

Cook Inlet and Prince William Sound Commercial and Noncommercial Tanner Crab Fisheries



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Cook Inlet and Prince William Sound

This oral report can be found in RC 3; Tab 5

Tanner Crab Terminal Molt in Cook Inlet and PWS

- Terminal molt – when crab reach their maximum size and will not molt again
 - Male and female Tanner crab
 - Males molt to large clawed condition– ratio of chela height to carapace width
 - may not reach legal size
- Trawl survey results show large pulses of pre-recruit crab that do not recruit to legal size
- Large claw information from the surveys corroborate terminal molt
- Current legal size and recruit categories were derived from other areas, not specific to Cook Inlet or PWS
- New analysis for Cook Inlet and PWS recommendations:
 - smaller legal size
 - harvest a proportion of smaller males in addition to fast growing large males; less large males removed from the reproductive pool
 - new recruit categories



**Kachemak
Bay,
Cook Inlet**



Cook Inlet Area Tanner Crab

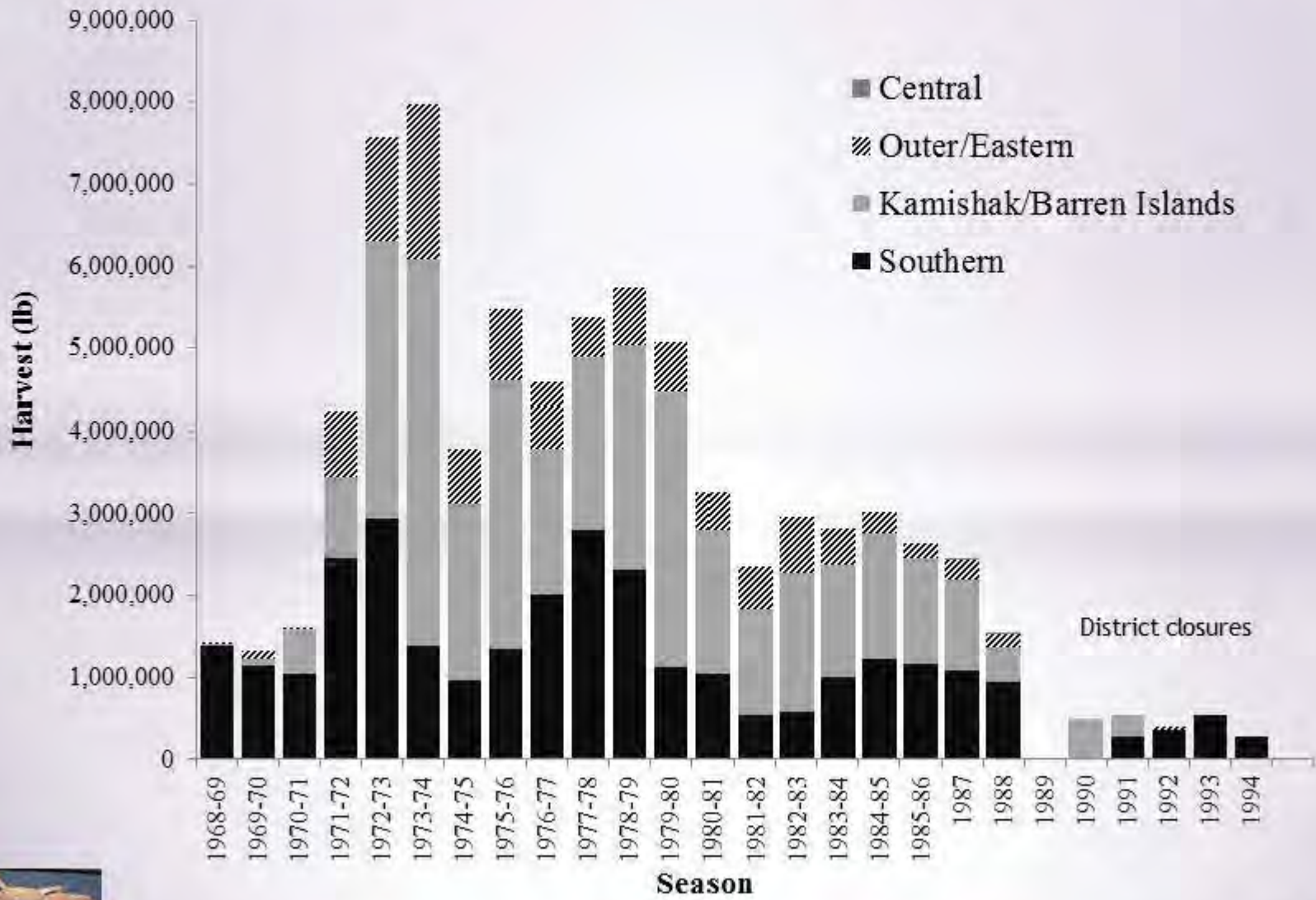
- Commercial Fisheries
 - Harvest and effort
 - Current regulations
 - Trawl survey results

- Noncommercial Fisheries
 - Area description
 - Permit
 - Proposals
 - Guideline harvest level (GHL) and harvest for last 3 full seasons
 - Regulations

- Summary
 - Survey
 - Harvest strategy



Cook Inlet Tanner Crab Commercial Harvest by District



1995 to Present - All Districts closed



Current Tanner Crab Harvest Strategy for Cook Inlet Area

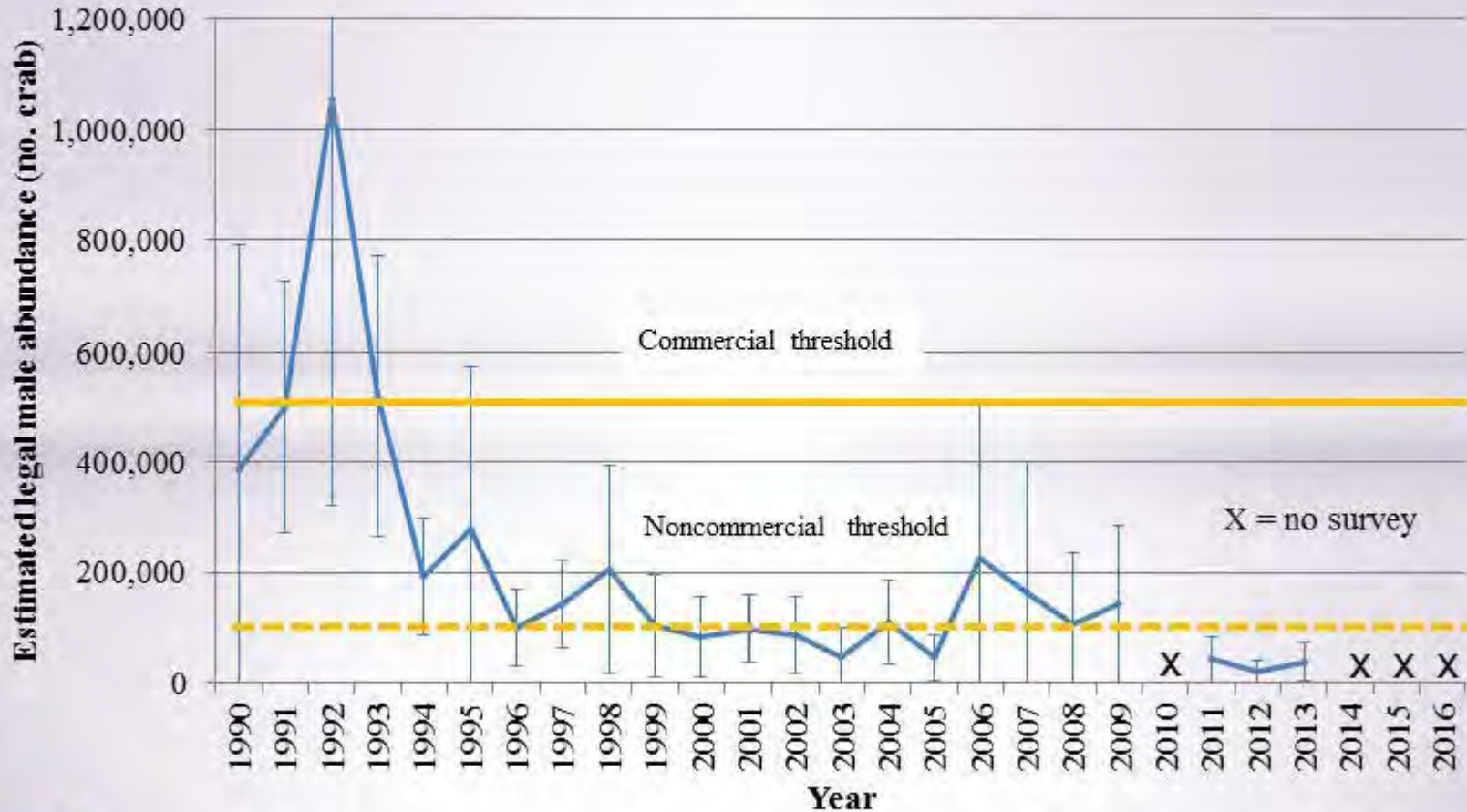
- Establishes legal male abundance thresholds for Tanner crab fisheries in Cook Inlet Management Area.
- Legal male abundance estimates are developed from the large mesh trawl surveys in Kachemak and Kamishak bays.
- Southern District thresholds
 - Commercial – legal male estimate $\geq 500,000$
 - Noncommercial – 3 year avg $\geq 100,000$ and one year avg $\geq 50,000$
- Kamishak and Barren Islands District thresholds
 - Commercial – legal male estimate $\geq 700,000$
 - Noncommercial – 3 year avg $\geq 50,000$ and one year avg $\geq 40,000$

