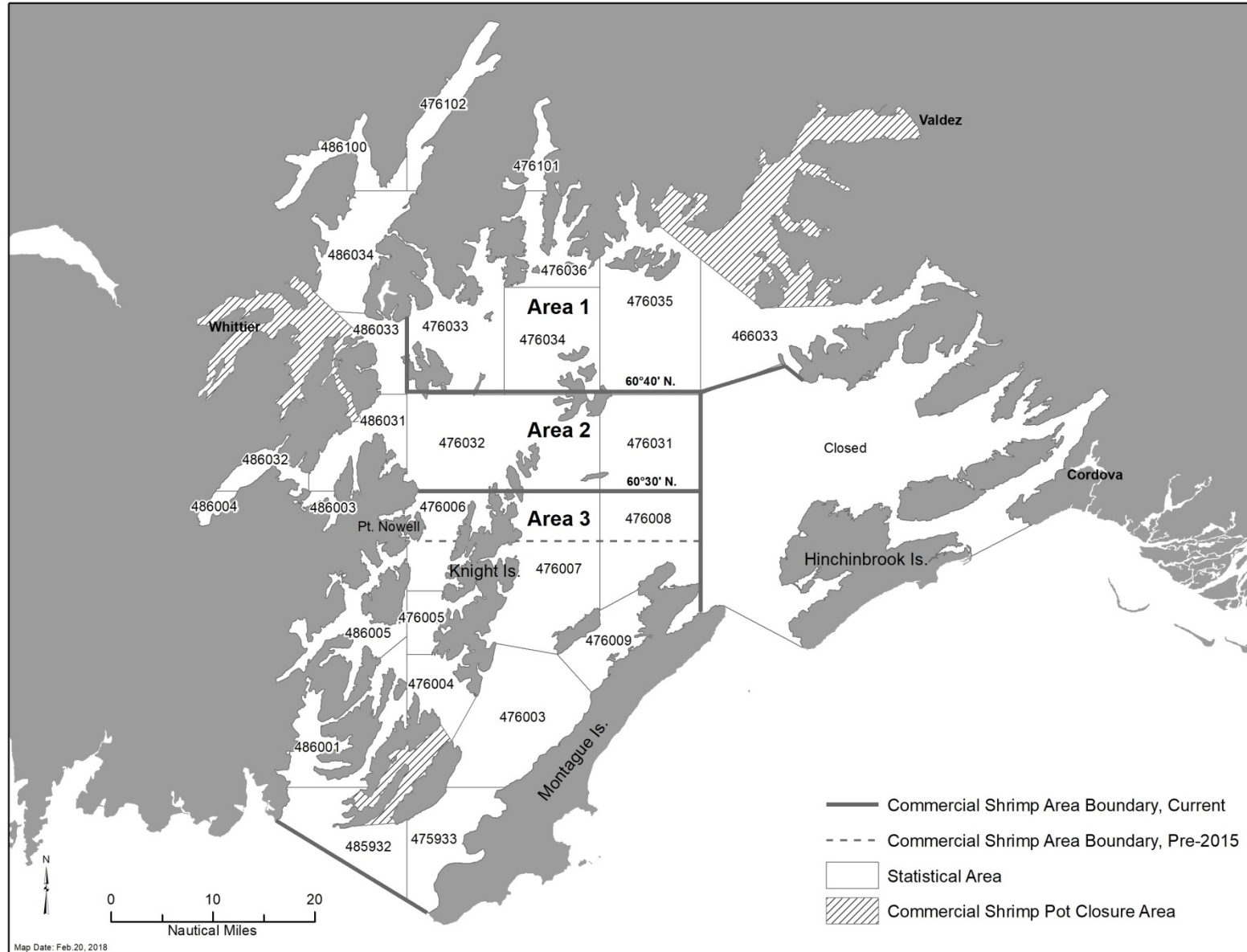


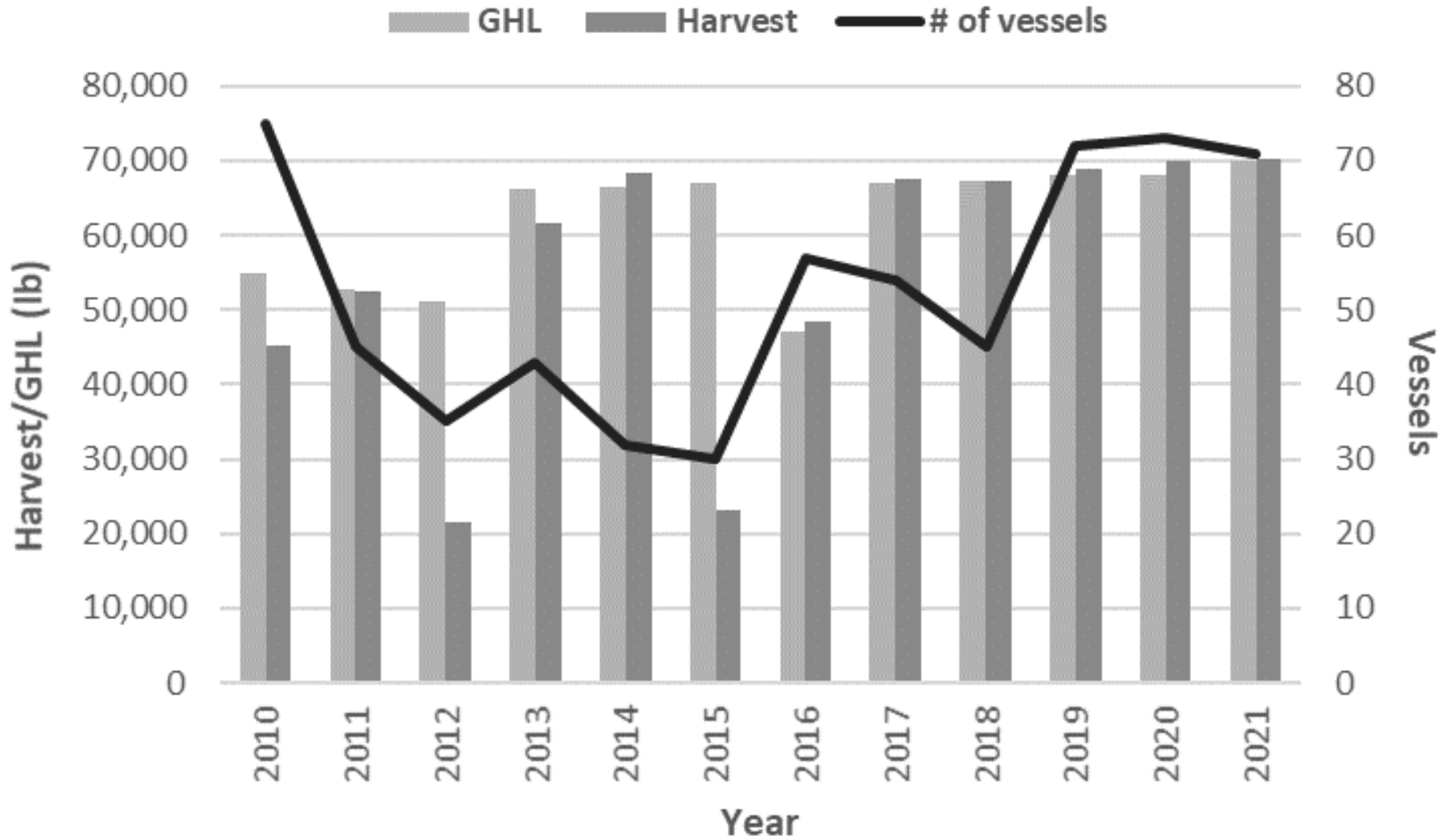


PWS COMMERCIAL SHRIMP POT FISHERY FLEET



PWS Commercial Shrimp Pot Fishery Areas





Guideline
Harvest Level,
Harvest, and
Participation



PWS Commercial Shrimp Pot Fishery Harvest and Effort

Area 1					
	2010	2013	2016	2019	Average
Harvest	45,349	61,644	48,423	68,947	56,091
Pot pulls	18,025	34,804	27,360	34,094	28,571
CPUE	2.52	1.77	1.77	2.02	1.96
Area 2					
	2011	2014	2017	2020	Average
Harvest	52,550	68,464	67,421	69,898	64,583
Pot pulls	29,580	41,670	45,261	32,679	37,298
CPUE	1.78	1.64	1.49	2.14	1.73
Area 3					
	2012	2015	2018	2021	Average
Harvest	21,561	23,138	67,375	70,168	45,561
Pot pulls	19,644	20,004	41,351	44,281	31,320
CPUE	1.10	1.16	1.63	1.58	1.45



