

GMT/Council Staff analysis on Accumulation Limits

A presentation on Agenda
Item G.4.b, GMT Report.

Purpose: *to evaluate GAC
accumulation limit options against
actual vessel target strategies
and ex-vessel earnings.*

The GMT's Approach

- Set limits for the key non-whiting target species first.
- Use exvessel revenues as a guide.
- Start with a "one vessel, one owner" scenario.
- Examine importance of the aggregate groundfish accumulation limit.

Why Accumulation Limits?

Basic Policy Rationales

What is the Council trying to achieve?

Accumulation Limits

The MSA LAPP provisions require the Council to set accumulation limits or other measures to:

- Ensure that no one acquires "an ***excessive*** share"
- "prevent an ***inequitable concentration.***"

-MSA 303A(c)(5)(D)

Accumulation Limits

ex·ces·sive: exceeding what is usual, proper, necessary, or normal.

excessive implies an amount or degree too great to be reasonable or acceptable.

in·eq·ui·ta·ble: not equitable : unfair.

-Merriam-Webster Online Dictionary

Two Limits

Separate but related policy rationales:

1. Control Limits (QS):

How much quota should an entity be able to own?

- Meant to ensure that no person captures an unreasonable share of a public resource.
- Buffer against anticompetitive effect of concentrated ownership.

2. Vessel Usage Limits (QP):

How much fish should one boat be able to catch?

- Aimed at keeping a minimum number of vessels in the fleet, maintaining some of the character and geography of today's fleet.

Control Limits

What's a reasonable or acceptable amount of QS for one person or entity to own?

- What level of ownership is "unreasonable"; "unacceptable"; or beyond what is "necessary" or "normal" in the Councils vision for the fishery?
- How much profit should one entity be able to extract from the limited public groundfish resource?

What level of concentration might risk unfair results?

- To fishing communities? To other quota holders? To new entrants?

Vessel Limits

At what point is fleet consolidation unacceptable?

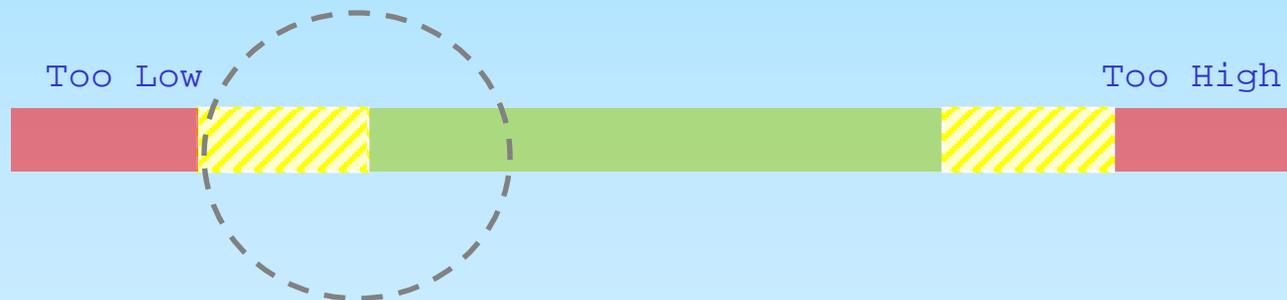
An "acceptable" fleet size would:

- Maintain some character of current fleet.
- Create more crew employment, economic benefit to communities.
- Maintain geographic dispersion of the fleet.

Fundamental Tradeoff

If set too high, there could be more consolidation than desired in ownership or fleet size.

If set too low, limits might hamper needed improvements in fleet efficiency and profitability.



Vessel Usage Limits

The GMT has focused on vessel usage limits because they relate more directly to fleet behavior.

We proposed looking at revenues because revenues drive fleet behavior.

Yet we had some questions:

- *How much revenue is enough?*
- *How do you combine revenues associated with species specific accumulation limits in a meaningful way?*
- *What was the proper relationship between control limits and vessel limits?*

The One Vessel, One Owner Scenario

Can an independent owner-operator hold enough QS to operate a vessel profitably without having to lease QP from others?