There have been no department surveys in Kachemak Bay since 2013 and therefore no abundance estimates.



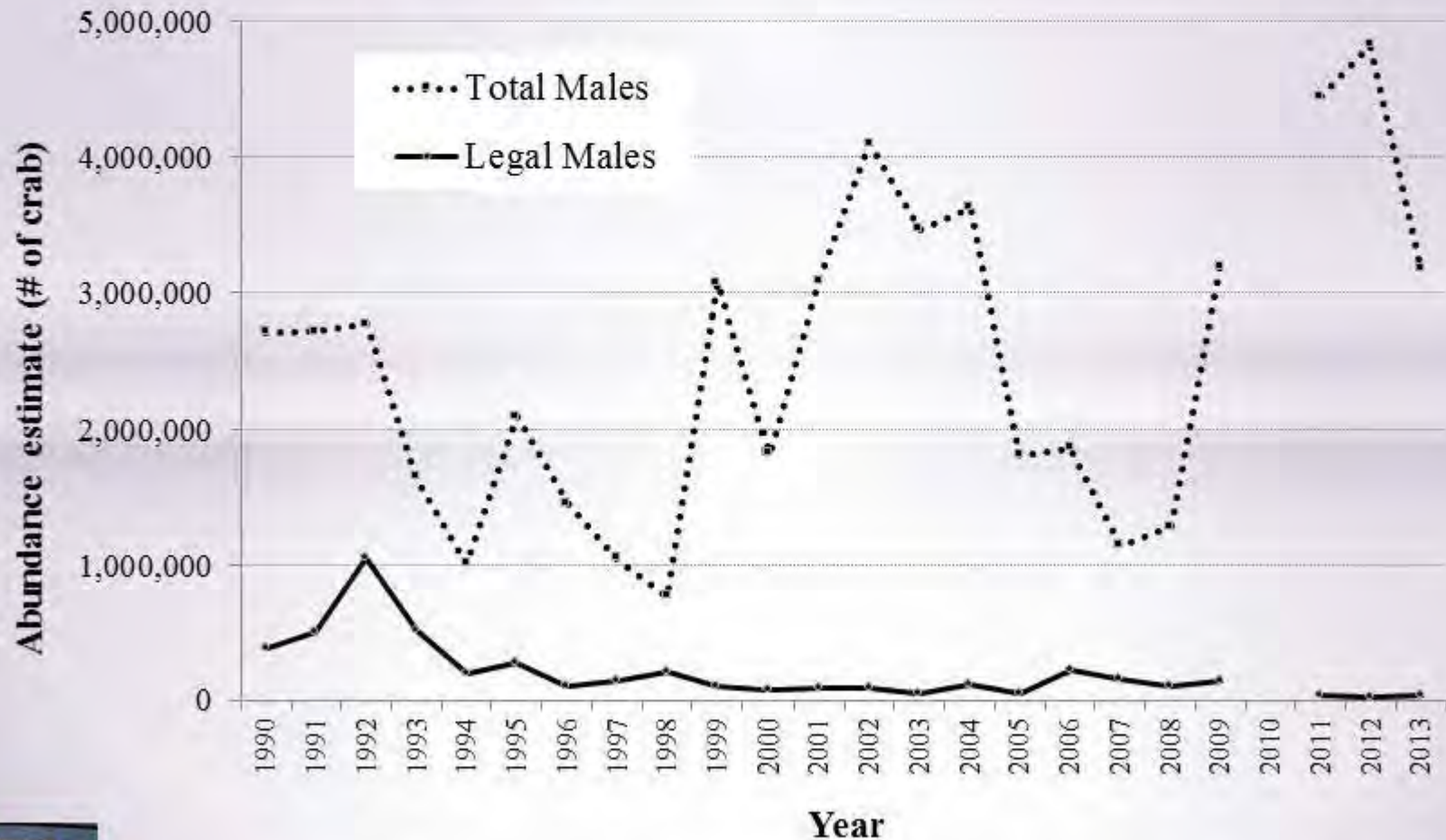
Kachemak Bay Trawl Survey Results

Legal Male Abundance Estimates

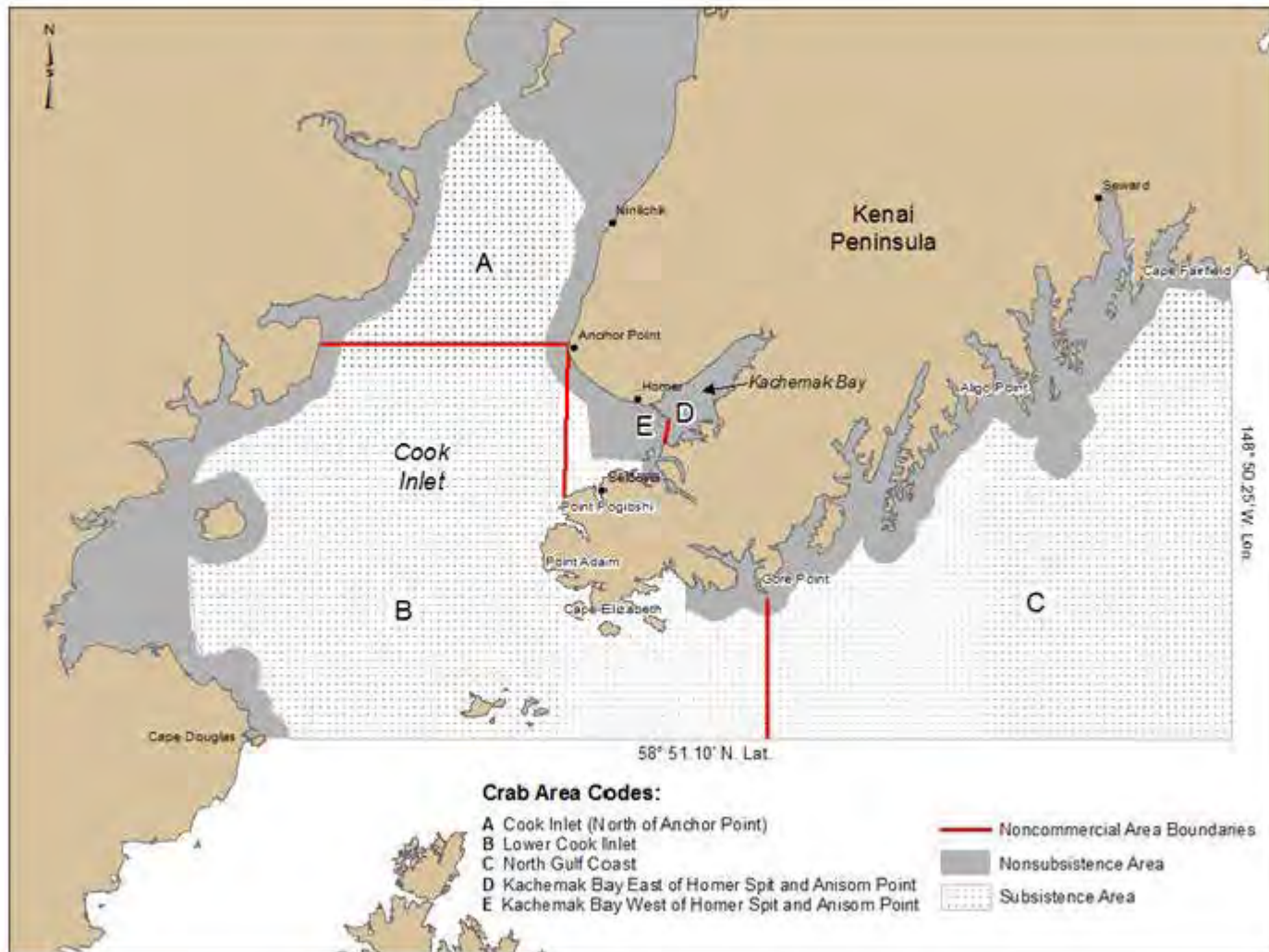


Kachemak Bay Trawl Survey Results

Legal and Total Male Abundance Estimates



Cook Inlet Tanner Crab Noncommercial Management Areas



11-

ALASKA DEPARTMENT OF FISH AND GAME

SUMMER/FALL 2011 COOK INLET/NGC SPORT, PERSONAL USE, & SUBSISTENCE TANNER CRAB PERMIT



Address _____

 Replacement for lost original

Residence (if different) _____

Alaska Resident? Yes No

Sport Fishing License No. _____

Sport Fishing License No. _____

Phone () _____

City _____

Driver's Lic. No. _____

State _____

Names of household members who will fish with this permit _____

Permit holder signature: _____

Date _____

Send this portion to: ADF&G, 1298 Douglas Place Homer AK 99603

Give this portion to customer

11-

ALASKA DEPARTMENT OF FISH AND GAME

SUMMER/FALL 2011 COOK INLET/NGC SPORT, PERSONAL USE, & SUBSISTENCE TANNER CRAB PERMIT



Name (including household members) _____

This permit is valid for the period July 15, 2011 through December 31, 2011.

- 1) This permit must be in your possession while taking or transporting Tanner crab in the Cook Inlet - North Gulf Coast Areas.
- 2) Each person fishing cannot harvest more than their individual bag limit of legal male crab (bag limits may change by Emergency Order).
- 3) One permit may be used by all household members (persons having the same residence) named on the permit. Household members may also get their own permit, but should be careful not to report the same harvest on two permits.
- 4) Information must be recorded in ink in the spaces below prior to leaving the fishing site or concealing the crab from view.
- 5) If more than one permit holder is aboard the vessel, only one should report the number of crab released.
- 6) You must return your completed permit to the address below by January 15, 2012 even if you did not fish.

Failure to return your completed permit is a violation and in addition to being cited, you may be ineligible to receive a permit the next year.

Record every day you fish, even if you Check here if no one named on this permit fished this season. don't catch anything.

Crab Harvest & Catch Log

Tanner crab bag and possession limits: 5 legal male crab.

Date (mm/dd) Pot Pulled	Number of People on this Permit Who Fished	Crab Area Code (see map)	Number of Legal Male Tanner Crab Kept	Crab Released		
				Number of Legal Male Tanner Crab Released	Number of Sub-legal Male Tanner Crab Released	Number of Female Tanner Crab Released