PWS Commercial Shrimp Pot Fishery

Year	TAH (lb)	Commercial GHL	Harvest (lb)	% of GHL
2010	137,500	55,000	45,349	82%
2011	131,900	52,760	52,550	100%
2012	128,100	51,240	21,561	42%
2013	165,750	66,300	61,644	93%
2014	166,500	66,600	68,464	103%
2015	167,000	67,000	23,138	35%
2016	117,653	47,061	48,423	103%
2017	167,000	67,000	67,421	101%
2018	168,000	67,200	67,375	100%
2019	170,200	68,100	68,947	101%
2020	170,209	68,100	69,898	103%
2021	174,978	70,000	70,168	100%



PWS Commercial Shrimp Pot Fishery Participation

Year	Permits			Vessels			Landings	Fishing days
	Purchased	Participated	% participation	Registered	Participated	% participation		
2010	195	82	42%	156	75	48%	233	118
2011	182	48	26%	91	45	49%	183	96
2012	158	40	25%	83	35	42%	105	93
2013	148	46	31%	89	45	51%	214	145
2014	129	33	26%	65	32	49%	214	111
2015	112	29	26%	56	30	54%	107	146
2016	131	52	40%	86	57	66%	219	28
2017	122	61	50%	85	54	64%	349	41
2018	112	48	43%	74	44	59%	249	118
2019	143	74	52%	100	72	72%	284	34
2020	128	74	58%	92	73	79%	226	18
2021	155	75	48%	102	71	70%	291	126
Average 2010-2021	142	53	38%	89	51	59%	217	90





Season Management

- Preseason meeting
- Registration deadline
- Set pot limit
- First fishing period to determine pace
- Target GHL – only 50% of GHL from one statistical area



Thank You!

Recent Survey Crew: Elisa Russ, Donnie Arthur, Brittany Blain-Roth, Wyatt Rhea-Fournier, Karen Swartzbart, and Jan Rumble

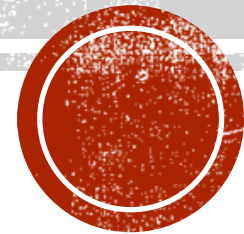
R/V Solstice Crew: Dave Anderson, Justin Nuzzi, Chatham Warga, and Butch Gagne



Questions?



PWS NONCOMMERCIAL SHRIMP POT FISHERY



PWS Noncommercial Shrimp Pot Fishery

- Subsistence & Sport
- All saltwater (Except for non-subsistence area)
- No threshold
- GHL is 60% of TAH
- Season dates: April 15 - September 15
- 5 pots/person/vessel
- Harvest Recording Form
- Preseason Management



PWS Noncommercial Shrimp Pot Fishery

- Permit is required.
- Same permit for all non-commercial users.
- Permit is free and available online.
- Must be filled out prior to leaving the fishing site.
- Currently shrimp is reported as gallons of whole shrimp.
- Required to report by Oct. 15.
- Reporting is online.

Alaska Department of Fish & Game
2021 Prince William Sound Shrimp Permit

Permit type: _____

Last Name: _____ First Name: _____ Initial: _____ Residency: _____

Mailing Address: _____ Sport Fishing License #: _____

City: _____ State: _____ Zip Code: _____ Phone Number: _____ Driver's License #: _____ State: _____

E-Mail Address: _____

Names Of Other Household Members (this permit may only be used by the permit holder or by individuals listed here): _____

This permit is valid for the period April 15th – September 15th, 2021

- ▶ You must have this permit with you while taking shrimp in the waters of Prince William Sound (from Cape Fairfield to Cape Suckling).
- ▶ See the Southcentral Sport Fishing Regulations for complete descriptions of shrimp pot regulations (including marking requirements).
- ▶ If you share pots with a friend or relative, be careful to report each harvest on only ONE permit.
- ▶ By signing this permit you agree to all conditions and terms of this fishery. See back side of permit for additional information.

Harvest information must be recorded in ink below prior to leaving the fishing site or concealing the shrimp from view. Please continue on another piece of paper if you need more lines to report your harvest.

- ▶ You must submit a report even if you did not fish.
- ▶ You must report online by October 15th, 2021.

