

Agenda Item F.4.

SABLEFISH GEAR SWITCHING - IDENTIFYING THE GEAR SWITCHING LEVEL TO USE IN DEVELOPING ALTERNATIVES

APRIL 2021

Synopsis of Process to Date

- April 2018 - SaMTAAC Charged to Develop Alternatives
- Sept 2020 - Council Decides to Move thru Full Process
- Nov 2020 - Council Req Analysis of Levels of Gear Switching

Council Action

Select Gear Switching Level

Provide Other Guidance

Consider short-term and
long-term levels?

Briefing Book Materials - Orientation

As of Mon, Apr 12

- Attachment 1 -- Analysis
- Supplemental CDFW Report
- Supplemental GMT Report
- Supplemental GAP Report
- Public Comment



Questions on Overview and Process?

Evaluation of Gear Switching Levels

IMPACTS

Short & Long term

User Groups

- GS Fleet
- Trawl Fleet
- QS owners
- First Receivers
- Community

CONDITIONS

Is GS constraining (recently & future)?

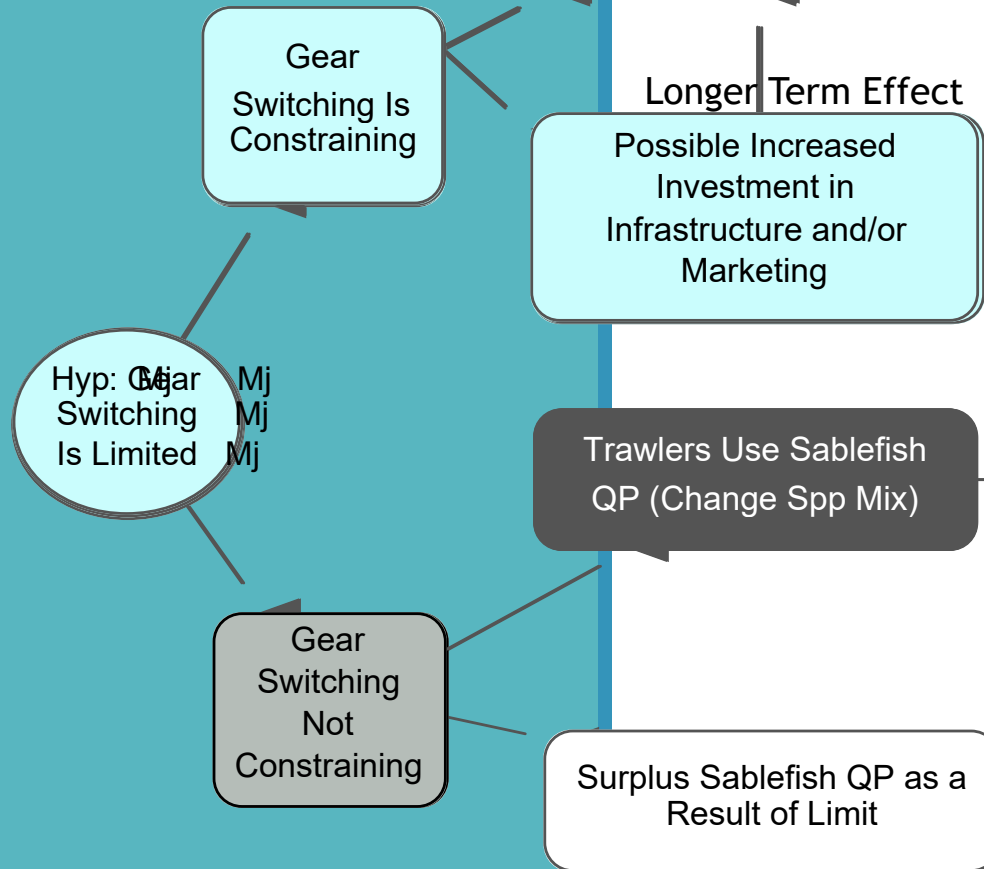
Sablefish QP Availability?

Understanding Conditions for Analysis

- Constraint on Trawl Attainment (recent fishery information)
 - ❑ What is currently constraining trawl, gear switching or something else?
- Future Gear Switching Levels
 - ❑ Is gear switching likely to expand in the future?
 - ❑ Will gear switching become a constraint (if currently not one)?
- Sablefish QP Availability
 - ❑ If there is surplus sablefish QP, will trawlers increase their use of sablefish QP or will it go unused?
 - ❑ How will changing sablefish ACLs affect QP usage in different trawl sector strategies?

Conclusion: Indicators but No Certain Answer

Condition/ Analysis Overview



Fixed Gear

Loses GS Revenue

Trawl

Gains in Attainment of Target Spp and Sablefish

QS Owners

Possibly a Small Decline in QP Prices

Loses GS Revenue

Gains in Sablefish Revenue

Modest Decline in QP Prices

Loses GS Revenue

No Change

Likely More Substantial Decline in QP Prices

Impacts on Communities and Processors

Presentation Overview

- Conditions Affecting Results (Sec 2.0 and 3.0)
- Results (Section 4.0)
- Process Forward

Section 2.0: Main Factors Influencing Trawl Allocation Attainment

- Competing uses, including gear switching
- Vessel participation
- Market limits
- Infrastructure limitations
- Catch share program design

Review of Factors - from September 2020 Analysis

Vessel Participation

- Likely not a limiting factor

Infrastructure Limitation

- Processor numbers declining
- Non-processing infrastructure likely not affecting attainment

Catch Share Program Design

- QS control limits may be limiting attainment

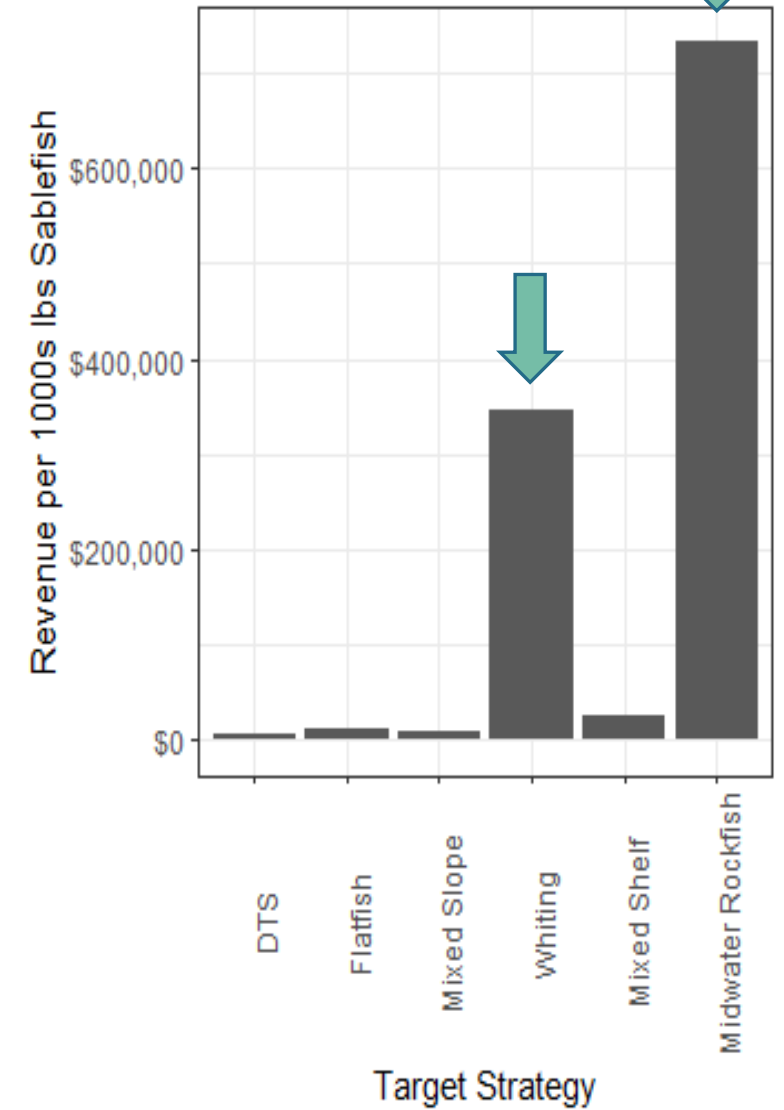
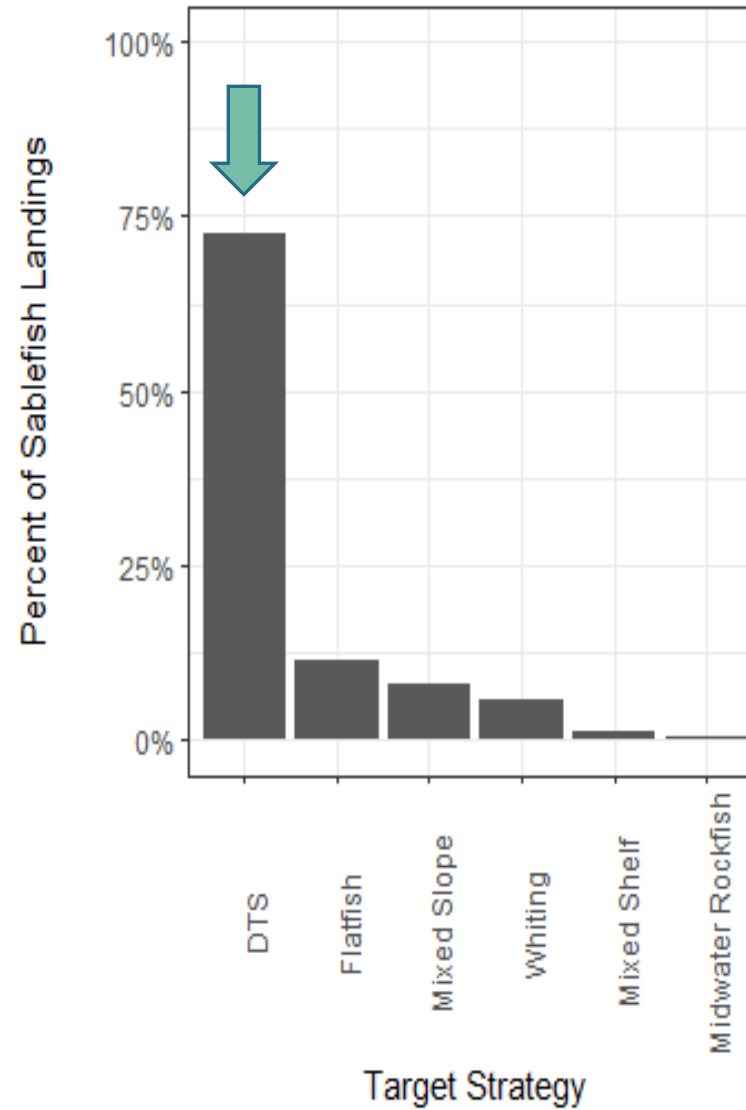
Competing Uses

