

# Western GOA pollock vessel limits

*Discussion paper*

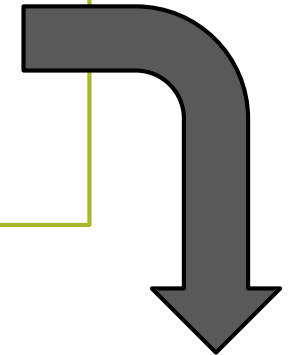
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December 2018

## WGOA pollock trip limit discussion paper

- December 2017
  - Lowering the 300,000 lb trip limit in order to reduce Chinook salmon PSC
  - This may or may not have the desired effect.
  - It would likely have socio-economic effects.



## WGOA pollock vessel limits discussion paper

- December 2018
  - The new proposal more directly seeks to address some of these social and economic effects
  - While PSC is still part of this discussion, the primary intent of action appears to be more about establishing community protections and achieving certain social and economic objectives.

In the Western Gulf of Alaska,

- Implement a vessel size limit of 58 feet overall length during the pollock fishery, or
- Establish a sideboard limit on catch of pollock by trawl vessels over 58 feet in length

## Analysts were asked to demonstrate:

- historical harvest distributions,
  - regulatory changes and external factors that influence participation and harvest,
  - historical dependence, and
  - the economic contribution of vessels.
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- To the extent possible, the evaluation should consider the extent these measures may protect the historical dependence of 58 foot vessels on the pollock fishery, affect Chinook salmon and halibut PSC rates and use, and protect the communities supported by the pollock fishery in the Western Gulf.

## 1. Background (relevant information)

- Spatial distribution
- Seasonal Apportionments and harvest trends
- Length of Season
- Description of participants
- Economic contributions to communities
- Information on Chinook and halibut PSC

## 2. Preliminary evaluation

- Potential impacts to vessels greater than 58 ft LOA (and associations)
- Potential impacts to vessel 58 ft LOA (and associations)
- Chinook and halibut PSC
- Steller Sea Lions