Please continue on another piece of paper if you need more lines.

RETURN THIS PERMIT TO: ADF&G
Homer no later than January 15, 2012
ADF&G, 3298 Douglas Place,
Homer, AK 99603

Questions? Consult pp. 62-63 of the
2011 Southcentral Alaska Sport Fishing
Regulations Summary Booklet or call
ADF&G Homer at: 907-235-8191.

Tanner crab

male-narrow
abdominal flapfemale-wide abdominal flap
covers most of underside (females
usually smaller than 5 1/2")
NO HARVEST ALLOWEDminimum size
5 1/2"

Width measurement of Tanner crab is the straight-line distance across the carapace, including spines.

Cook Inlet Noncommercial Tanner crab Permit



Cook Inlet Tanner Crab Proposals

Proposal 265 – Amend harvest strategy to allow a noncommercial fishery to be open in the absence of a department trawl survey (submitted by ADF&G)

Proposal 266 – Allow a personal use fishery with reduced bag limit



Kachemak Bay Tanner Crab Noncommercial Fishery Harvest from Permits

Season	GHL	Total Harvest	Permits Fished	Oct – Feb ^a Proposed season-265	
				<u>Harvest</u> Number (%)	<u>Permits Fished</u> Number (%)
2008/09	13,373	16,185	2,760	3,343 (21%)	227 (8%)
2009/10	14,860	17,141	2,747	6,064 (35%)	344 (13%)
2010/11	18,284	12,676	2,503	2,779 (22%)	256 (10%)
Average	15,506	15,334	2,670	4,062 (26%)	276 (10%)

^a Fishery closed from Jan 1-15



Cook Inlet Noncommercial Tanner Crab Current and Proposed Regulations

2008-2012

- Size limit = 5.5 inches
- 2 pots per person/ 2 pots per vessel
- Season July 15 – March 15
- 5 crab bag and possession limit
- Permit required
- Noncommercial

Proposal 265 (ADF&G)

- Size limit = 4.5 inches
- 1 pot per person/ 1 pot per vessel
- Season October 1 – end Feb
- 3 crab bag and possession limit
- Permit required
- Noncommercial

Proposal 266

- Unspecified size
- 2 pots per person
- Unspecified season
- 2 crab bag and possession limit
- Permit not specified
- Personal use

2014 BOF meeting – new season date was adopted Sept 15-March 31

In 2016, personal use regulations have been repealed to reduce redundancy



Cook Inlet Area Summary

- Terminal molt corroborated by survey data
- New analysis suggests a smaller legal size
- ADF&G proposes to open a sport and subsistence fishery with a reduced season, bag, and pot limit to be conservative
- Monitor the fishery annually with permits
- Future plans
 - Trawl survey to assess population
 - Update harvest strategy





**Prince
William
Sound
(PWS)**



Prince William Sound Area Tanner Crab

- Commercial fishery
 - Area description
 - Harvest and effort by district

- Subsistence fishery
 - Regulations
 - Area description
 - Harvest and effort
 - Harvest by permit holder residence