In this scenario, control limits converge with vessel limits.

The GMT Approach

The GAC Options

Use 90th percentile values from either the 1994-2003 window period (Option 1) or the 2004-2006 baseline (Option 2) to establish control limit. Set vessel usage caps at twice the control limit.

Some major benefits of the TIQ program are expected from:

- Improved catch accounting
- Individual accountability for bycatch
- *A more efficient, more profitable trawl fleet.*

Vessel profitability can be improved by either:

Increasing revenues

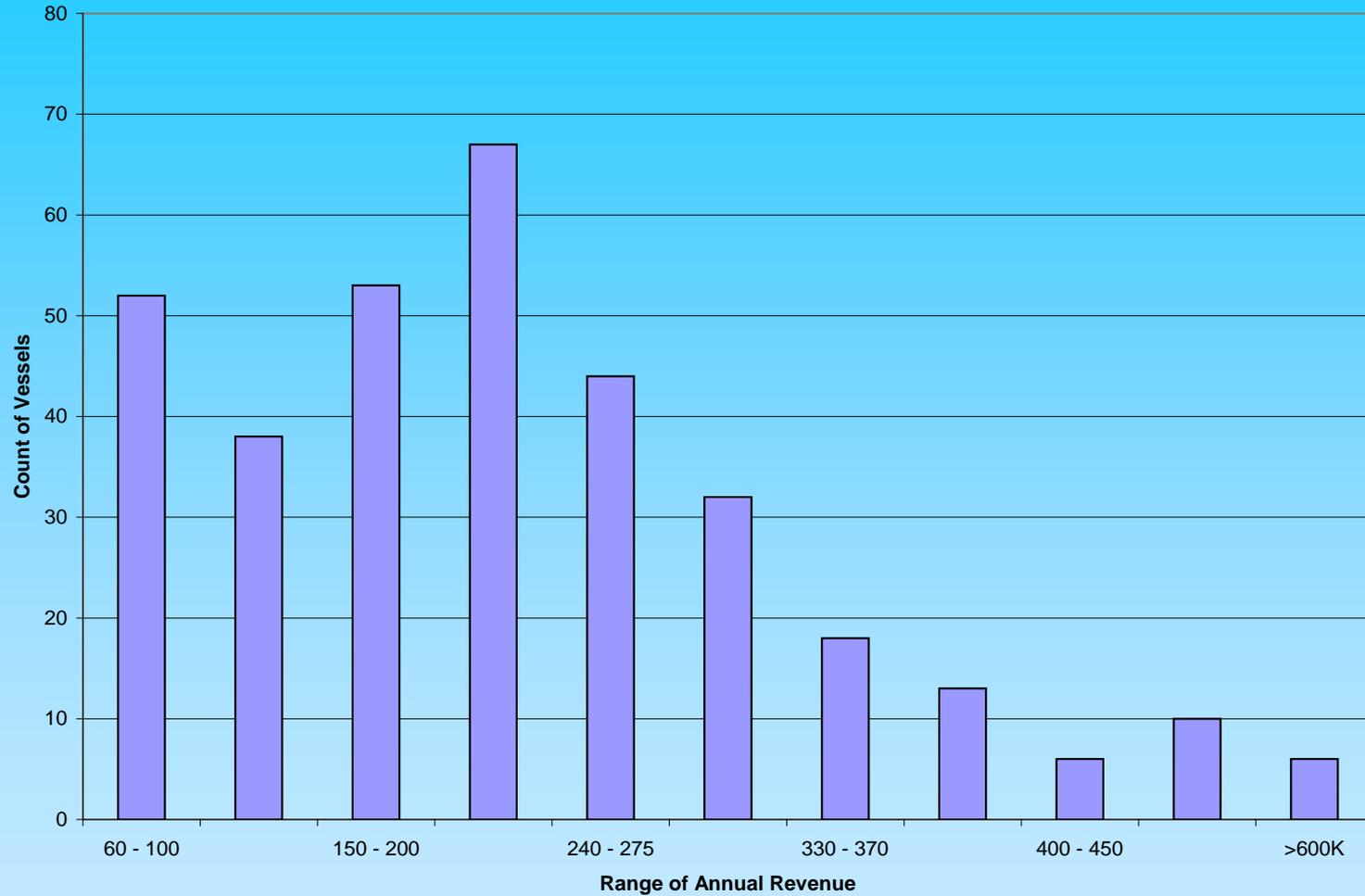
and/or

Decreasing costs

Under the TIQ program, it will be more expensive to operate a vessel because of increased tracking and monitoring costs.