## 3. Next Steps

# Spatial distribution of pollock directed fishing in the GOA trawl fishery, 2017

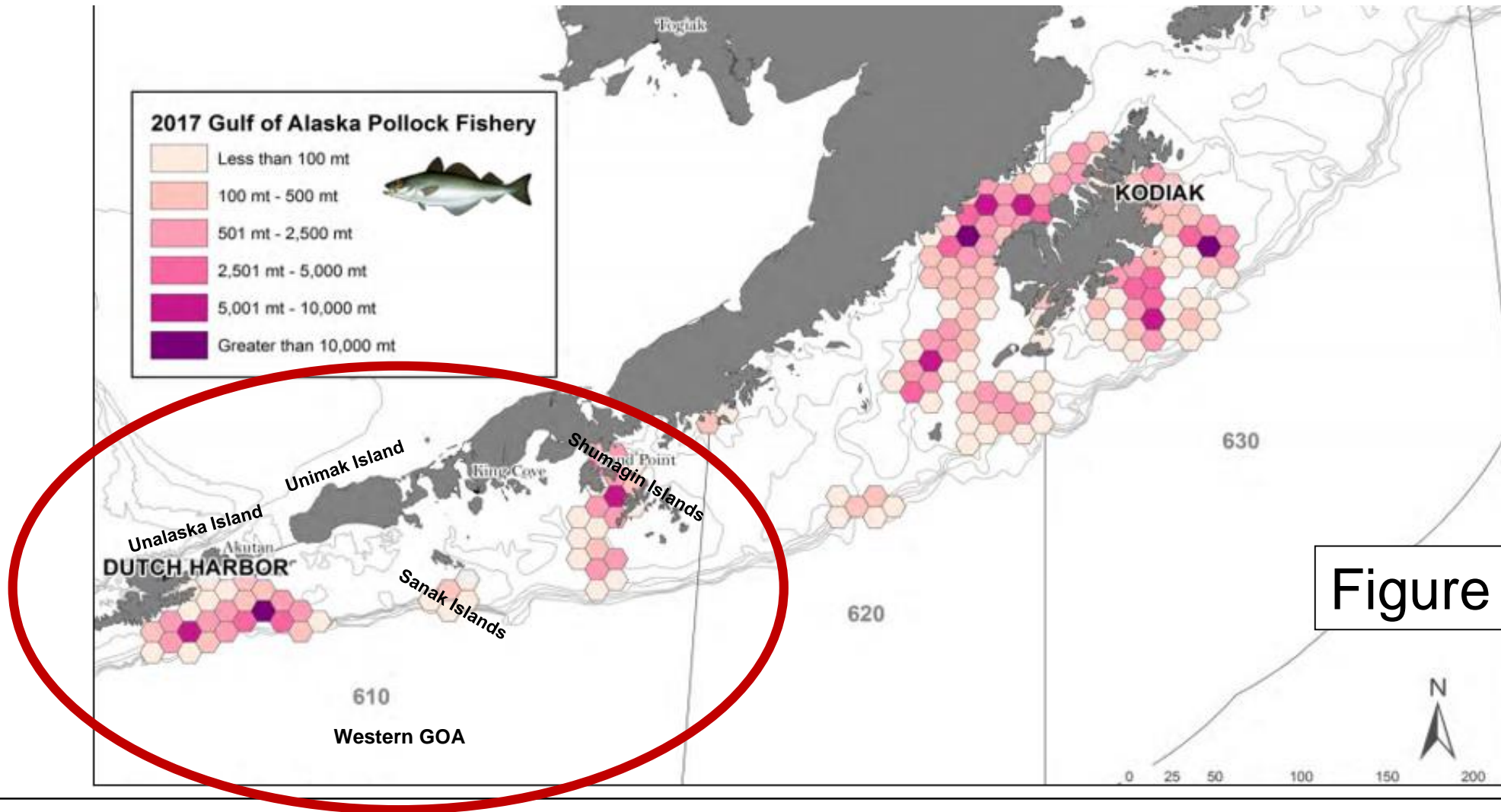
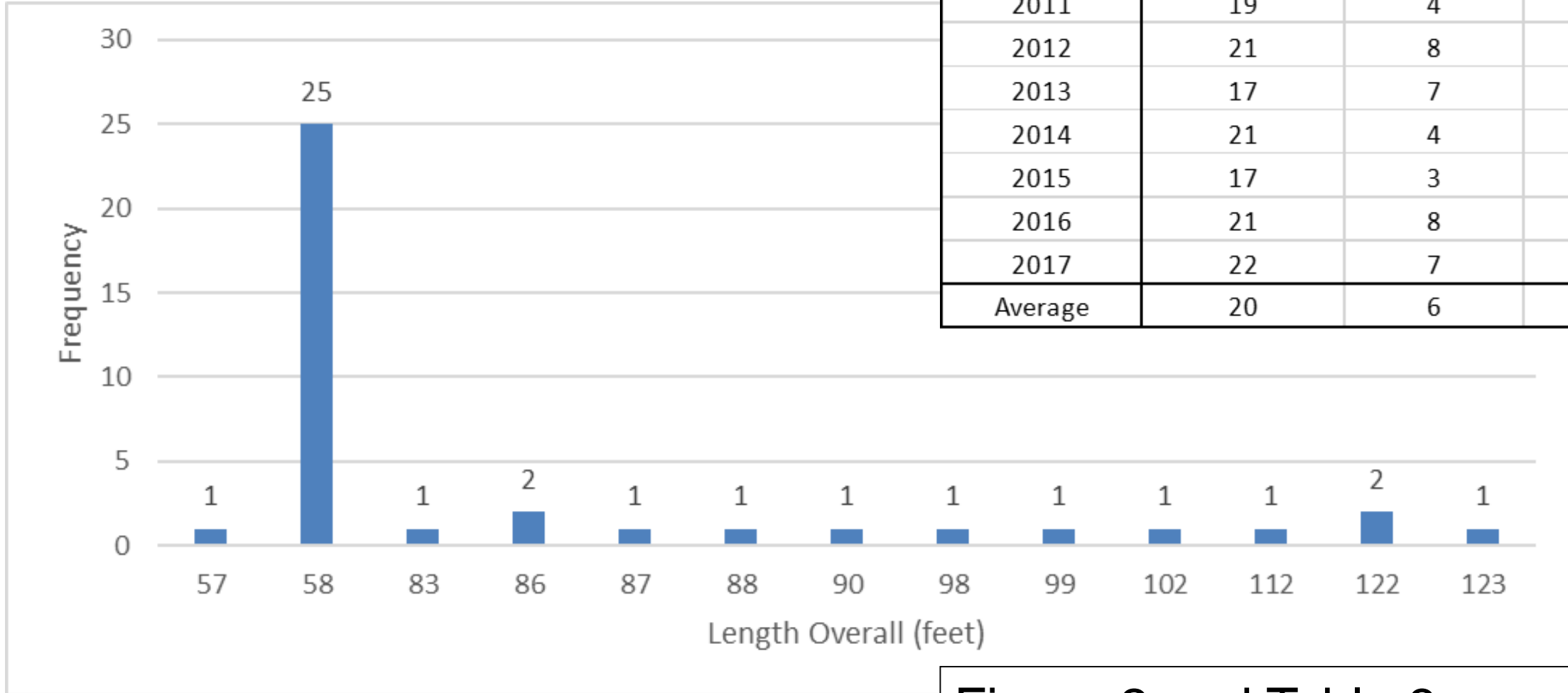