- Survey

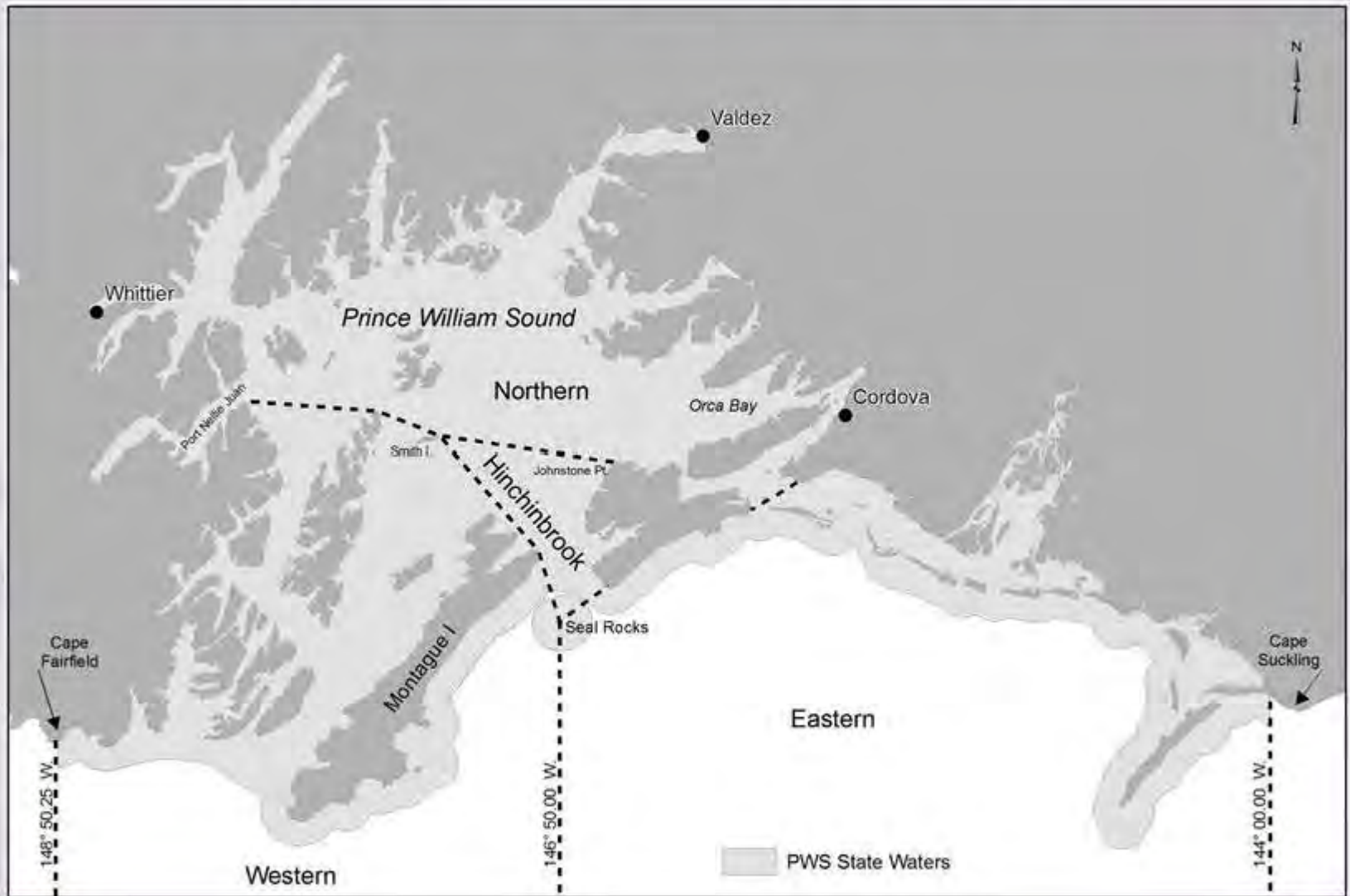
- Test fishery

- Board of Fisheries proposals

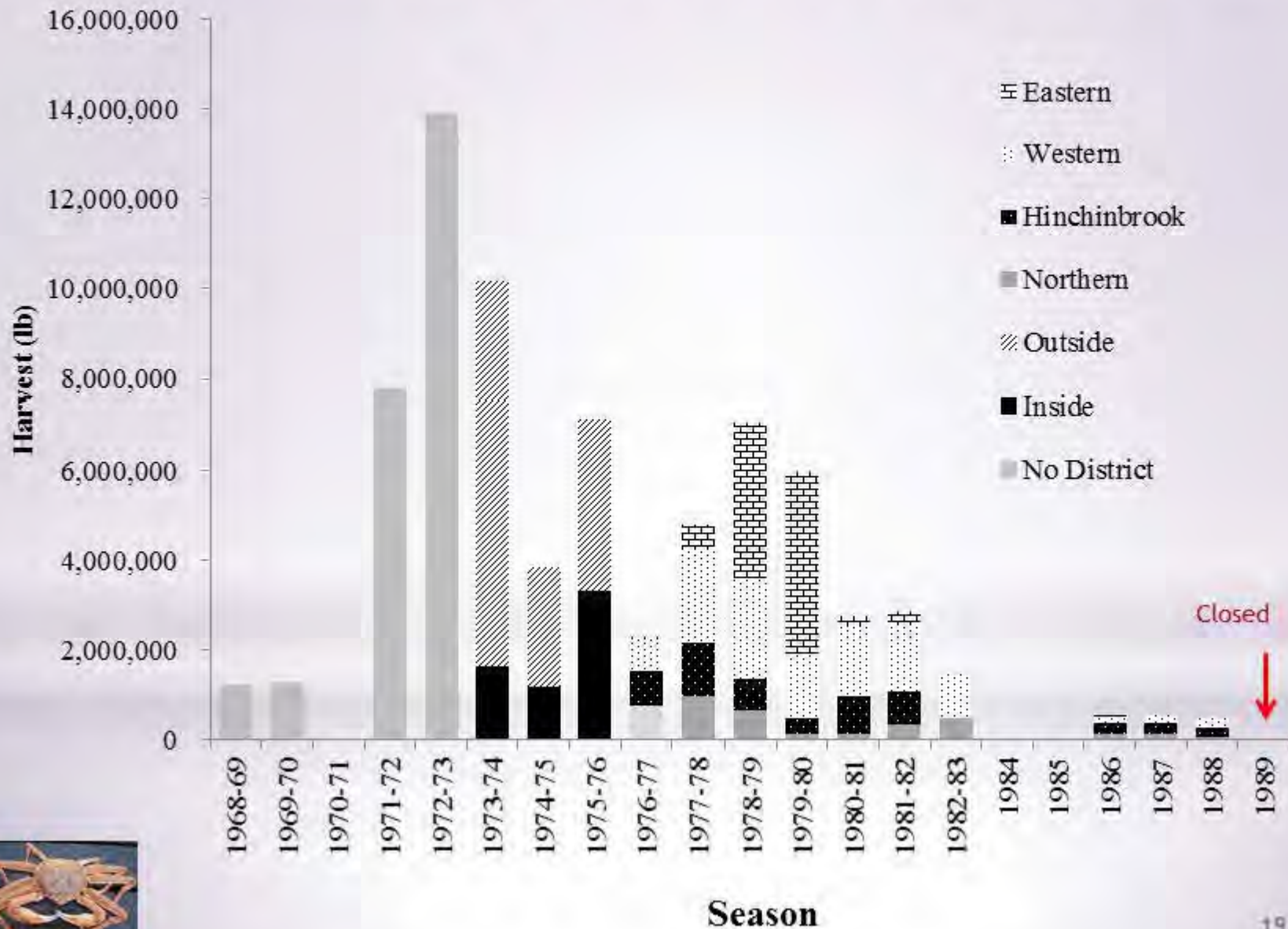
- Proposed harvest strategy



PWS Commercial Shellfish Fisheries Districts



PWS Commercial Tanner Crab Harvest and Effort



PWS Noncommercial Tanner Crab Regulations

Prior to 1999

- Sport, Personal Use, and Subsistence
- Open year round
- 20 male crab \geq 5.5 inches
- 10 pots per vessel
- No direct monitoring
- Area closures by EO