SECTION 2.1

Competing Trawl Strategies

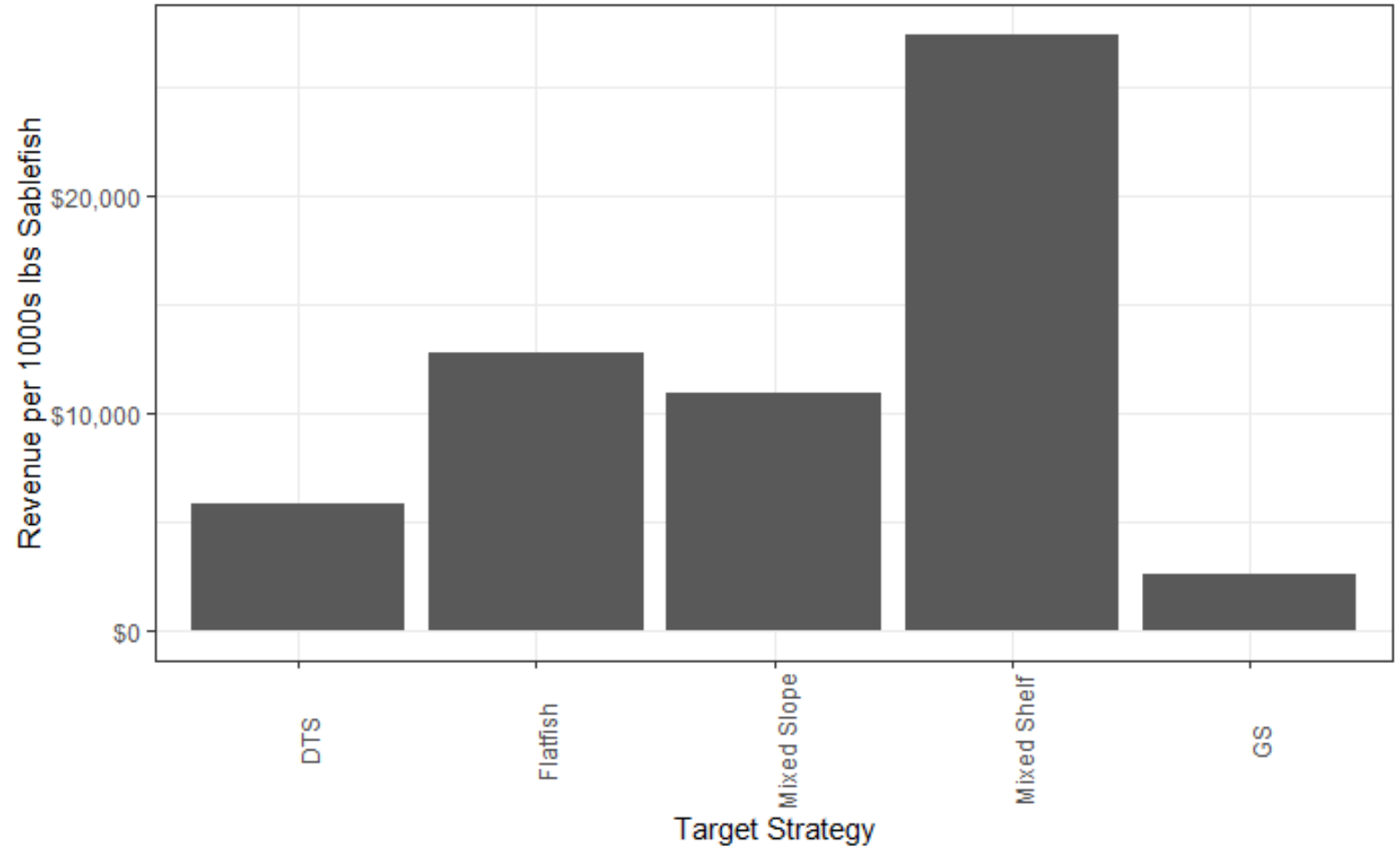
- DTS revenue per 1000 pounds of sablefish lowest amongst trawl.
- For those complexes with substantially higher revenue per 1000 pounds of sablefish, it is likely that trawl vessels easily out-compete gear switching vessels with respect to acquisition of sablefish QPs.

Fig. 2 from Att. 1



Trawl/GS Competition

- Avg price per pound of sablefish was **40% lower** for trawl than GS.
- Gear switching rev per 1000 lbs of sablefish less than all trawl strategies.
- Per 1,000 pounds of sablefish, DTS receives **125% more revenue** than GS vessels.

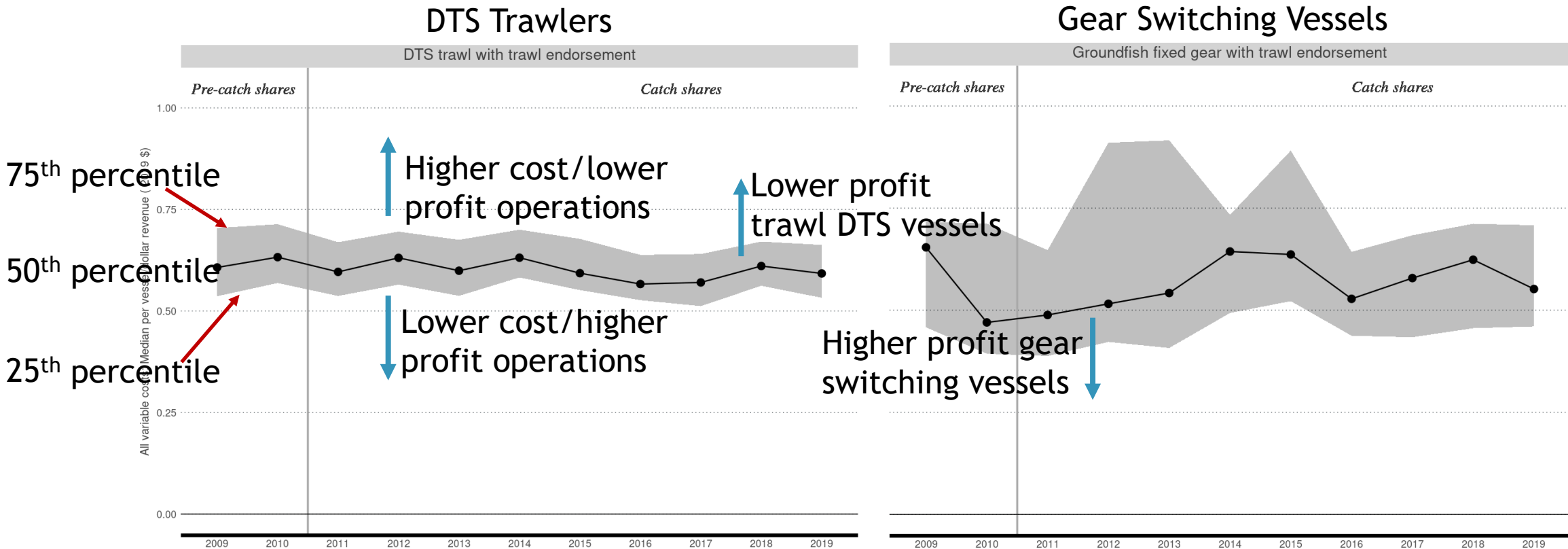


Individual Vessel Performance

If all trawler vessels were more profitable than all fixed gear vessels or all fixed gear vessels more profitable than all trawl vessels, the more profitable group would expand fishing until they use all sablefish QP or run into another constraint (e.g. markets).