Figure 1, page 4

# Seasonal apportionments of TAC in 610 (WGOA)

	A SEASON	B SEASON	C SEASON	D SEASON
Season dates	January 20 – March 10	March 10 – May 31	August 25 – October 1	October 1- November 1
Initial TAC in 2017	2,232 mt	2,232 mt	19,569 mt	19,569 mt
% of 610 TAC in 2017	5.1%	5.1%	44.9%	44.9%

# The participating vessels



	≤58 ft LOA	>58 ft LOA	Total
2010	20	6	26
2011	19	4	23
2012	21	8	29
2013	17	7	24
2014	21	4	25
2015	17	3	20
2016	21	8	29
2017	22	7	29
Average	20	6	26

Figure 2 and Table 3, page 4



# Harvest distribution by vessel size category

	≤58 ft LOA		>58 ft LOA		Total
	Harvest (mt)	% of total	Harvest (mt)	% of total	
2010	19,760	77%	6,027	23%	25,787
2011	16,850	83%	3,353	17%	20,204
2012	18,459	69%	8,410	31%	26,869
2013	4,298	59%	2,944	41%	7,242
2014	10,635	87%	1,599	13%	12,234
2015	26,794	95%	1,505	5%	28,299
2016	45,009	74%	15,873	26%	60,881
2017	26,600	54%	22,397	46%	48,998
Average	21,051	75%	7,764	25%	28,814