At the same time, fleet consolidation is expected to decrease fixed costs and increase average per-vessel revenues.

This makes it possible to cover higher operating costs and increase revenues, potentially returning the fleet to profitability.



Annual non-whiting vessel revenues (\$K, 2004-2006)

Profitability Under Status Quo

EIS indicates that the average vessel generates wages and covers costs, but does not necessarily make a profit

Most vessels currently generate less than \$300K per year, but some have earned more than \$600K.

Profitability Under TIQ

What revenues would be necessary to achieve profitability and expected economic efficiencies under the TIQ program?

The analysis submitted to the Council by Lian, Weninger, and Singh suggests that the average vessel will need to generate somewhere on the order of **\$700K** annually.

How do vessels fish under status quo? :

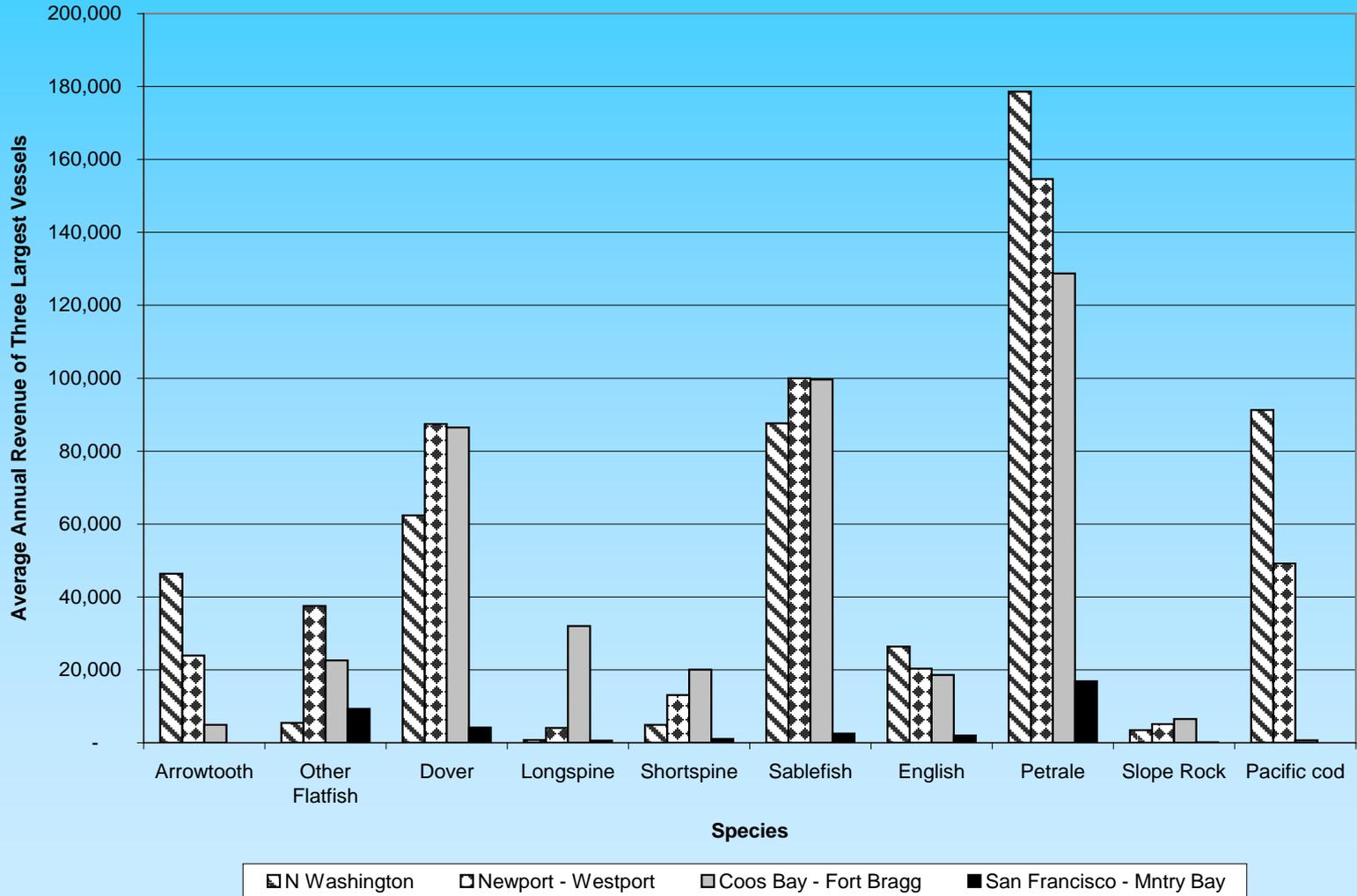
The non-whiting trawl fishery is a multi-species fishery with multiple target strategies.