However, variation in individual vessel performance makes the picture more complex.

Costs per Dollar of Exvessel Revenue (From EDC FISHEyE)



These graphs are a supplement to the analysis provided in the briefing book.

Dover Ratio Analysis

2007-2010: Dover “bubble”

- Peak landings
- High Ratio

Starting in 2011:

- Landings decline
- High ratios continue

Sablefish Allocations and Dover Landings

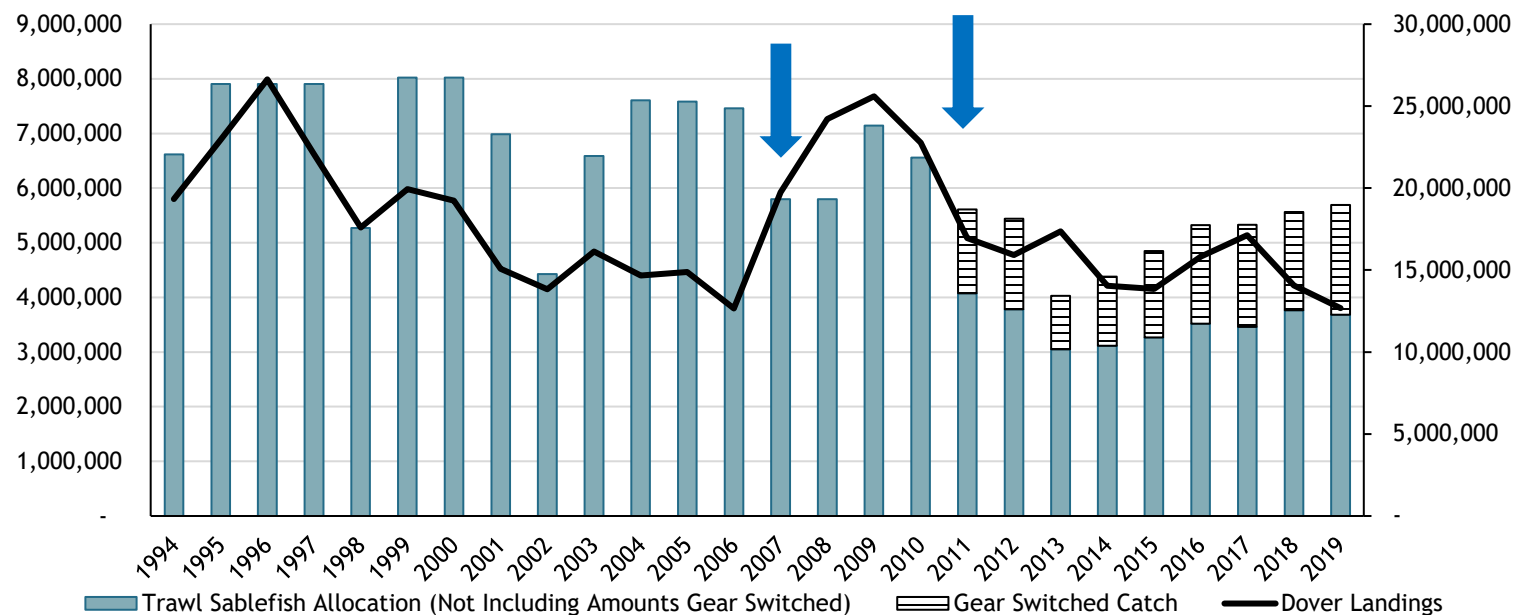


Fig. 6 from Att. 1

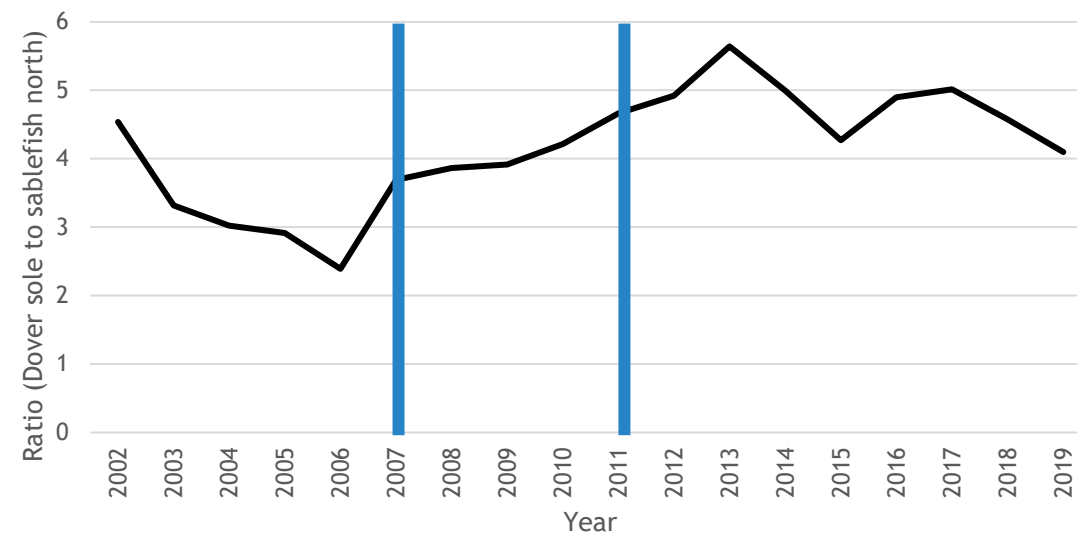


Fig. 5 from Att. 1

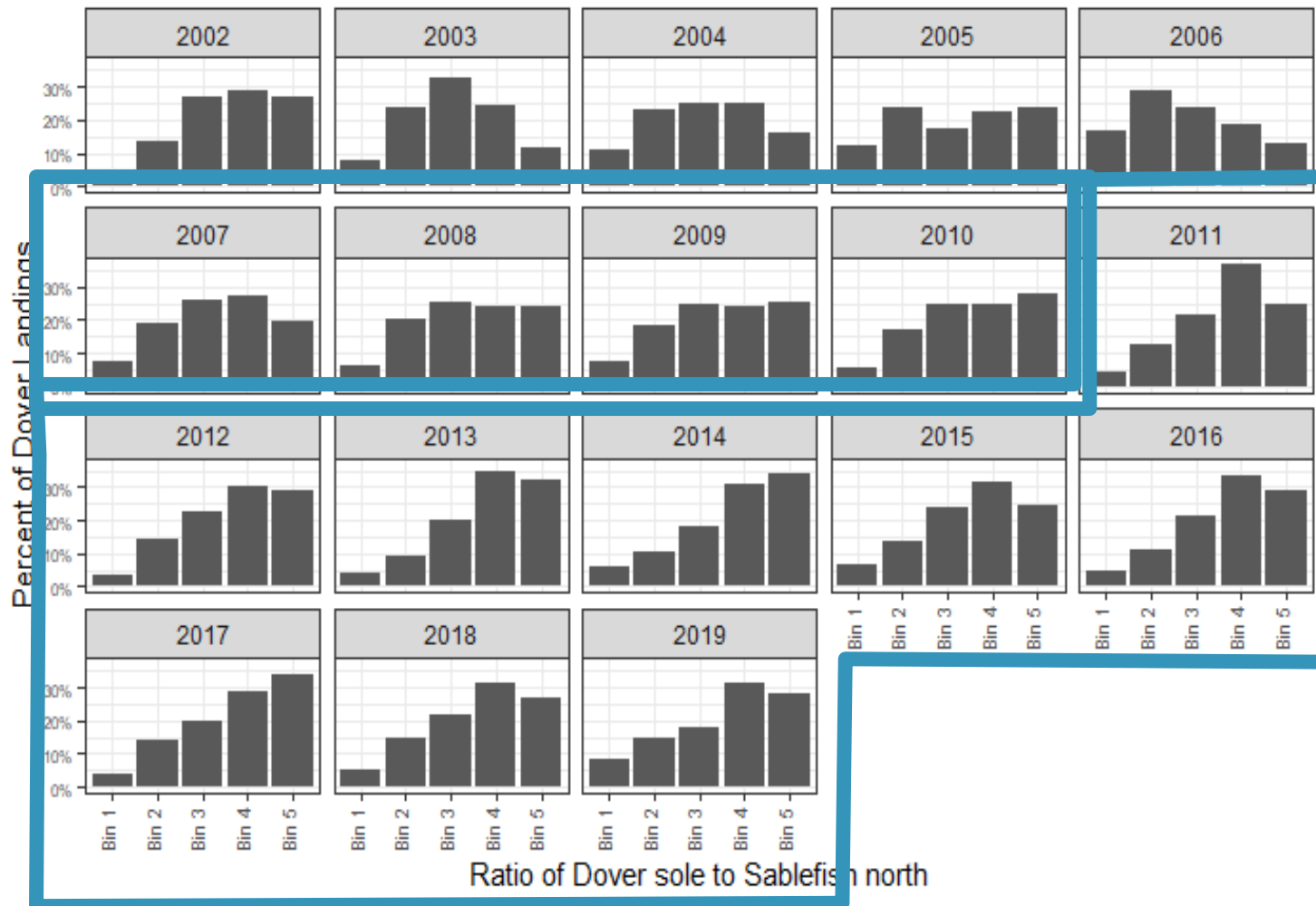


Fig. 7 from Att. 1

- 2007-2010: Increased Dover allocation → Shift in amts & % of landings in the bins representing higher Dover/sablefish ratios
- 2011-2019: Proportion of landings in the highest ratio bins increased even further
- Appears as though there was not a general upwards shift amongst the bins, but rather a deliberate shift in tactics.