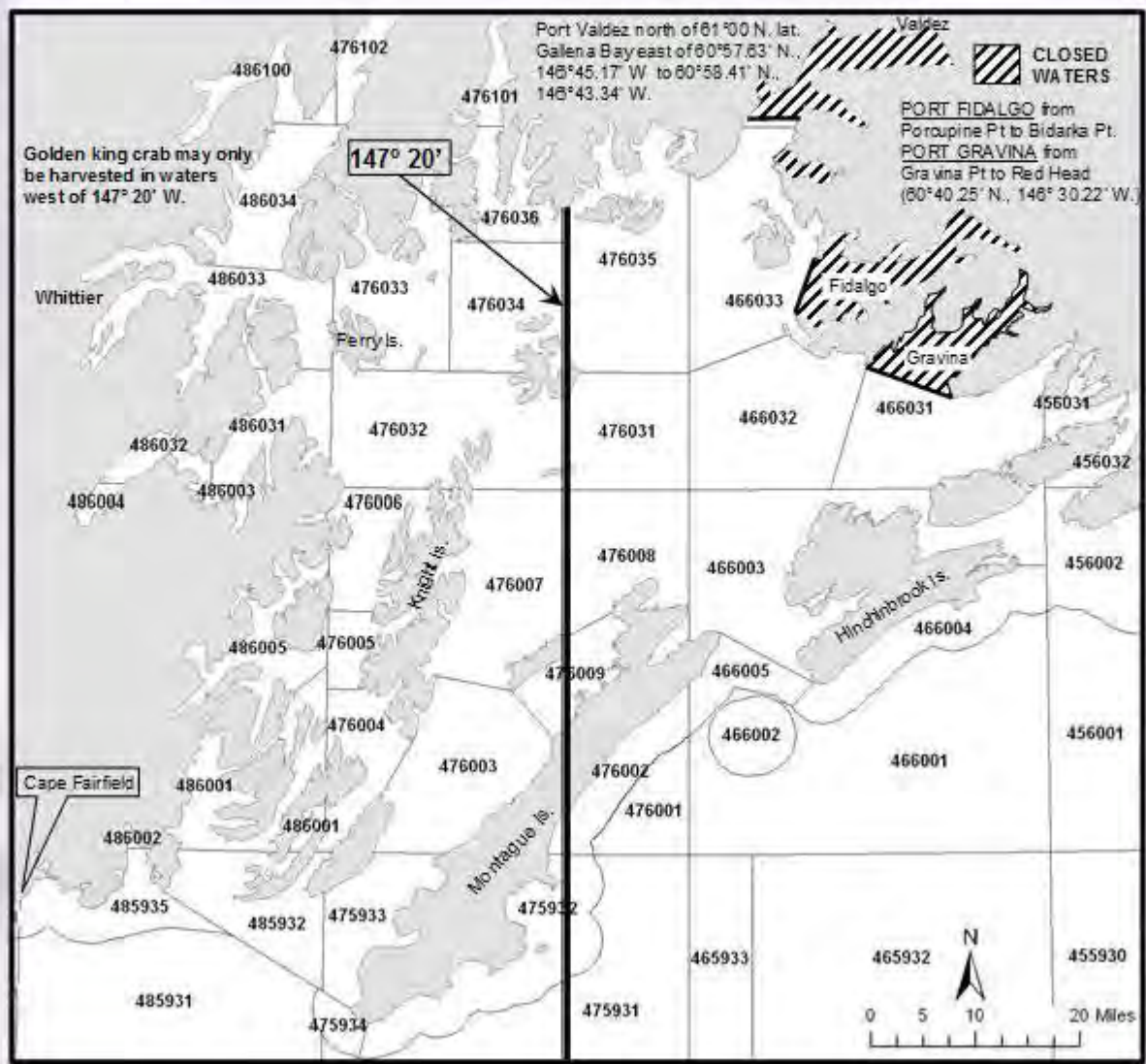


2008 to Present

- Subsistence only
- October 1 – March 31
- 5 male crab \geq 5.5 inches
- 2 pots per person and vessel
- Permit requirement
- Tanner crab nursery areas closed



PWS Subsistence Tanner Crab Statistical Areas



16/17

ALASKA DEPARTMENT OF FISH AND GAME DIVISION OF COMMERCIAL FISHERIES
2016/17 PRINCE WILLIAM SOUND SUBSISTENCE GOLDEN KING AND TANNER CRAB PERMIT



Name _____
 Address _____
 City _____ State _____ Zip _____
 Phone _____ Email _____ Driver's License No. _____
 Vessel Name: _____
 Names of other household members who may fish with this permit _____
 Permit holder signature: _____ Date _____

Replacement for lost original
MUST BE AN ALASKA RESIDENT

Send this portion to: ADF&G PWS Subsistence Crab Permits, PO Box 669 Cordova, AK 99574

Cut Here

16/17

ALASKA DEPARTMENT OF FISH AND GAME DIVISION OF COMMERCIAL FISHERIES
2016/17 PRINCE WILLIAM SOUND SUBSISTENCE GOLDEN KING AND TANNER CRAB PERMIT



Name (including household members) _____

This permit is valid during the PWS subsistence crab season which is October 1, 2016 through March 31, 2017.

- 1) This permit must be in your possession while taking or transporting golden king or Tanner crab in the Prince William Sound Area.
- 2) One permit may be used by all household members (persons having the same residence) named on the permit.
- 3) Each person fishing may only harvest his or her individual bag or annual household limit.
- 4) Only whole crabs may be removed from a vessel.
- 5) Information must be recorded in ink in the spaces below prior to leaving the fishing site or concealing the crab from view.
- 6) If more than one permit holder is aboard the vessel, **only one should report the number of crab released.**
- 7) You must return your completed permit to the address below by April 15, 2017, even if you did not fish.

Failure to return your completed permit is a violation and in addition to being cited, you may be ineligible to receive a permit the next year.

Record every day you fish, even if you don't catch anything. Check here if no one named on this permit fished this season.

Daily Bag and Possession Limit = 5
Tanner Crab Catch Log legal male Tanner crab per household member fishing

Date Pots Pulled	# of Pots Pulled	# of Household Members Who Fished	AK # of Vessel Pulling Pots	Area Code (see map on back)	# of Legal Male Crab Kept	Crab Released			
						# of Legal Male Crab Released	# of Sub-legal Male Crab Released	# of Female Crab Released	# of Dungeness Released

Golden King Crab Catch Log Annual Household Limit = 3 legal males

Date Pulled	# of Pots	(Name as above)

Tanner crab



multi-narrow abdominal flap



female-wide abdominal flap covers most of underside (females usually smaller than 5 1/2")
NO HARVEST ALLOWED



Width measurement of Tanner crab is the straight-line distance across the carapace, including spines.

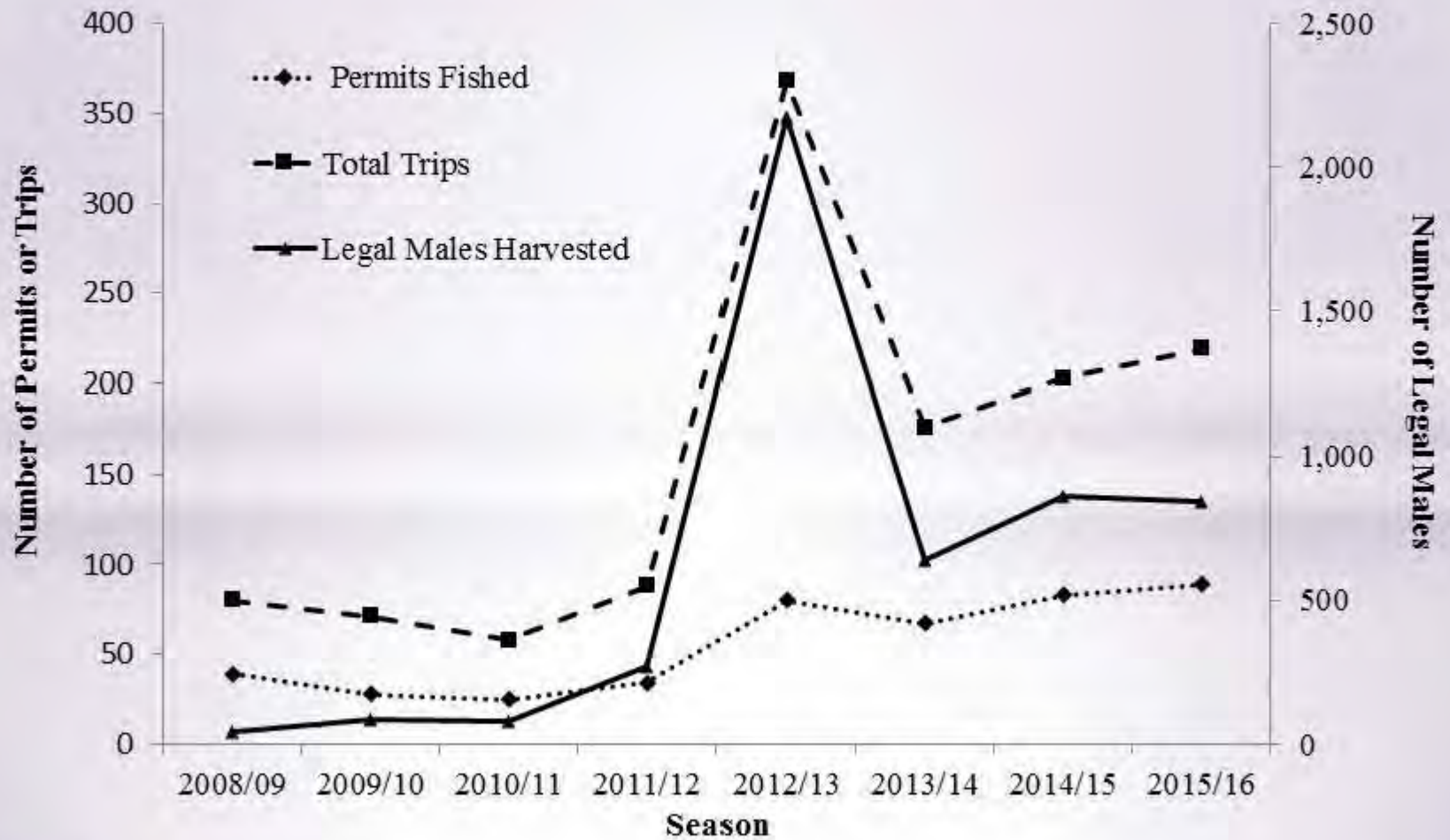
Please continue on another piece of paper if you need more lines for the Tanner crab catch log. Return this permit no later than April 15, 2017 to:

ADF&G PWS Subsistence Crab Permits - P.O. Box 669 Cordova, AK 99574

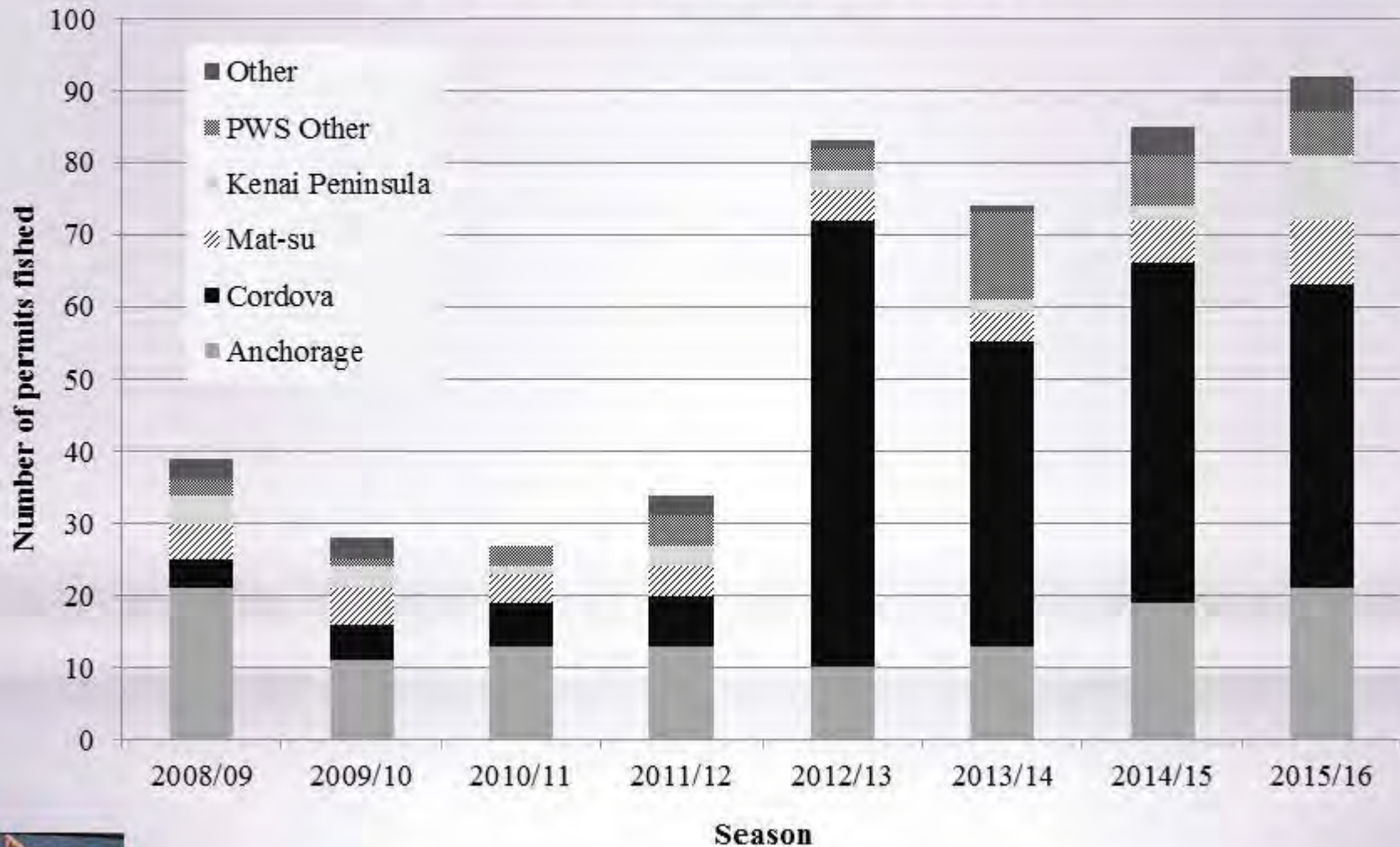
**PWS
 Tanner Crab
 Subsistence
 Permit**