Table 4, page 5

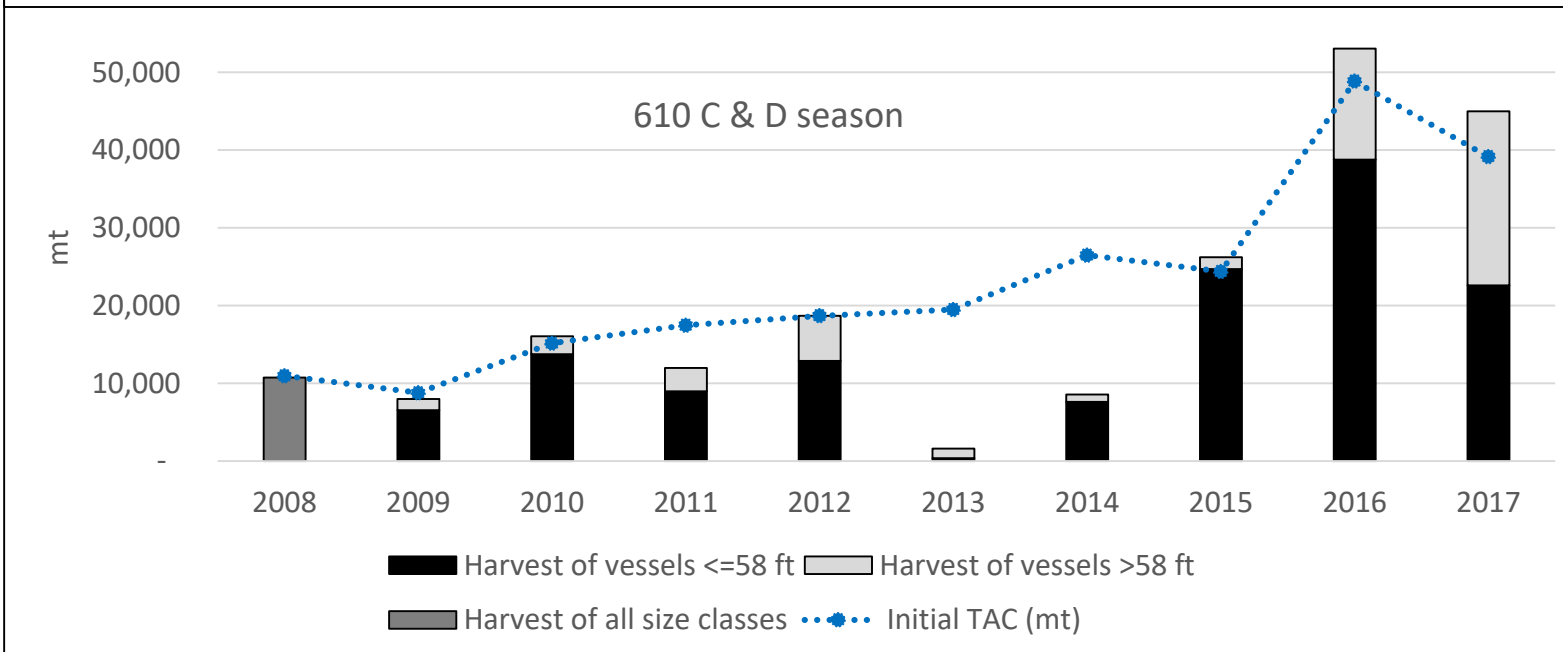
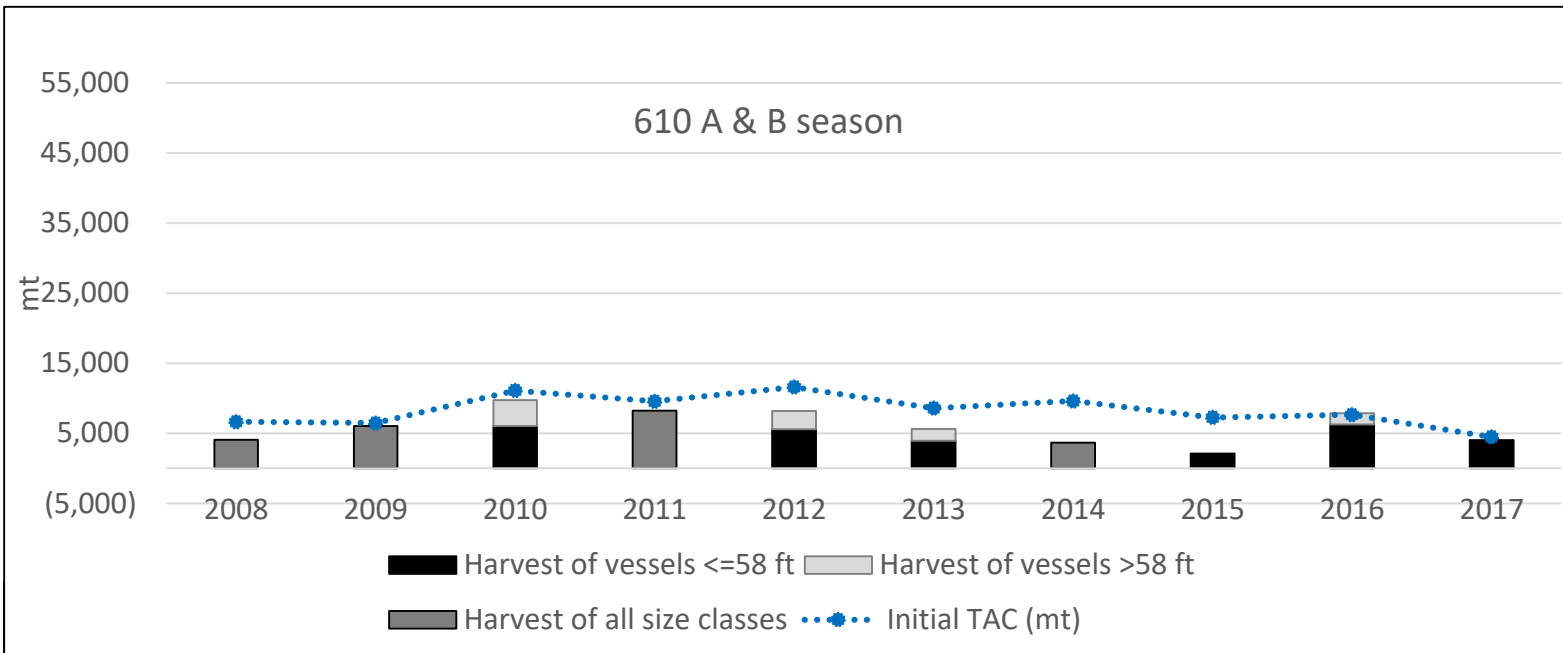