Report Online by Scanning the QR code or visit us at <https://www.adfg.alaska.gov/Harvest/>

Permit Holder Signature: _____ Date: _____

Was this permit used to set shrimp pots in 2021? YES NO

Number of lost shrimp pots: _____

Report in GALLONS of whole shrimp (shrimp heads attached):
Examples: 0.5 = 1/2 gallon whole shrimp (shrimp heads on)
0.05 = 5 gal, 0.25 = 1/4 gal, 1.75 = 1 3/4 gal

DATE (Pots Set)	LOCATION shrimp was harvested from in Prince William Sound Examples include: specific bay, fjord, canal, arm, etc.	NUMBER OF POTS FISHED	TIME SOAKED	WHOLE SHRIMP HARVESTED
MM DD		Pots	Hours	Gallons
1. / /				
2. / /				
3. / /				
4. / /				
5. / /				
6. / /				
7. / /				
8. / /				
9. / /				
10. / /				
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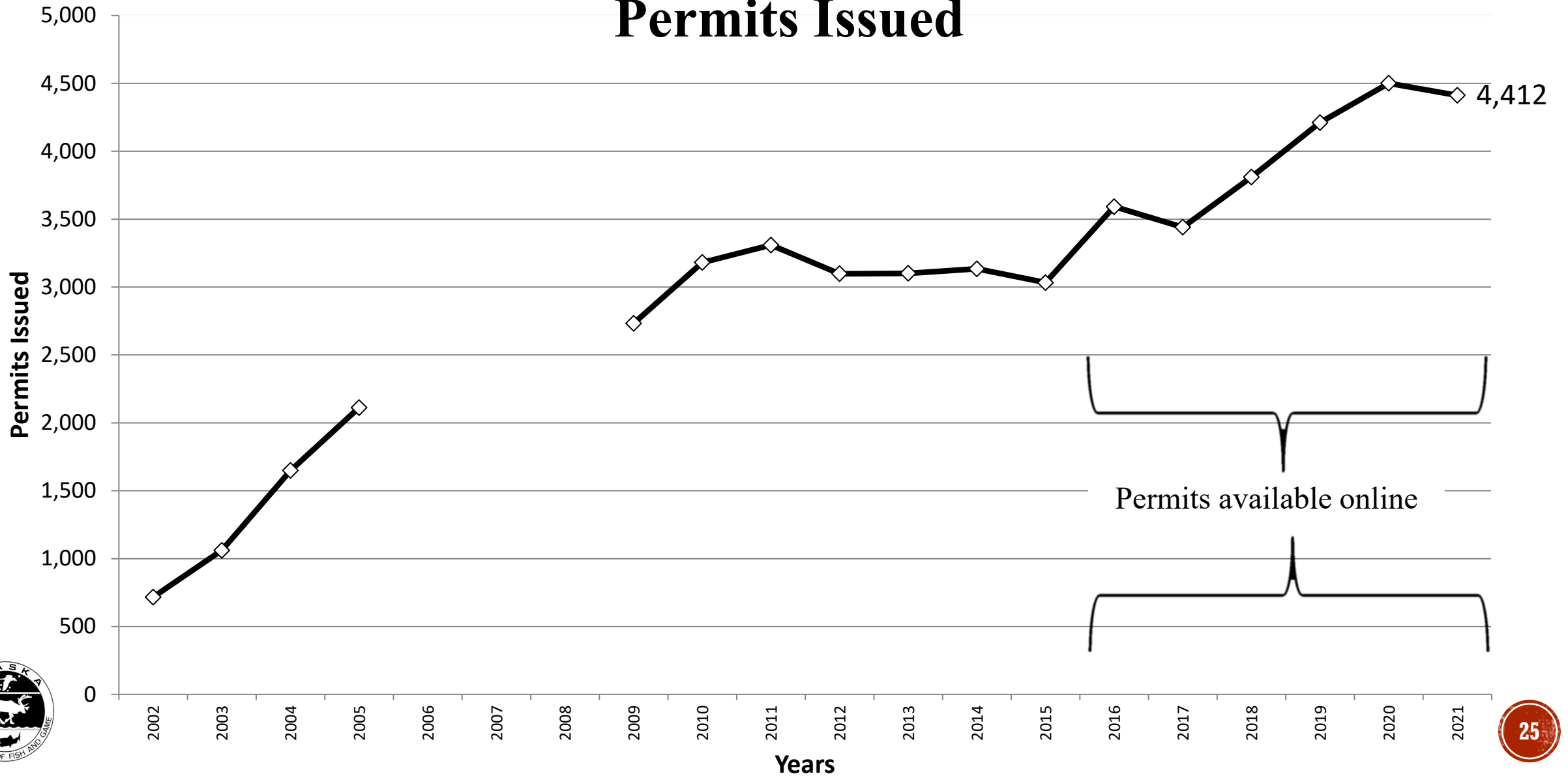
Report each day you shrimped and record your harvest, even if you did not catch anything.