PWS Area Tanner Crab Subsistence Harvest and Effort



PWS Subsistence Tanner Crab Permits Fished Permit Holder Residence

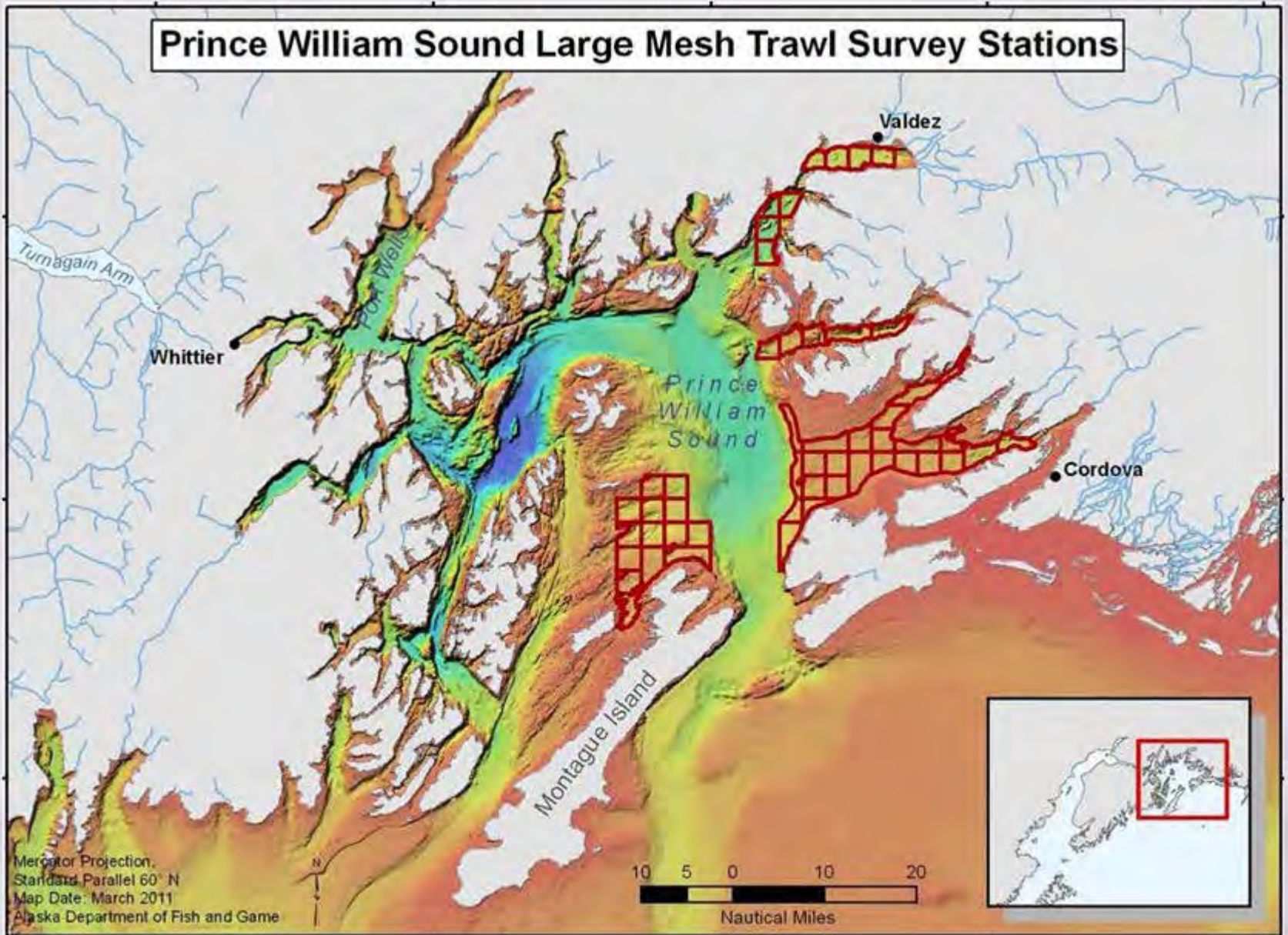


PWS Tanner Crab Survey History

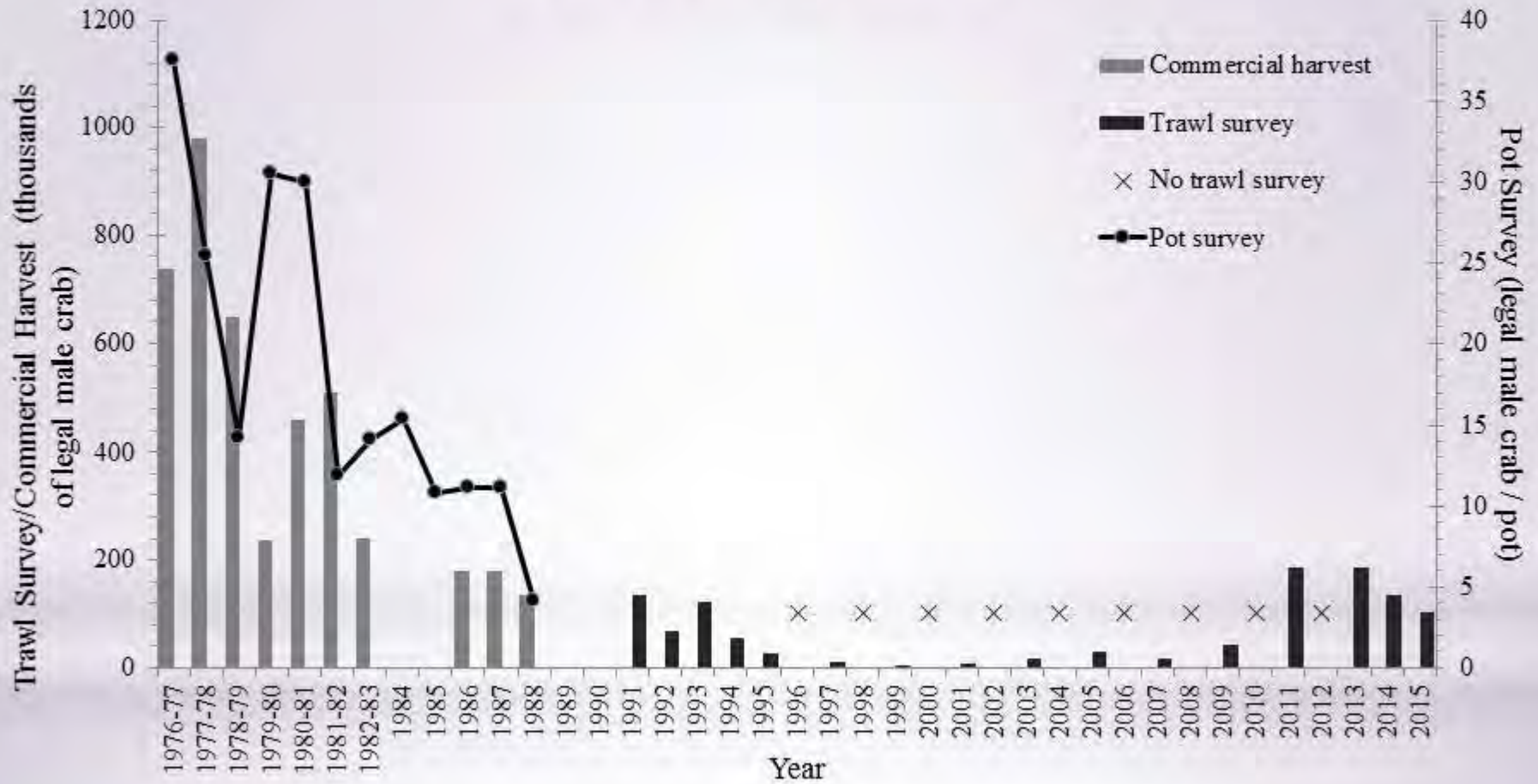
- Pot survey
 - 1977 – 1991
 - index of abundance
 - used to adjust GHGs for commercial fishery
- Trawl survey
 - 1991 – present (next survey 2017)
 - estimate abundance with area swept calculations



Prince William Sound Large Mesh Trawl Survey Stations



PWS Tanner Crab Survey and Commercial Harvest History



2016 PWS Tanner Crab Test Fishery RFQ

- Interest from the public in surveying untrawlable areas
- Request for quotations (RFQ) for test fishery – March/Sept 2016
 - 2 lots of 300 pots each = 600 total
 - 400 pot locations from historical ADF&G pot survey, inside and outside PWS
 - 200 captain's choice pot locations (<1/3 of total)
 - Mandatory observer to collect biological information
 - Closed escape rings to retain sublegal males and females