Figure 3,  
page 6

# Diversification

Vessel size category	Year	Count of vessels in the WGOA pollock	Of the vessels that fished WGOA pollock, the number of vessels that also fished....							
			CGOA pollock	BSAI pollock	Other non-pollock trawl	Hook-and-line groundfish	Pot groundfish	Halibut	Salmon	Crab
≤ 58 ft LOA	2010	20	3	0	4	6	13	10	18	13
	2011	19	5	0	2	6	15	10	17	17
	2012	21	14	0	14	4	13	8	16	20
	2013	17	4	0	12	3	7	6	12	5
	2014	21	3	0	17	5	15	8	19	0
	2015	17	9	0	4	3	9	7	17	0
	2016	21	8	0	2	5	14	8	20	0
	2017	22	5	0	5	5	17	8	22	0
	Average	19.8	6.4	0.0	7.5	4.6	12.9	8.1	17.6	6.9
> 58 ft LOA	2010	6	2	2	5	0	0	0	0	0
	2011	4	3	0	4	0	0	0	1	0
	2012	8	8	2	8	0	0	0	1	0
	2013	7	5	1	6	0	0	0	1	0
	2014	4	3	0	4	0	0	0	0	0
	2015	3	3	0	3	0	0	0	0	0
	2016	8	7	2	7	0	0	0	1	0
	2017	7	6	2	6	0	0	0	0	0
	Average	5.9	4.6	1.1	5.4	0.0	0.0	0.0	0.5	0.0