There are known regional differences in target strategies and species landed.

Would 90th percentile control limit values accommodate these differences?

Regional Target Strategies

(top 3 vessels in each region)



The Big Three

Petrale and sablefish are major revenue earners in almost all regions.

Dover sole is also widely fished.

<u>Region</u>	<u>Other Important Species*</u>
N. Washington	<ul style="list-style-type: none"> -Arrowtooth -Pacific cod -English sole (marginal)
Newport - Westport	<ul style="list-style-type: none"> -Other Flatfish (for some vessels) -Pacific cod (for some vessels) -Arrowtooth (for some vessels) -English sole (marginal)
Coos Bay - Fort Bragg	<ul style="list-style-type: none"> -Longspine -Shortspine -Slope rock (if regulations allowed)
San Francisco-Monterey Bay	<ul style="list-style-type: none"> -Other flatfish <p>*other than sablefish, petrale, or Dover sole</p>
Maine - Boston (And)	<ul style="list-style-type: none"> -Faintly listed flatfish

Potential Exvessel Revenue Associated with the GAC 90th Percentile Options

Regional Strategy	Market Bundle	Maximum Potential Revenues	
		GAC Option 1	GAC Option 2
N WA	Arrowtooth, Dover, Sablefish, Petrale, P cod, English	\$ 493,888	\$ 733,167
S WA - C OR	Other Flat, Dover, Petrale, Sablefish, Arrowtooth, English	\$ 471,918	\$ 743,690
S OR - N CAL	Dover, Longspine, Shortspine, Sablefish, Petrale, Slope Rock	\$ 364,874	\$ 559,097
SF South	Other Flat, Dover, Sablefish, Petrale	\$ 329,682	\$ 499,317

Highly unlikely that an independent owner operator would generate the indicated revenues

- To reach a \$700,000 figure, some flexibility is necessary
- \$700,000 may or may not make a relatively large vessel profitable

Estimated revenues associated with regional strategies should be viewed as highly optimistic

- An example using the northern Washington strategy:
 - Pacific cod is often unavailable to the fishery
 - Arrowtooth may still be discarded in heavy amounts due to spoilage issues, and because markets often do not exist
- To make up for these issues, QS owners need the flexibility to focus more heavily on different species during different years

GMT concept for control limits

- Begin to establish limits such that an independent owner operator could be profitable without having to acquire quota pounds from another source (can be scaled up if the goal is more than one vessel per entity)
- Allow for flexibility in attaining regional target strategies and responding to varying conditions by setting species limits higher than the GAC 90th percentile limits
- Cap overall control by keeping the aggregate limit relatively low
- Use principal target species (sablefish and petrale sole) and regional fishery dependence as benchmarks/considerations in setting species specific limits

How Much Revenue Will Independent Owner-Operators Need?