Harvest must be recorded as you are actively shrimping on your paper permit. Final reports of each individual set made, and associated harvest, must be submitted online by October 15.



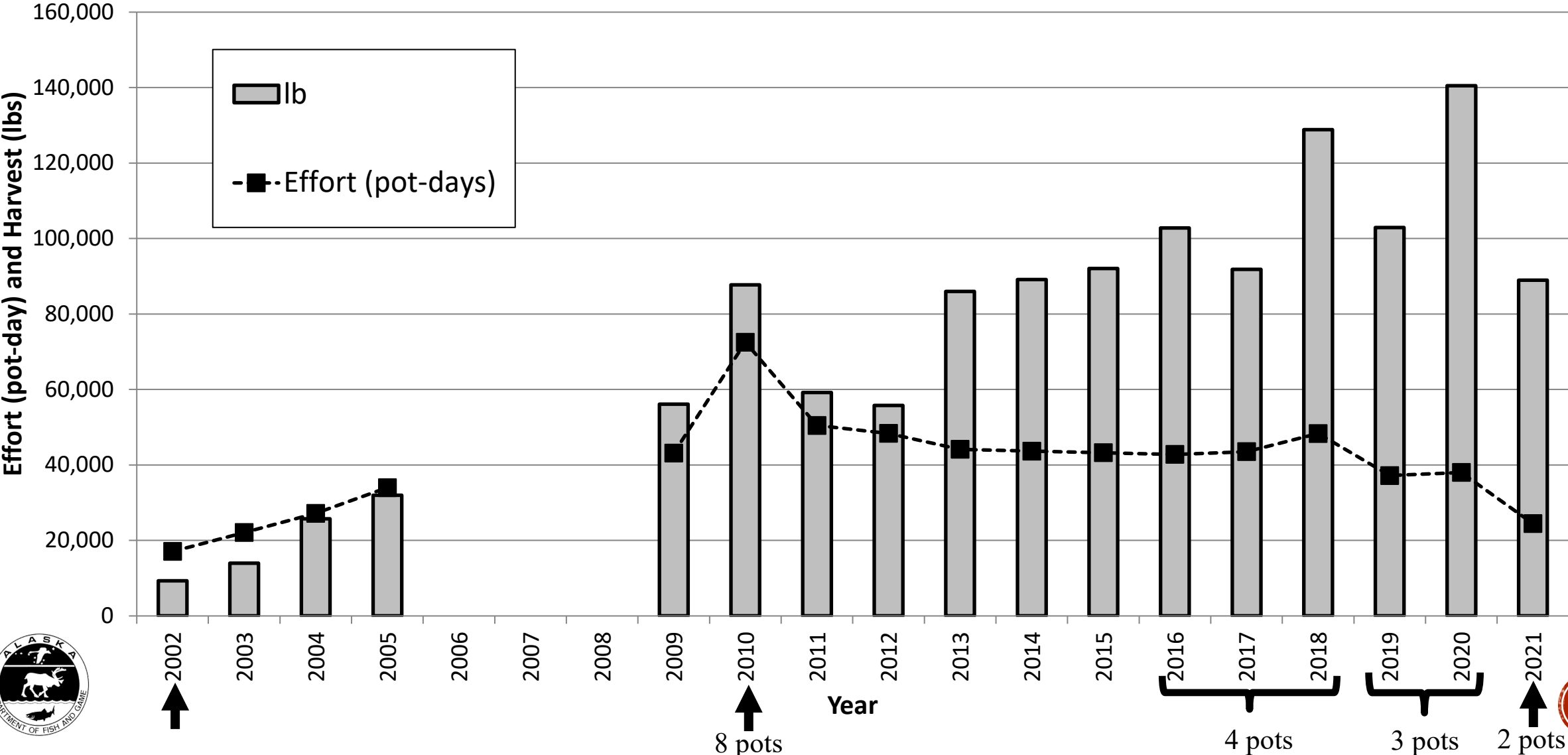
PWS Noncommercial Shrimp Pot Fishery

Permits Issued