Bin 1: [$>0-1.54$] Bin 2: (1.54-3.21] Bin 3: (3.21-5.97] Bin 4: (5.97-13.5] Bin 5: (>13.5]

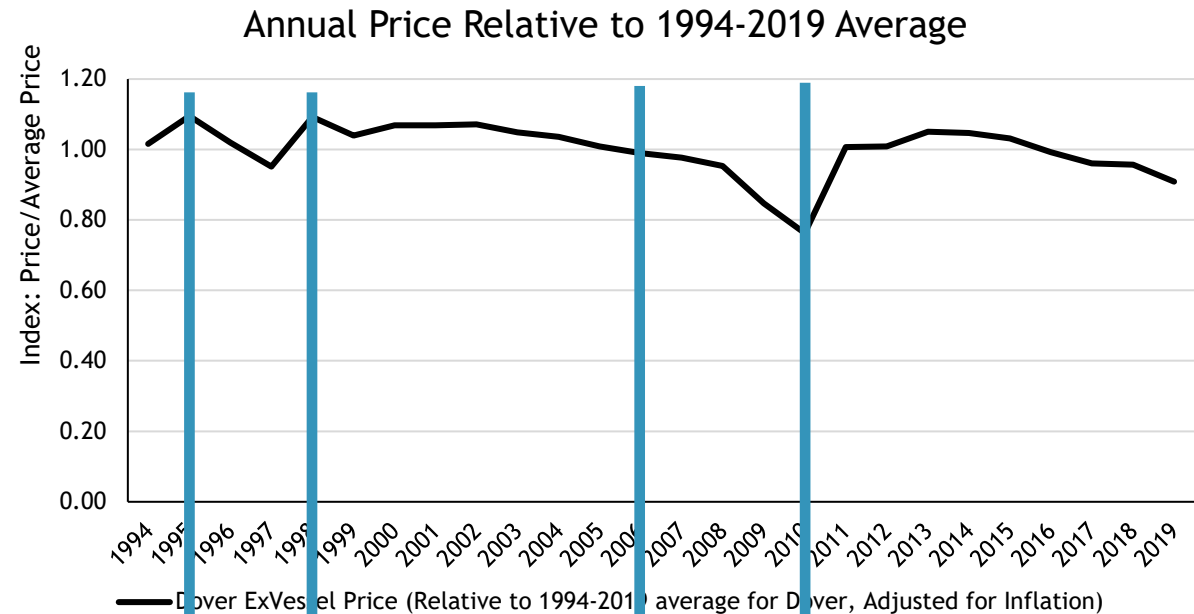
Market Limits

SECTION 2.3

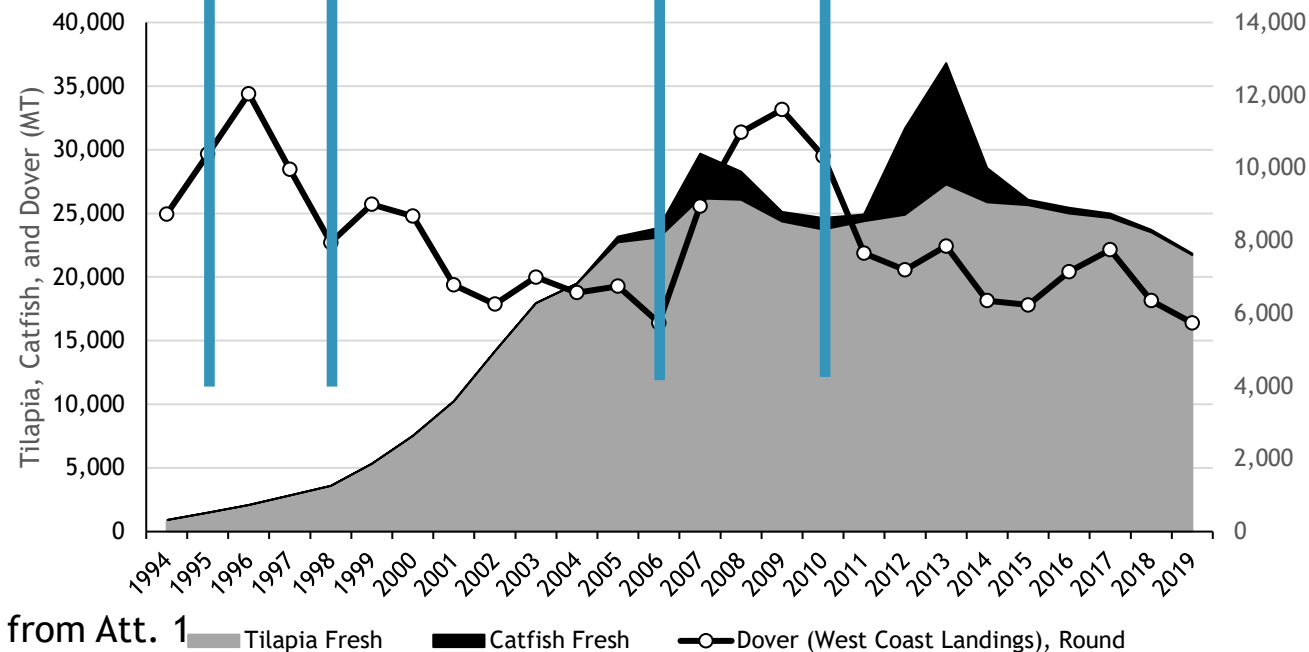
Previous Analysis

Dover price dip with expansion of production

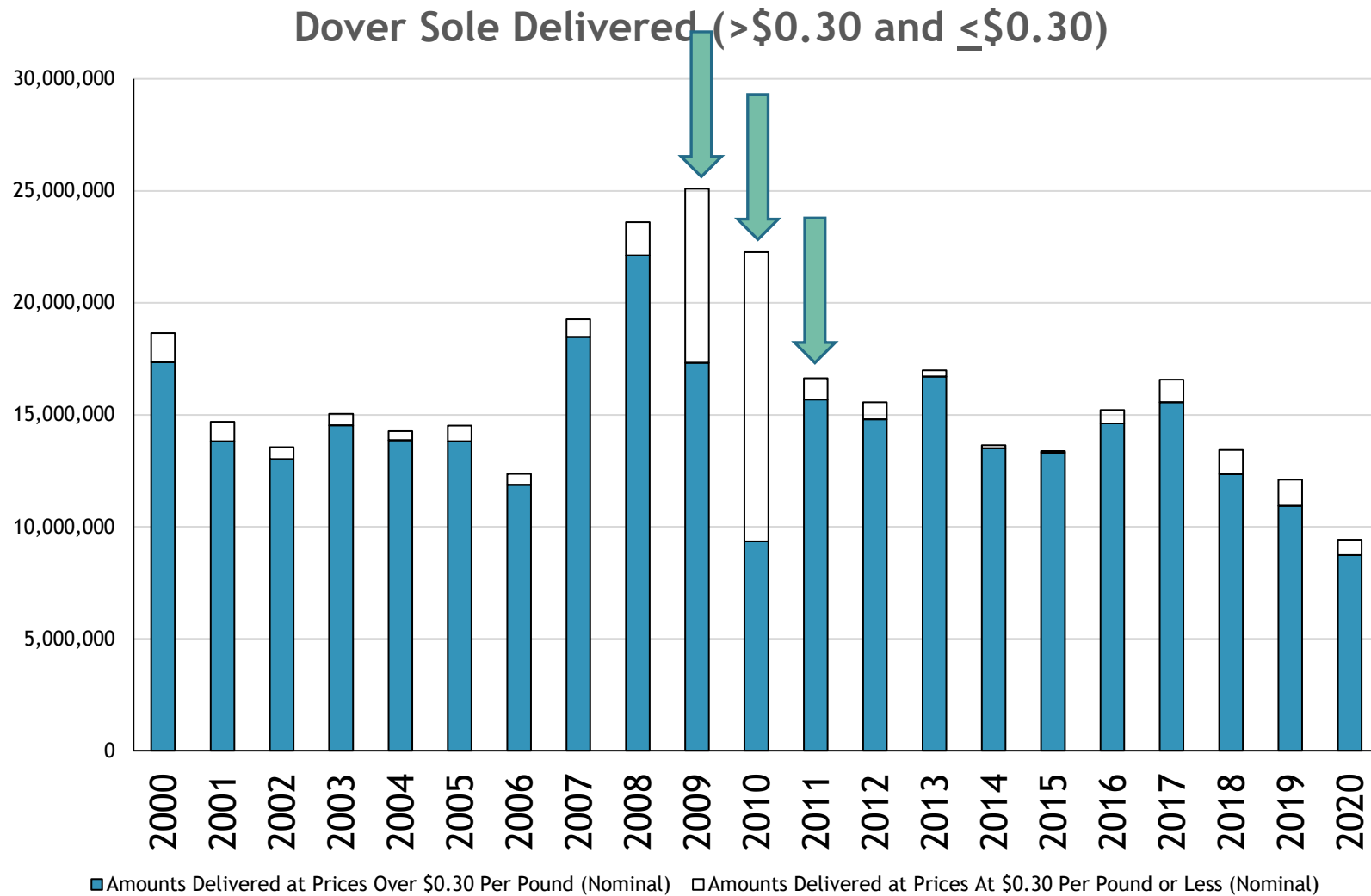
Indicators of Dover market capacity limit?