Table 5, page 9

# Historical dependence

Green = vessels  $\leq$  58 ft LOA

Orange = vessels  $>$  58 ft LOA

D2 Presentation WGOA Vessel Limits

Vessel	2010	2011	2012	2013	2014	2015	2016	DECEMBER 2018
1	Green							
2	Green							
3			Green					
4			Green					Green
5					Green		Green	Green
6					Green		Green	Green
7	Green	Green	Green		Green			
8		Green	Green		Green		Green	Green
9				Green	Green	Green		Green
10	Green	Green	Green	Green		Green		Green
11	Green	Green	Green		Green			Green
12	Green	Green	Green	Green	Green			Green
13	Green	Green	Green	Green	Green	Green		Green
14	Green	Green	Green	Green	Green	Green		Green
15	Green	Green	Green	Green	Green	Green		Green
16	Green	Green	Green	Green	Green	Green		Green
17	Green	Green	Green	Green	Green	Green		Green
18	Green	Green	Green	Green	Green	Green		Green
19	Green	Green	Green	Green	Green	Green		Green
20	Green	Green	Green	Green	Green	Green		Green
21	Green	Green	Green	Green	Green	Green		Green
22	Green	Green	Green	Green	Green	Green		Green
23	Green	Green	Green	Green	Green	Green		Green
24	Green	Green	Green	Green	Green	Green		Green
25	Green	Green	Green	Green	Green	Green		Green
26	Green	Green	Green	Green	Green	Green		Green
27			Orange					
28				Orange				
29								Orange
30	Orange						Orange	
31	Orange			Orange				
32			Orange				Orange	Orange
33	Orange		Orange	Orange			Orange	
34			Orange			Orange	Orange	Orange
35	Orange	Orange	Orange				Orange	Orange
36	Orange	Orange	Orange	Orange	Orange			
37				Orange	Orange	Orange	Orange	Orange
38		Orange	Orange	Orange	Orange		Orange	Orange
39	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange

Table 6, page 10

# AFA participation

Season	Year	Non-AFA	AFA	Total	Season	Year	Non-AFA	AFA	Total
<b>A</b>	2008	14	1	15	<b>B</b>	2008	8	1	9
	2009	15		15		2009	15	2	17
	2010	17	3	20		2010	16	3	19
	2011	9		9		2011	20		20
	2012	11	1	12		2012	19		19
	2013	13	1	14		2013	16	4	20
	2014	6		6		2014	16		16
	2015	1		1		2015	12		12
	2016	17	2	19		2016	8	1	9
	2017	9		9	2017	6		6	
<b>C</b>	2008	10	1	11	<b>D</b>	2008	12	2	14
	2009	16	3	19		2009	16	2	18
	2010	18	2	20		2010	18	2	20
	2011	15	1	16		2011	19	1	20
	2012	23	1	24		2012	21	1	22
	2013	5	3	8		2013	9	2	11
	2014	18	2	20		2014	11		11
	2015	18	1	19		2015	15	1	16
	2016	26	1	27		2016	25		25
	2017	24	1	25	2017	27	1	28	

Table 7, page 12

# Economic Contributions

- Economic impacts and net value generated by the WGOA pollock fishery
- We focus on economic impacts
  - These impacts are typically measured in terms of industry output/ sales, employment, household spending, and government revenue.
    1. Spending necessary to harvest WGOA pollock
    2. Employment directly related to harvesting WGOA pollock
    3. Employment indirectly related to harvesting WGOA pollock (processing)
    4. Spending induced from income related to WGOA pollock fishing
    5. State and local taxes

Community connections (with links between these categories)	Types of economic impacts
Vessel owner's community	→ Induced spending due to income earned from the WGOA pollock fishery
Vessel home port community	→ Money spent in community related to fishing → Sales taxes
Port of delivery	→ Processing, processing employment → Induced spending due to income earned WGOA pollock processing → Local and state raw fish tax and sales taxes
Communities associated with skipper and crew	→ Direct employment → Induced spending due to income earned WGOA pollock fishing
Communities associated with support services	→ Indirect employment from support sectors → Induced spending due to indirect income related to WGOA pollock

# Highlights

- Many (but not all) of the vessels  $\leq$  58ft have ties to Sand Point or King Cove
- Larger vessels have ties to WA and OR communities and Kodiak
- Of the vessels that participate in WGOA pollock, this fishery amounts to 21-27% of the yearly (between 2010-2017) fishery ex vessel revenue when grouped by vessel owner community (i.e. valuable to participating vessels)
- Relative to other communities, Sand Point and King Cove demonstrate the most dependency on the WGOA pollock fishery (in terms of vessel owner's fishery participation)
- Ports of delivery include: Aktuan, King Cove, Kodiak, Sand Point, and Unalaska
- Communities benefit from their own raw fish tax (and an additional AEB raw fish tax)
- Crew data demonstrate that 58-ft vessels especially employ crew from Sand Point and King Cove (in addition to other locations). Vessels greater than 58 ft especially employ crew from Kodiak as well as WA and OR communities (in addition to other locations).