- Existing data indicates that some vessels make over \$600,000 in some years
 - Objective in Groundfish FMP to “minimize disruption”
- EIS modeling indicates a vessel may need to generate \$700,000 to reach predicted efficiency gains
- “A vessel of 60 – 70 feet needs to make over \$600,000 a year to make it work”
 - Public comment
- Ensure that non-whiting vessels are not out-competed financially by SS whiting trawlers for bycatch quota
 - Speaks to the need to increase per-vessel revenues

Several species are regionally distinct

- Pacific cod is caught exclusively off Washington (typically northern Washington)
- Thornyheads appear most abundantly in the fishery from south-central Oregon to north-central California
- When combined with estimated fleet consolidation, a relatively few number of entities should be expected to focus on those regionally distinct species

Species specific limits can be developed by using petrale sole and sablefish as benchmarks

Those species which have many substitutes, may be regionally distinct, and which may be underutilized would have larger limits

Petrале as benchmark for English sole

GAC 2004 – 2006 90th percentile option sets petrале sole control limit at 2.3% and English sole at 2.6%

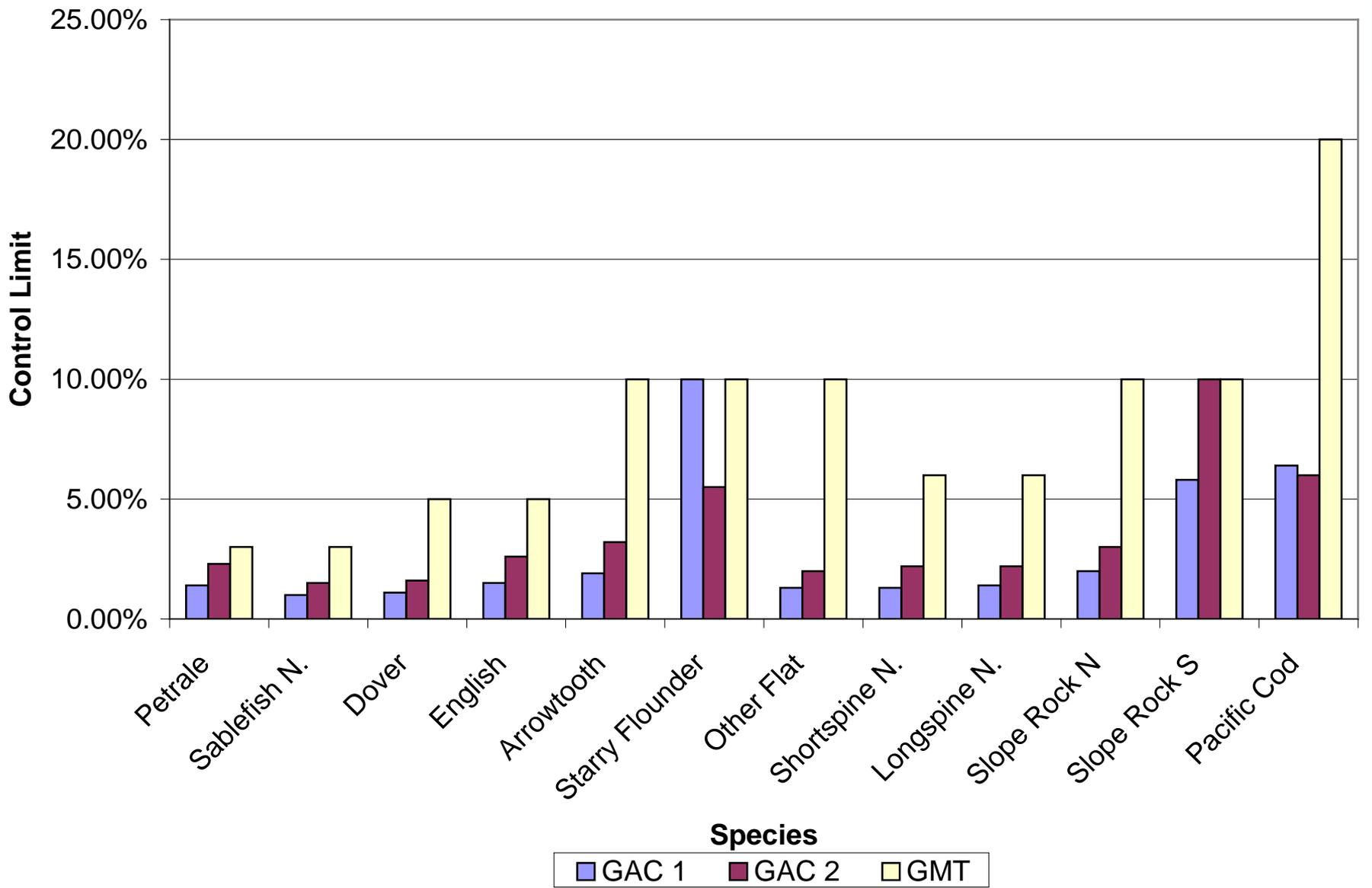
- highly similar limits

Petrале is caught by almost every trawler and is highly important to the fishery. An entity with petrале QS could use that to leverage favors from others