From Fig. 9 from Att. 1



From Fig. 8 from Att. 1



From Fig. 12 from Att. 1

Predominant Dover Price Cats

Year	Price (\$)	Lbs (mil)
2007	0.38-0.39	13.8
2008		18.6
2009		13.6
2010	0.33-0.35	8.2
2011	0.41-0.45	15.1

From Fig. 10 and 13 from Att. 1

Number of Price Points (>10k lbs)

Year	Count
2001-2006	11
2007	13
2008	60
2009	140
2010	56
2011	28
2012-2019	14

From Fig. 11 from Att. 1

Section 3.0: Future Gear Switching Levels

Development of Scenarios for Unlimited Gear Switching

Potential Influences on Future Gear Switching

- Biomass
- Sablefish Market Prices
- Crossover from Other Fisheries
- New Entrants
- Quota Share

Potential Influences on Future Gear Switching

Biomass Changes

- Availability changes with ACLs, allocations
- Encounter rates may change by strategy

Sablefish Market Prices - Recent Years (2018-2019)

- Exvessel prices declined but gear switching increased
- Trawl/fixed price differential increased in recent years
- QP prices
 - Declined with exvessel sablefish prices

Potential Influences on Future Gear Switching

Crossover from Other Fisheries

- LEFG and Dungeness crab fisheries appear to have highest rate of crossover
- *New analysis on Alaska interactions*
 - Less than 15% of the fleet participates in both fisheries, 2016-2019
 - Appears that vessels prioritize West Coast fishing compared to Alaska

New Entrants

- Avg. of 2 new vessels and permits entering the GS fishery, 2016-2019
- Total annual participation has stabilized at ~15-16 vessels & permits, 2016-2019

Potential Influences on Future Gear Switching

Quota Share Ownership

- A strong trend toward increased acquisition of QS by gear switchers might indicate an intent for long term or expanded participation.
- We are not seeing a strong trend
 - GS vessel and permit owners acquired 3.0 percentage points since 2014

Development of Scenarios for Unlimited Gear Switching

33 percent gear switching limit $\approx$ recent GS level

Utilized a random sampling methodology using GS landings of vessels from 2011-2019

- See methods in Section 7.0

Identified two levels of increased GS for analysis:

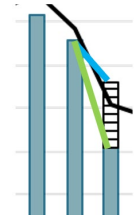
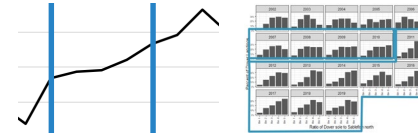
40 and 52 percent

Summary: Constraints and Future

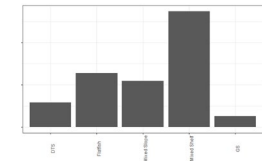
□ What is currently constraining trawl attainment, gear switching or something else?

- In 2011, Dover decline was more than proportional to the sablefish allocation decline

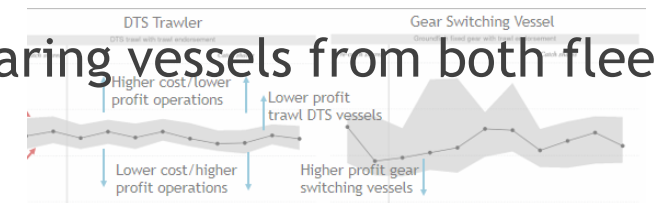
- Compensation through increased Dover/Sable ratios



- Trawlers have greater total revenue per pound of sablefish than GS, on *average*



but, there was substantial overlap and variability of profit comparing vessels from both fleets



- The decline in Dover landings in 2010 and 2011 might have a market driven compon



Summary: Constraints and Future

- ❑ Is gear switching likely to expand in the future?
 - Short term, ACLs increasing might meet needs (decrease percent used for gear switching).
 - ACLs could decline, increasing constraints and competition among trawl and non-trawl strategies.
 - Declining exvessel and QP prices but gear switching has increased slightly (FG/trawl price differential increasing).
 - Most likely source of new participants are LEFG and Crab vessels (limited AK overlap).
 - Limited recent expansion in annual number of participants or acquisition of QS by gear switchers.
- ❑ How might trawlers respond to surplus of sablefish QP?
 - Starting in 2007 trawlers reduced sablefish as a share of their DTS. This might be reversed if opportunity is provided.

Impacts of Gear Switching

SECTION 4.0

Evaluation of Gear Switching Levels

Gear Switching Levels: 0%, 12%, 20%, 33%, 40%, 52%

IMPACTS

Short vs. Long term

User Groups

- GS Fleet
- Trawl Fleet
- QS owners
- First Receivers
- Community

CONDITIONS

Gear switching is constraining

- Harvest of co-occurring complexes changes with sablefish supply

Gear switching is not constraining

- Trawl non-sablefish harvest exhibits no change
- Trawl harvest increases utilization of sablefish within complexes

Sablefish QP Availability

- ACL levels (2013, 2019, 2021)
- Response to Surplus QP

Short Term Impacts

SECTION 4.1

Gear Switching Level Impacts

- ACLs and allocations impacts the GS limit (Table 13 on page 49)
- 2019 fleet capacity
 - 2 million lbs
 - Low allocation year (2013)→ 50% of the allocation
 - High allocation year (2021)→ 29% of the allocation
 - 35.1% of the allocation
 - Low allocation year (2013)→ 1.4 million lbs
 - High allocation year (2021)→ 2.43 million lbs

Gear Switching Fleet Impacts

- Compared actual landings to GS limit under “cap” for each allocation level.
- Losses for gear switchers of approximately \$0.22 to \$4.56 million, relative to actual values.