# Chinook and halibut PSC information

- This fishery includes limits on Chinook salmon and halibut PSC
- The WGOA pollock fishery has a limit of 6,684 Chinook salmon.
- We use short series of Observer data for Chinook salmon rates in C/D season by vessel size category
  - Variability in rates indicating “lighting strike” events
  - 58-foot fleet demonstrate higher rates
  - Unclear what factors may have contributed – e.g. geography, timing, excluder use, size of trip.
- CAS estimates halibut mortality rate with pollock target
  - Accounted for against the limit for shallow-water species
  - Generally pretty low levels of halibut PSC for both vessel size categories

## 1. Background (relevant information)

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## 2. Preliminary evaluation

- Potential impacts to vessels greater than 58 ft LOA (and associations)
- Potential impacts to vessel 58 ft LOA (and associations)
- Chinook and halibut PSC
- Steller Sea Lions

## 3. Next Steps

# Preliminary impacts assessment:

In the Western Gulf of Alaska,

- Implement a vessel size limit of 58 feet overall length during the pollock fishery, or
- Establish a sideboard limit on catch of pollock by trawl vessels over 58 feet in length

# Preliminary assessment of impacts on vessels > 58 ft

- Creating a 58 ft vessel length limit in the WGOA pollock fishery would negatively impact harvesters that have operated vessels >58 ft and future entrants in this size class
  - Skippers, crew, vessel owners and others associated with this business and operation would not be able to participate
  - 13 unique vessels (2010-2017); 3-8 vessels per year
- Truly constraining sideboards would also negatively impact these operations
- Could result in diminished rev, possibility of limiting employment, and spillover impacts on associated processors, other businesses and communities
- Shift fishing effort to be more intensive in the eastern part of the Western GOA, effecting processors are receiving deliveries and which communities receive the tax revenue from those landings.
- Impacts to harvesters, lower magnitude impacts to their associated communities (relative to the 58 ft fleet).

# Preliminary assessment of impacts on vessels $\leq 58$ ft

- Particular connection to King Cove and Sand Point
- Extent of benefits depends on level of competition
- External factors also influence harvest by 58 ft vessels
- Recent years of 2016 and 2017 have been more competitive
- Increased opportunity benefits harvesters
- Shift in activity to the eastern portion of the WGOA
  - Could benefit associated processors, other businesses, communities
  - Possibility the 58 ft vessels don't harvest as much as all vessel sizes in some years
  - Possibly result in stranded pollock and reduced net benefits

# Expectations of change in PSC

- Shift in where, when, and how WGOA pollock is harvested
- Catch patterns similar to patterns from the 58 ft vessels
- Given the low rates of halibut mortality from either size class, changes unlikely
- The effects on Chinook PSC not obvious
  - Appears 58 ft vessels have more “lightening strike” events
  - These fleets fish differently – unclear which differences may contribute to different Chinook PSC rates
  - Unclear whether slowing the pace of the fishery could allow for more deliberate avoidance

# Steller Sea Lions

- Will need to consider Stellar sea lion and the possibility of ESA consultation
- Potentially slowing of the fishery – potential greater prey availability
- Unlikely negative impacts on Stellar sea lions
- Further analysis necessary

# Next steps

- Clarify objective and hone the intent into a purpose and need
- Further refine alternatives as necessary



# Thanks to contributors and people consulted

## **Contributors and Agency**

### **Persons Consulted**

Mike Fey, AKFIN

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