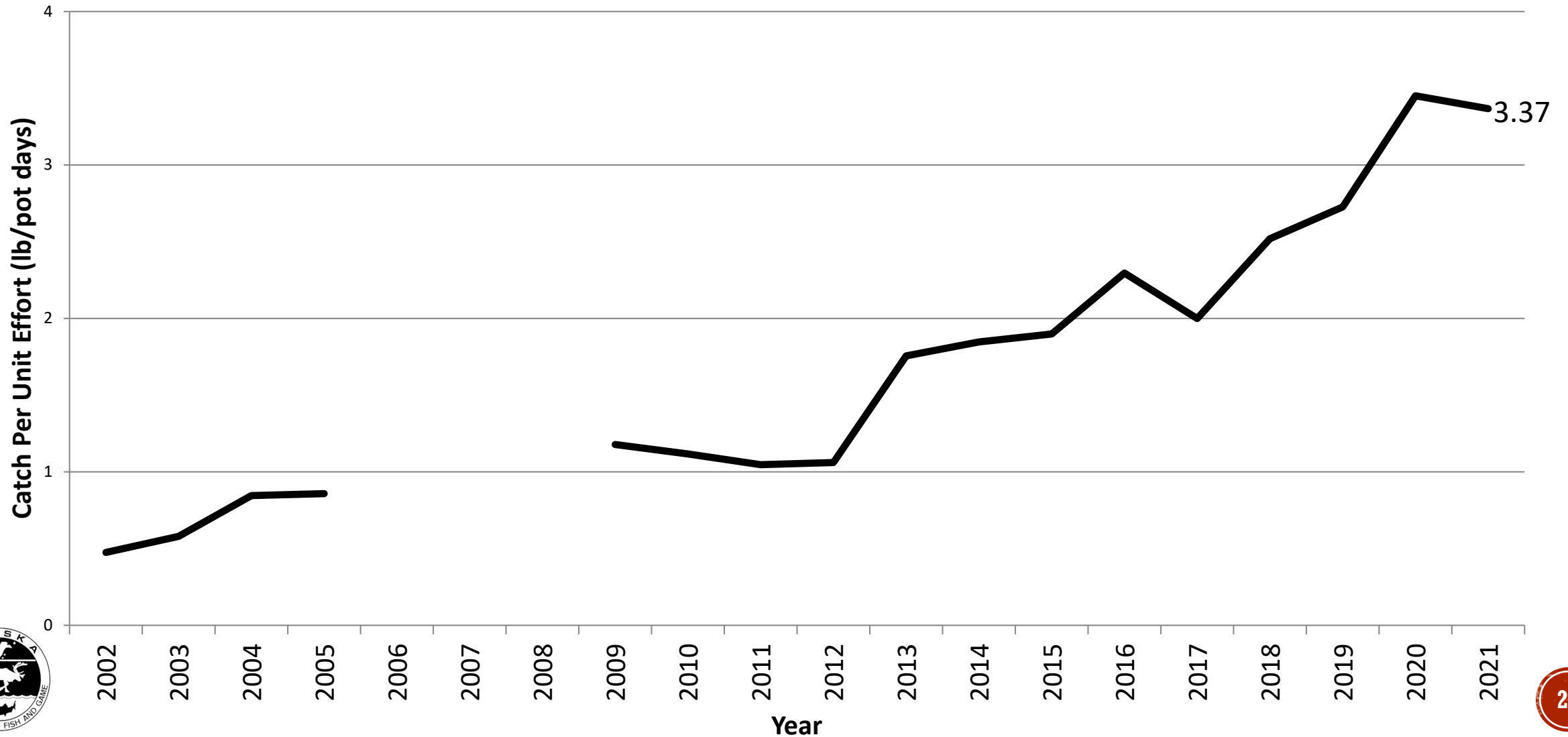
PWS Noncommercial Shrimp Pot Fishery

Harvest and Effort



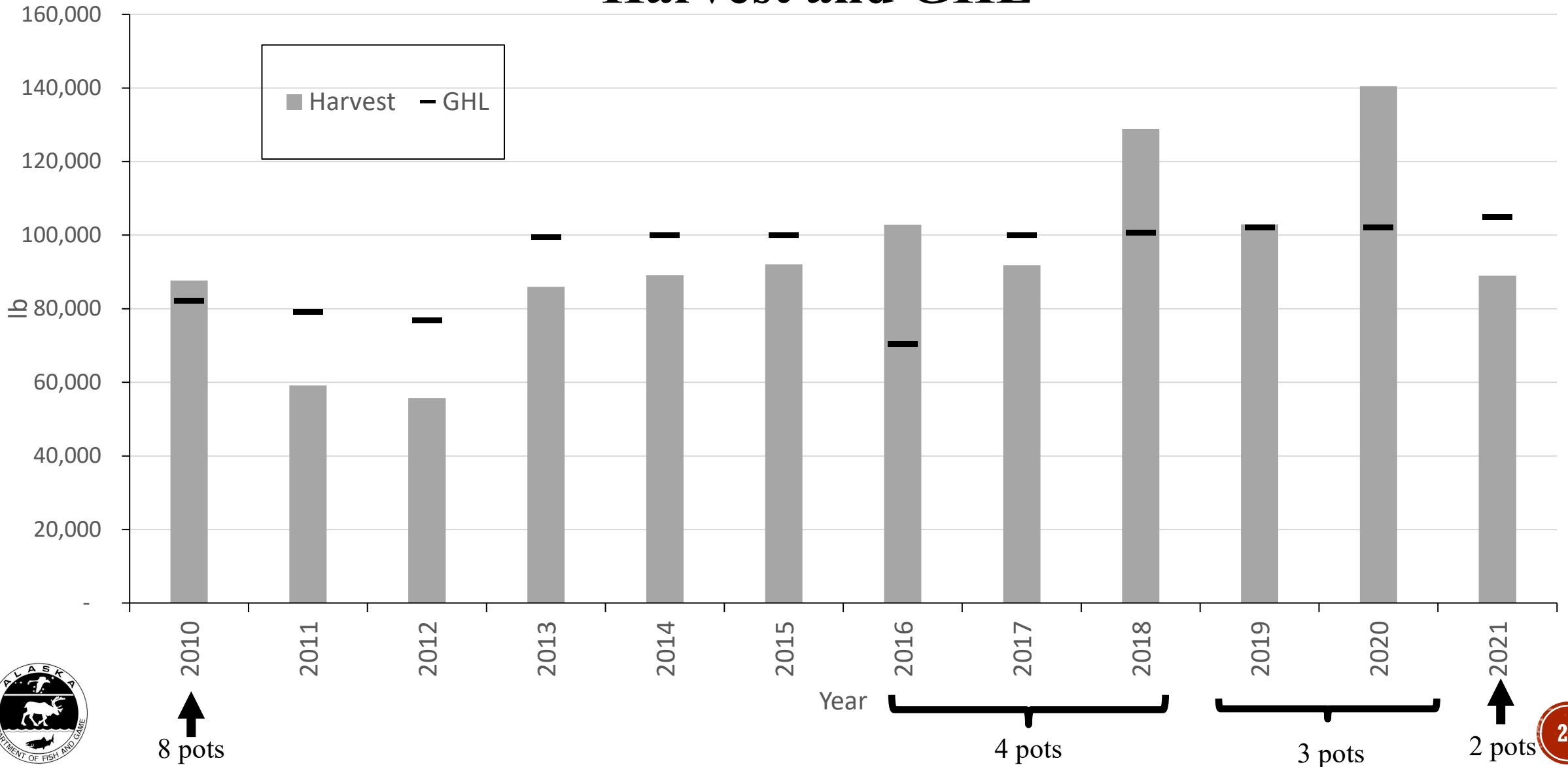
PWS Noncommercial Shrimp Pot Fishery

Catch Per Unit Effort



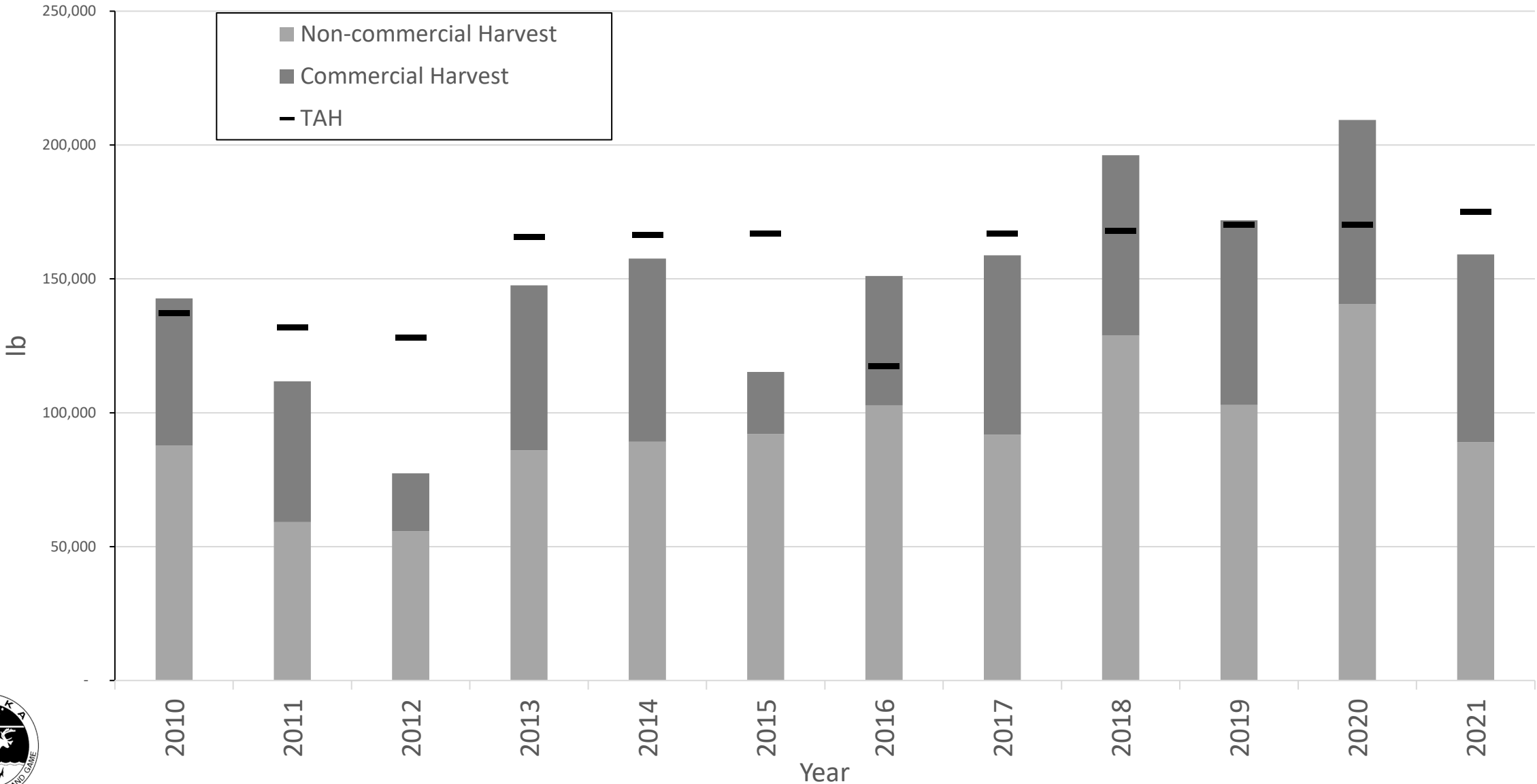
PWS Noncommercial Shrimp Pot Fishery

Harvest and GHL



PWS Shrimp Pot Fisheries

Harvest and TAH



Thank you



Rumble, J. M., J. Baumer, X. Zhang, B. Buzzee, E. Russ, J. Loboy and M. Byerly. 2022. Prince William Sound shrimp pot fisheries, 2010–2020. Alaska Department of Fish and Game, Special Publication No. 22-10, Anchorage.



Summary of PWS Shrimp Pot Fisheries

Surplus Production Model produces a conservative estimate of TAH

PWS-wide survey with long time series

Model uses commercial and noncommercial fisheries, survey information

EO's used to adjust fisheries to target GHL's

Research projects to expand knowledge – fishery sampling, fecundity, tagging