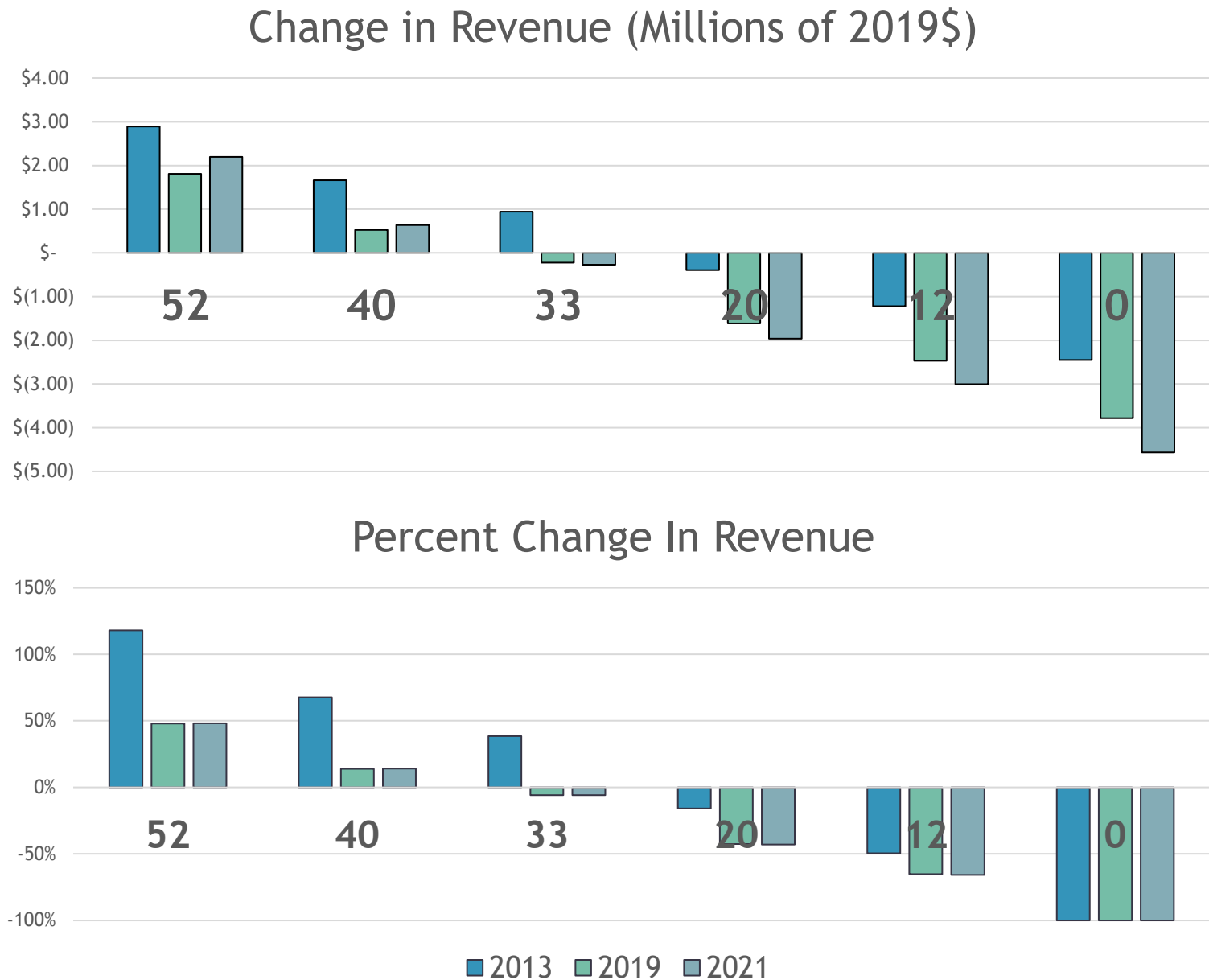


Table 13 and Figure 23 from Att. 1

Trawl Fleet Impacts

Four scenarios

- Gear switching is displacing trawl and
 - (a) Gear switching declines to zero
 - (b) Gear switching is reduced
 - (c) Gear switching expands
- Gear switching is not displacing trawl

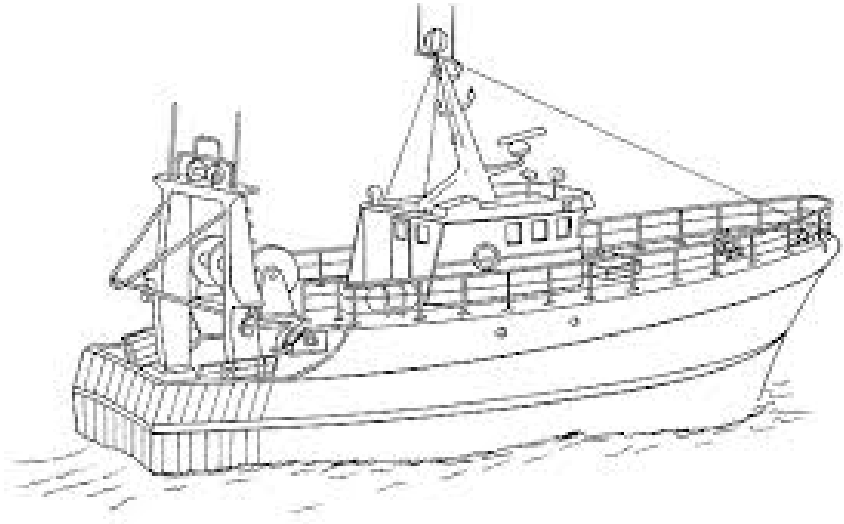
Impacts to competing trawl strategies and DTS only

Competing Strategies in 2019

- Ratios in 2019 lower than average--> trawlers using more sablefish to get complexes out of water.
- Increase in use of sablefish for mixed slope and mixed shelf strategies.

Strategy	Average (2016-2019)		2019	
	Proportion	Ratio of non-sabl to sablefish	Proportion	Ratio of non-sabl to sablefish
DTS	77.4	8.3	72.0	7.4
Flatfish	12.4	15.9	9.8	14.7
Mixed Slope	8.7	15.4	14.6	13.4
Mixed Shelf	1.5	39.3	3.6	21.0

Table 14 from Att. 1



Assumption: Gear Switching Constrains Trawl



(a) Gear Switching is Eliminated

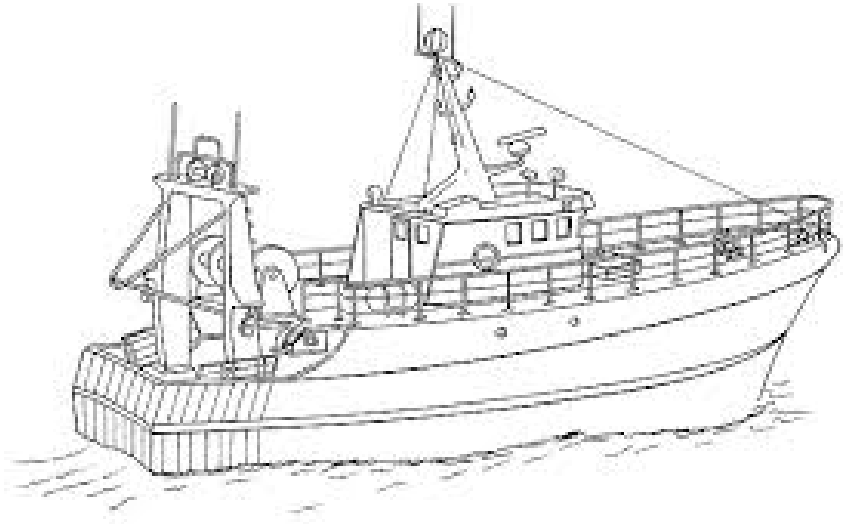
Trawl revenue increases

\$9.7 to \$12.7 million

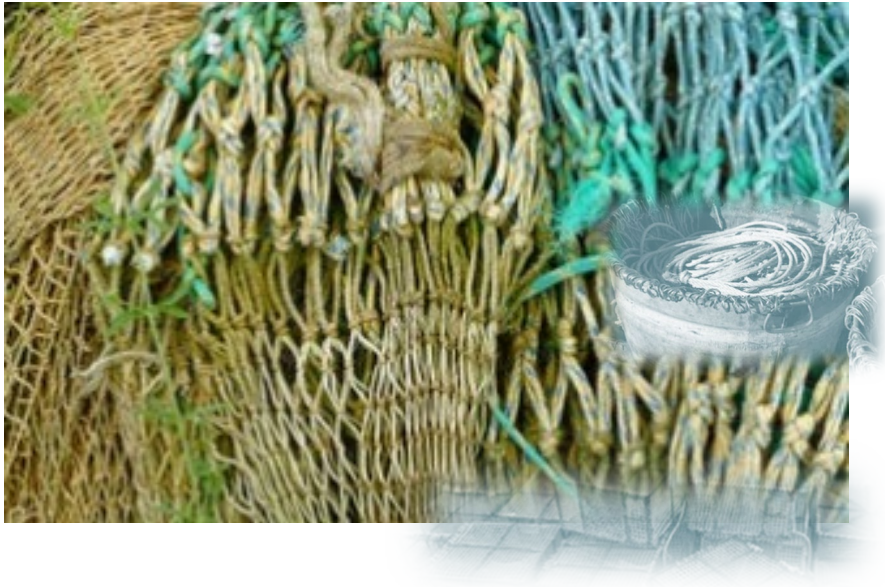
Strategy	Actual Strategy (2019)		Hypothetical Increase		Total	
	Landings (mil. of lbs)	Revenue (\$ mil)	Landings (mil. of lbs)	Revenue (\$ mil)	Landings (mil. of lbs)	Revenue (\$ mil)
All Competing Strategies	31.6	19.1	+20.9	+12.7	52.4	31.8
DTS	18.2	10.6	+16.7	+9.7	34.9	20.2