English sole is underutilized, has many substitutes, and has few markets. Few will care if someone has some English sole QS.

To allow development of English sole markets and stock utilization, limits on English sole should be set notably higher than petrале sole

- highly unlikely an entity could use English sole QS as leverage toward others



Regional Strategy Revenue from GMT Suggested Limits (before aggregate limits are imposed)

Regional Strategy	Regional Strategy Exvessel Revenue
N WA	\$ 1,785,667
S WA - C OR	\$ 1,953,518
S OR - N CAL	\$ 1,414,053
SF South	\$ 1,394,197

The Aggregate Limit

Aggregate limits are used to counter the effect of the relatively high GMT limits

The effect of the aggregate limit is highly dependent on how it is estimated

- Existing option is a weighted average based on trawl allocation: changes every time OY changes
- Compare the existing aggregate limit formula with two other possibilities

The sensitivity of the aggregate IFQ estimate to the aggregate limit formula

- Assumes everyone maxed out on each species specific control limit

Existing option -->

	Option 1	Option 2
Trawl allocation weighting formula	1.95%	3.02%
Equal weighting of each species	3.53%	4.76%
Weighting that uses 2004 - 2006 sector revenues by species	1.64%	2.28%

Result of aggregate IFQ formula sensitivity

- Because the aggregate IFQ calculation formula is sensitive, the GMT recommends that the Council carefully consider the manner in which it is calculated