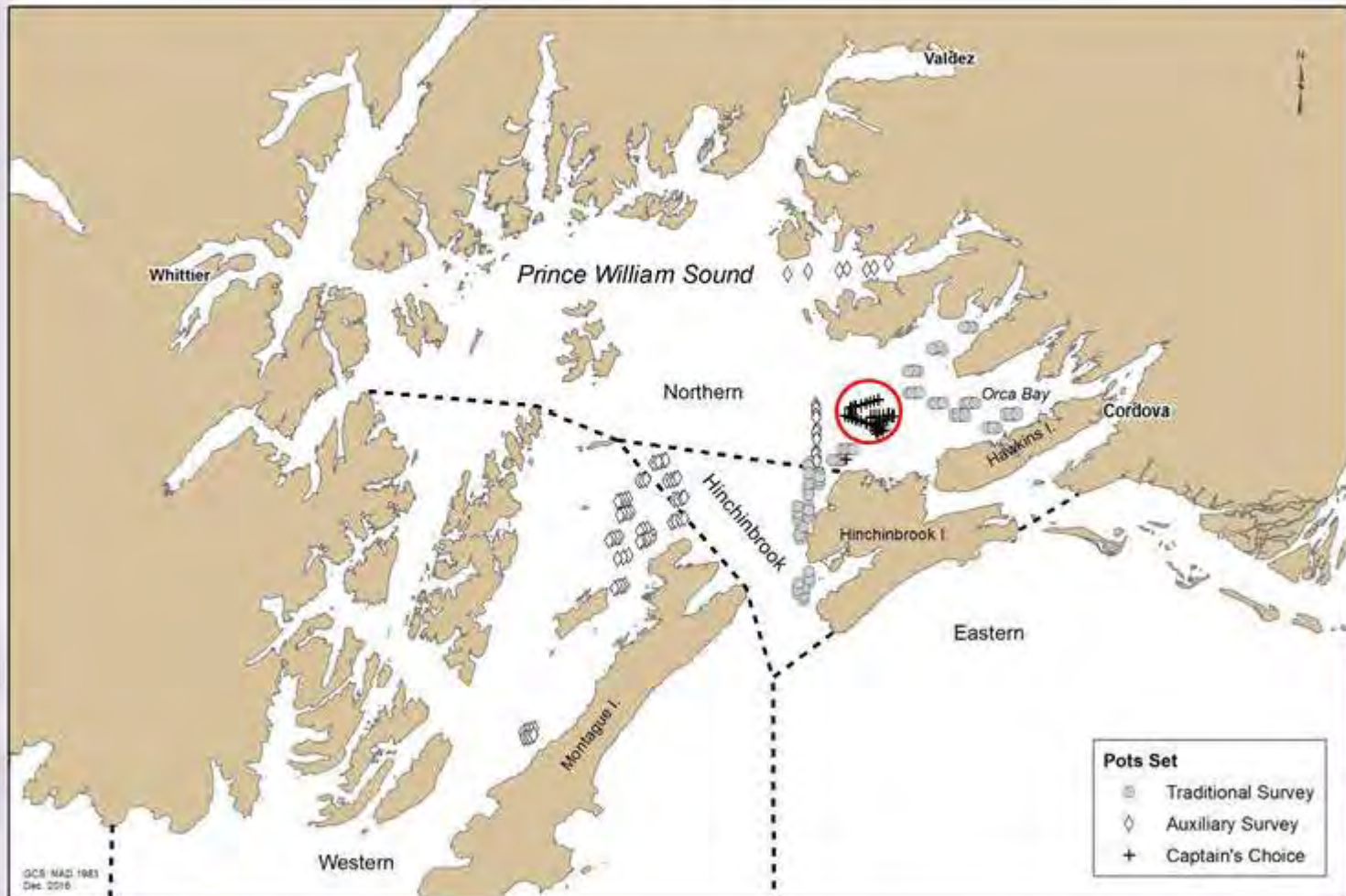


2016 PWS Tanner Crab Test Fishery

- No applicants in March 2016
- 4 applicants in October 2016
- One bidder won both lots
- Survey conducted from mid-Nov thru mid-Dec 2016
- Only 158 out of 400 ADF&G pot locations were surveyed
- The pot survey locations on the outside of PWS were not completed



PWS Tanner Crab Test Fishery Pot Locations



PWS Tanner Crab Test Fishery Results

District	Pots	# Legal males	CPUE legal
Hinchinbrook	49	44	0.9
Northern	67	485	7.2
Western	42	37	0.9
Total ADF&G	158	566	3.6
Captain's Choice (CC)	48	1,416	29.5
Combined ADF&G + CC	206	1,982	9.6

Note: all of the captain's choice pots were set in the Northern District area of highest abundance from ADF&G pot locations; this area is 8 square nautical miles.

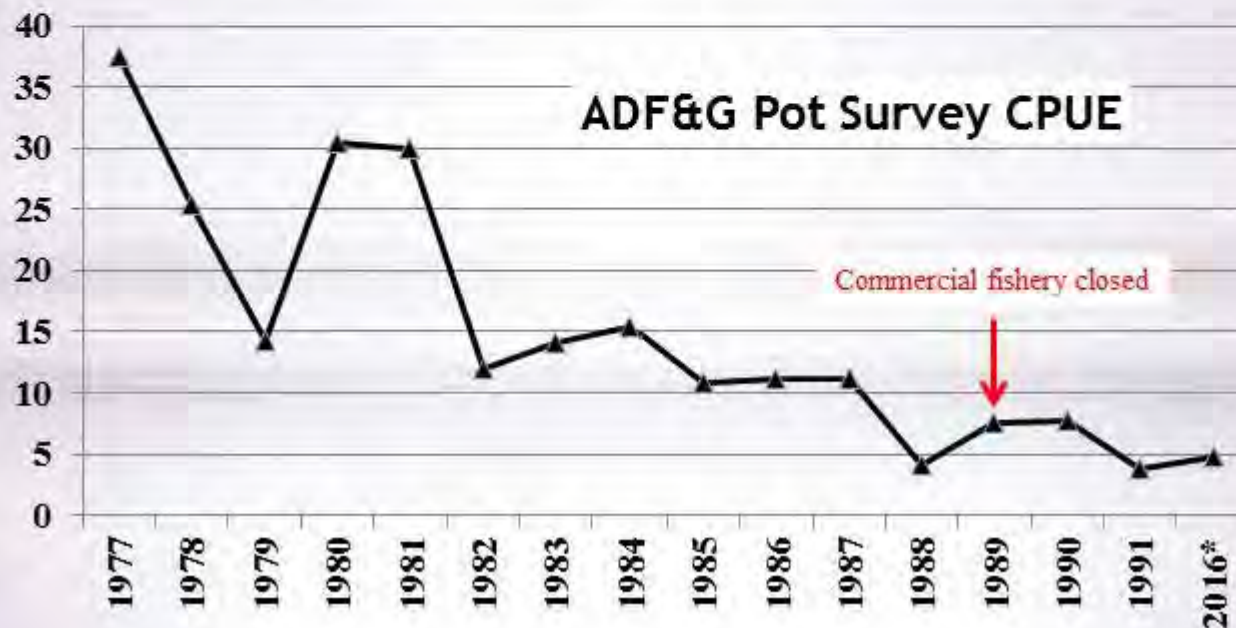
The area where the captain's choice pots were placed is in our trawl survey area and will be surveyed in June 2017.



PWS Tanner Crab Test Fishery Results

Traditional Pot Locations

District	Pots	# Legal males	CPUE legal
Hinchinbrook	36	27	0.8
Northern	48	380	7.9
Total ADF&G	84	407	4.8



PWS Tanner Crab

Proposals

- **Proposal 267** – Create a harvest strategy and reduce size limit
- **Proposal 268** – Create a harvest strategy and establish a sport fishery
- **Proposal 269 and 270** – Open a commercial fishery in the Western and Eastern districts
- **Proposal 271** – Allow ADF&G to issue commissioner's permits for king and Tanner crab
- **Proposal 272** – Reduce the legal male size limit
- **Proposal 273** – Increase the subsistence bag limit



PWS Commercial Tanner Crab Harvest Strategy

Proposal 267

- Developed from:
 - Historical commercial fishery harvest
 - Noncommercial harvest (SWHS and permit)
 - Trawl survey results
 - Pot survey results



PWS Commercial Tanner Crab Harvest Strategy

Proposal 267

- Reduce male size limit to 5.0 inches
- Establish abundance thresholds to open commercial fisheries
- Pot limit determined pre-season by number of registrants/GHL
- Pot storage requirements
- Logbooks
- Reporting requirements
- Operation of other gear



PWS Commercial Tanner Crab Harvest Strategy

Proposal 267

- Trawl survey results will be used to estimate legal male abundance, with new size limit
- Commercial threshold = 200,000 legal males
- If it surpasses 200,000 legal males, harvest rates vary depending on estimate (15 - 30%)



PWS Tanner Crab Summary

- Department is proposing a harvest strategy
- Harvest strategy corroborates historical management actions
- Harvest strategy proposes reduced legal size, takes into account terminal molt information; apply this to subsistence legal size
- Comparing test fishery information to historical survey information shows populations continue to be at low levels, below harvest strategy thresholds
- Trawl survey planned for 2017
- Continue to monitor subsistence fishery through permits



Questions?

Thanks to Elisa Russ, Chris Russ, Mike Booz, Josh Mumm, Mike Byerly, Carol Kerkvliet, and Ken Goldman for help with presentation!