Table 15 from Attachment 1

Assumption: Gear Switching Constrains Trawl



(b) Gear Switching Is Reduced

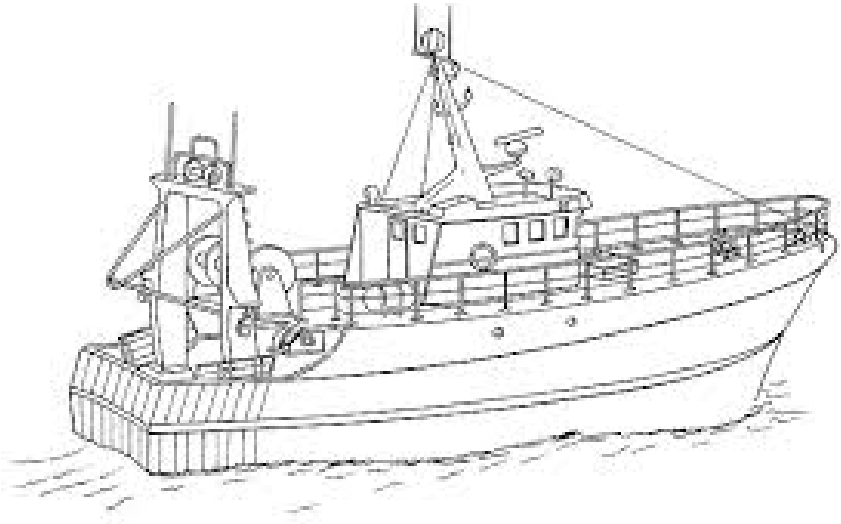


Trawl revenue increases
\$0.6 to \$8.3 million

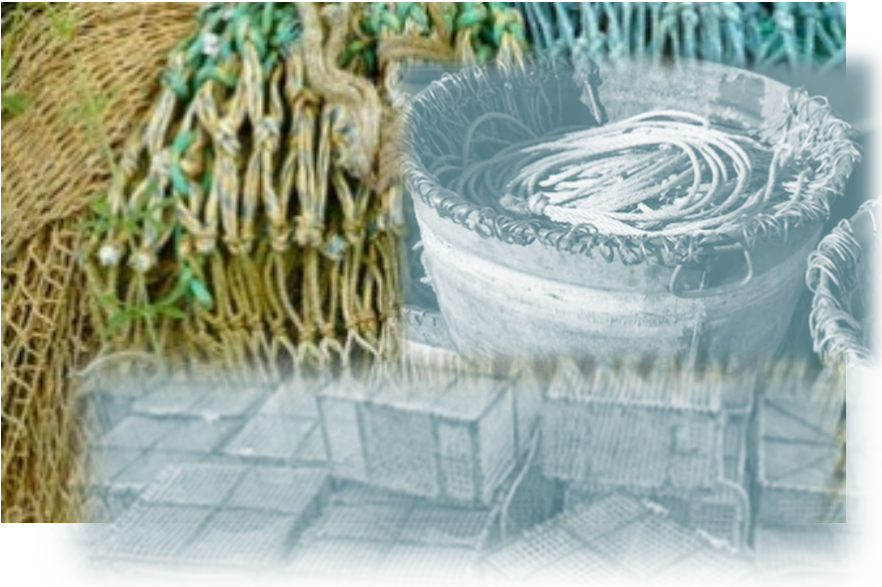
Target	12 percent		20 percent		33 percent	
	Landings (mil. of lbs)	Revenue (\$ mil)	Landings (mil. of lbs)	Revenue (\$ mil)	Landings (mil. of lbs)	Revenue (\$ mil)
All competing strategies	+13.7	+8.3	+9.0	+5.4	+1.2	+0.8
DTS	+11.0	+6.4	+7.2	+4.2	+1.0	+0.6

Table 17 from Attachment 1

Assumption: Gear Switching Constrains Trawl



(c) Gear Switching Increases



Trawl revenue decreases
\$1.4 to \$6.1 million

Target	40 percent		52 percent	
	Landings (mil. of lbs)	Revenue (\$ mil)	Landings (mil. of lbs)	Revenue (\$ mil)
All competing strategies	-2.9	-1.8	-10.1	-6.1
DTS	-2.3	-1.4	-8.1	-4.7

Table 19 from Attachment 1

If gear switching is not constraining and....

GEAR SWITCHING REDUCED

- Trawlers increase sablefish ratio
 - No gear switching
 - +\$74-\$100 per mt of DTS
- No change in spp mix
 - Sablefish QP goes unused

GEAR SWITCHING INCREASED

- More of a result than a cause
- Trawlers could increase non-sablefish to sablefish ratios or make no change → freed up sablefish QPs for GS

QS Owners

GS DISPLACES TRAWL

Gear switching declines

- Modest decrease in QP prices

Gear switching increases

- QS prices are likely to increase

GS DOESN'T DISPLACE TRAWL

Gear switching declines

- Trawlers increase proportion of sablefish
 - Some decrease in QP prices
- Trawlers don't change proportion of sablefish
 - Substantial reduction in QP prices

Gear switching increases

- QP prices relatively stable

First Receivers (Buyers)

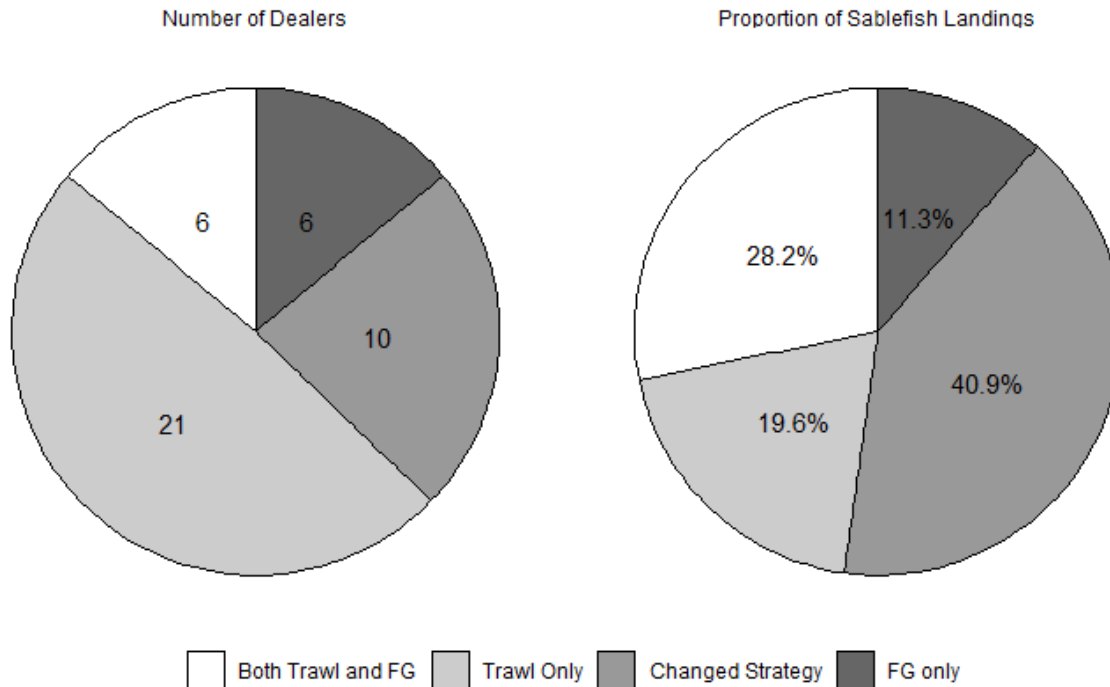


Figure 24 from Attachment 1

Difficult to predict distribution of changes across FRs.

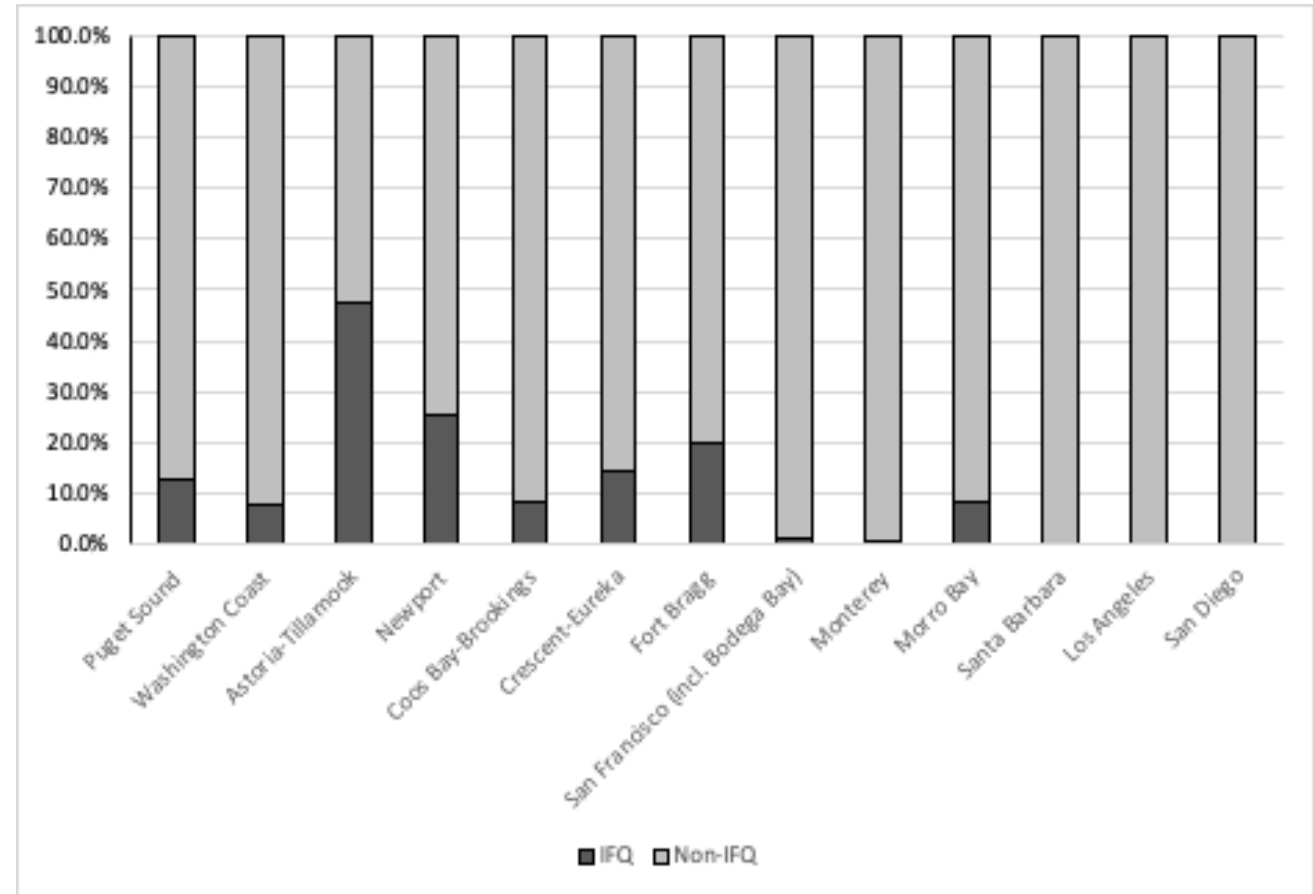
- **Fixed Gear only**
 - 35% of all GS sablefish</