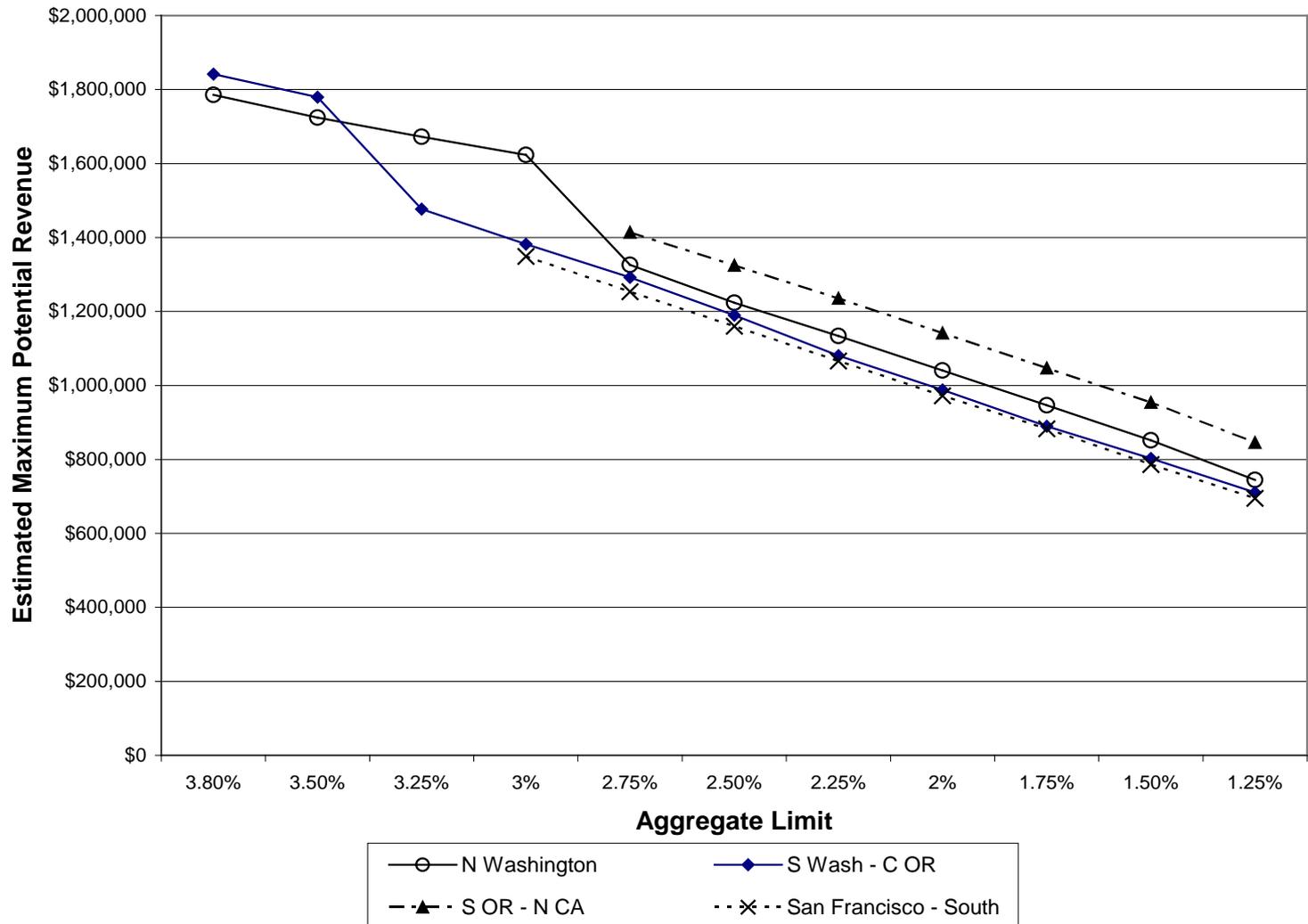
Fluctuations in the Aggregate Control Formula

- As currently stated in the alternatives, the aggregate control formula changes each time OYs change
 - Because it's a weighted average based on the trawl allocation
- This biennial variation reduces the ability to develop expectations about the future.
 - One does not know where he/she will stand next to the aggregate control limit if the aggregate control formula is only good for two years
- Biennial variation therefore makes it difficult to make long term investment decisions, which leads to some benefits of the benefits of an IQ program
 - A fixed formula that does not change every two years would be much more conducive to an IQ program

Interaction between Aggregate Control Limit and the Species Specific Limits

- Aggregate limit counters the effect of relatively high species limits
- We show the effect of reducing the aggregate limit on potential entity revenues
 - Assume GMT species limits
 - Assume entities divest their least valuable species first to stay under the aggregate limit

Regional Strategy Revenues when Aggregate Limits are Applied to GMT Suggested Species-Specific Limits



Conclusions

- The ability to engage in regionally specialized strategies is important to ensuring a healthy fishery that is found coastwide
- The 90th percentile control limits do not appear to accommodate such regional strategies (if we intend to accommodate independent owner-operators)
- Higher species-specific limits can accommodate regional strategies. We counter the effect of higher species specific limits with relatively small aggregate limits
- If the amount of revenue necessary to support an independent owner operator is on the order of \$700,000, control limits should allow for somewhat larger amounts
 - Aggregate limit of 2.25 to 2.75% may be appropriate if we stick with existing aggregate limit formula
- Do not allow the aggregate limit formula to vary every time our OYs change. Instead, make changes in the weighting formula a conscious Council action