Community Impacts

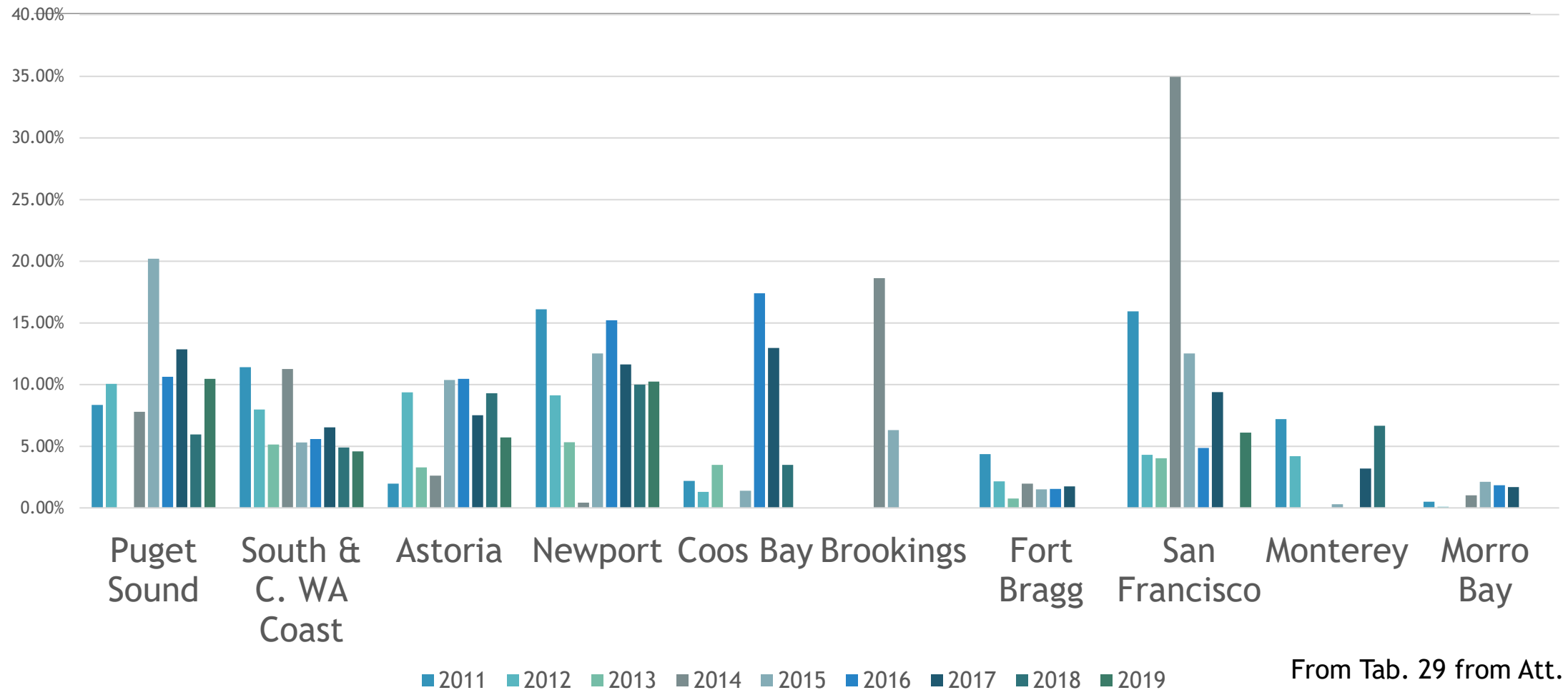
SECTION 4.1.5

West Coast Communities - Port Areas (2016-2019)

- Most ports receive less than 15% of revenue from IFQ fisheries
- IFQ landings decrease as travel south



Percent of Groundfish Revenue from Gear Switching Port Areas



Port Level Activity (2016-2019)

Ports North of 36° N. lat.

Ports receiving both non-whiting trawl and gear switched IFQ landings

Bellingham

Astoria

Newport

Coos Bay

Fort Bragg

San Francisco

Princeton/Half Moon Bay

Monterey

Morro Bay

Port Level Activity (2016-2019)

Ports North of 36° N. lat.

Ports receiving GS landings but no non-whiting trawl landings

Ilwaco (receives both gear switched and whiting)
Moss landing (received only gear switched)

A number of ports receive non-whiting trawl but no GS landings

Neah Bay
Westport
Brookings
Crescent City
Eureka
Other San Fran/San Mateo

Ports that receive only LEFG (and not IFQ) might be indirectly affected, for example

Winchester

Port Orford

Bodega Bay

Port Related Fleet Specific Impacts

GS CONSTRAINING

Reduction in GS:

- If port has infrastructure → increased trawl landings
- Negative effect for GS ports

Increase in GS:

- Likely to negatively impact trawl focused ports
- Positive effect for GS ports

GS NOT CONSTRAINING

Reduction in GS:

- Some ports with trawl landings could offset if trawlers increased sablefish harvest
- Mostly affect ports focused on GS

Increase in GS:

- No effect on trawl ports
- Positive effect for GS ports

Summary of Short Term Impacts (GS Constraining)

From Tab. 30 from Att. 1

GS Level	Net Impacts		Change in NWT % Attainment	QS Owners (QP prices)	First Receivers	Community
	Landings	Revenue				
52	-9.1	-\$4.3	-3.6%	Substantial 	Depends on distribution of buyers	Trawl 
40	-2.6	-\$1.3	-1.1%			GS 
33	1.1	+\$0.5	+0.4%	Possible Modest 		Redistribution among ports
20	8.1	+\$3.8	+3.2%			Trawl 
12	12.4	+\$5.9	+4.9%			GS 
0	18.9	+\$8.9	+7.4%			Redistribution among ports

Summary of Short Term Impacts

(GS Not Constraining; No Change in Ratio)

From Tab. 31 from Att. 1

GS Level	Net Impacts		Change in % Attainment	QS Owners (QP prices)	First Receivers	Community
	Landings	Revenue				
33	-0.1	-\$0.3	-0.1%	Substantial 	Depends on distribution of buyers	Trawl 
20	-0.9	-\$1.6	-0.4%			GS 
12	-1.3	-\$2.5	-0.5%			Redistribution among ports
0	-2.0	-\$3.8	-0.8%			

If gear switching increased, trawlers would have had to change ratio.

Long Term Impacts (Section 4.2)

- Include short-term impacts plus longer term effects
- Long-term most likely associated with changes in investment
(also GS reduction phase in)
- If GS is constraining (or could become one)→
a limitation could reduce uncertainty in access to QP →
increase investment in processing equipment and
marketing
- Limiting GS could affect investments in businesses dependent on GS
(either operations or leasing QP)
- Impact on community's infrastructure

Looking Down the Road

This meeting: select gear switching limit level(s)

SaMTAAC Proposed Three Actions Alternatives for Achieving Levels

Alt 1 Gear Specific QP

Alt 2 Gear Switching Endorsement

Alt 3 Active Trawlers

Coming Steps?

1. **Selection of Range of Alternatives to Develop**
2. **Modifications of Alternatives to Achieve Gear Switching Limit(s)**
 - Short-term: Qualification Provisions for Grandfather/Legacy Privileges and Opportunity Provided for GS
 - Long-term: Remaining Gear Switching Opportunity if Legacy Privileges Expire
 - Section 5.0 poses questions for to help guide further development of analysis
3. **Narrowing of Other Options Within Alternatives**

Council Action

*Select Gear Switching Level to Guide
Development of the Gear Switching
Alternatives and Provide Other Guidance
as Appropriate*

Consider short-term and long-term levels?