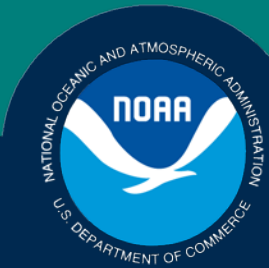


Science, Service, Stewardship



Performance of the Northeast Groundfish Fishery

Tammy Murphy, Andrew Kitts, David Records, Chad Demarest, Daniel Caless*, John Walden and Sharon Benjamin

Social Sciences Branch, Northeast Fisheries Science Center

*Analysis and Program Support Division, Northeast Regional Office

January 30, 2014

NEFMC Council Meeting, Portsmouth, NH – January 29, 2014

**NOAA
FISHERIES
SERVICE**



Major Findings - 2012

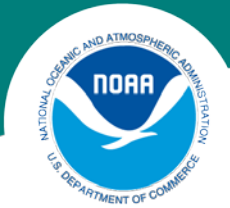
Decreases in landings & revenues for all species
(revenues down \$25.3 million, 7.7%, from 2011)

GF landings & revenues at a 4 year low
(GF revenues down \$20.7 million, 22.9%, from 2011)

in
2012

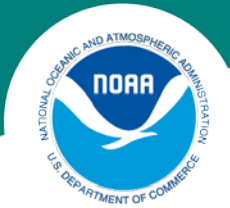
Most measures of economic performance declined in 2012.

The quota market declined in weight & value in 2012;
23.3 million lbs leased, valued at \$8.2 million.



Presentation Outline

- I. Landings, Prices and Gross Nominal Revenues
- II. Gross Nominal Revenues by Landed Port State
- III. Number of Vessels and Vessel Affiliations
- IV. Crew Employment
- V. Leasing Activity
- VI. Economic Performance (unadjusted for leasing activity)
- VII. Consolidation and Distribution of Revenues
- VIII. Adjusting Net Revenue for Leasing Activity
- IX. Moving Forward
- X. Discussion



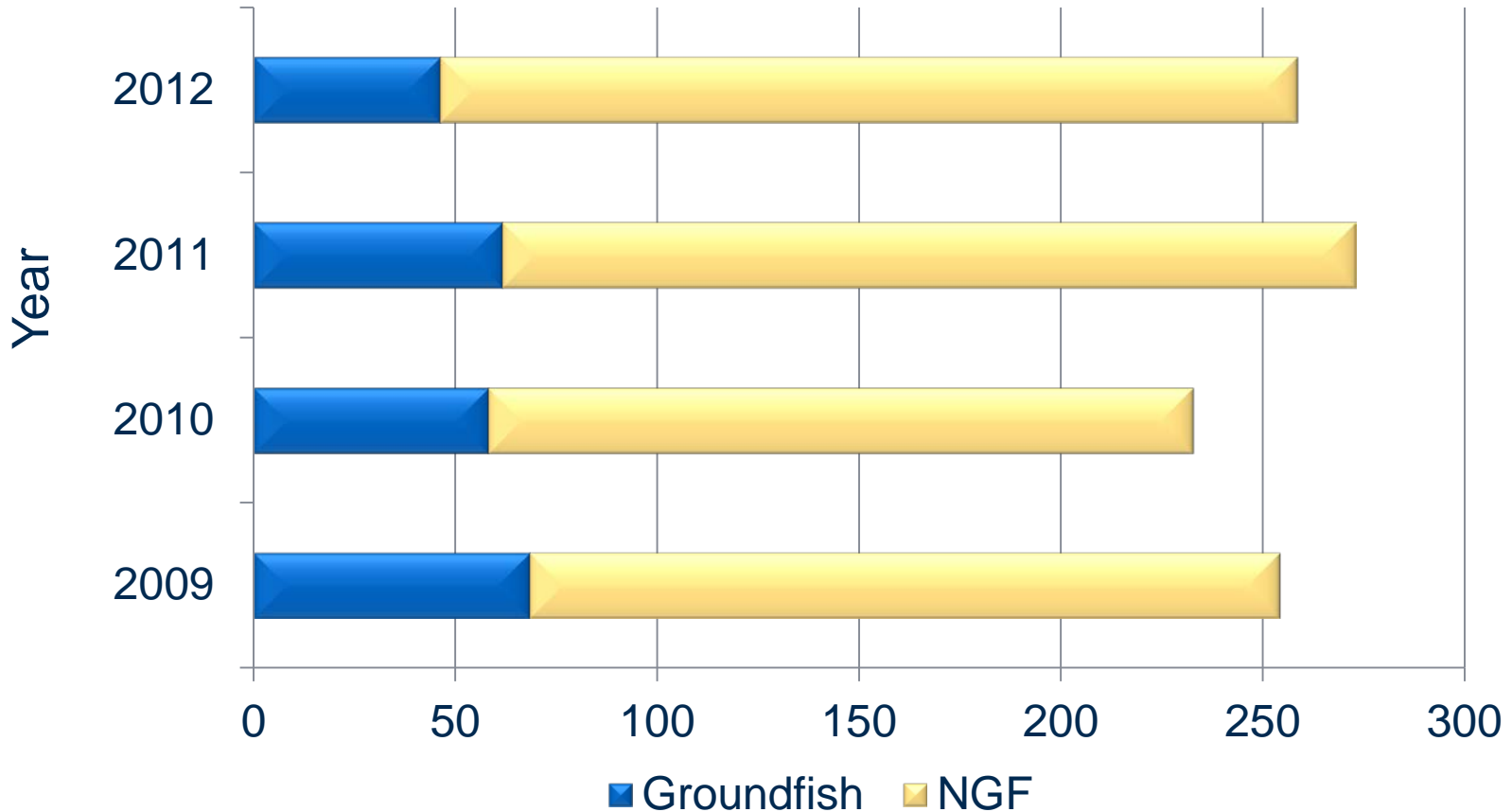
Section I

Landings, Prices & Gross Nominal Revenues



Lower Total Landings in 2012, compared to 2011
GF landings at a 4 year low, NGF landings nearly constant

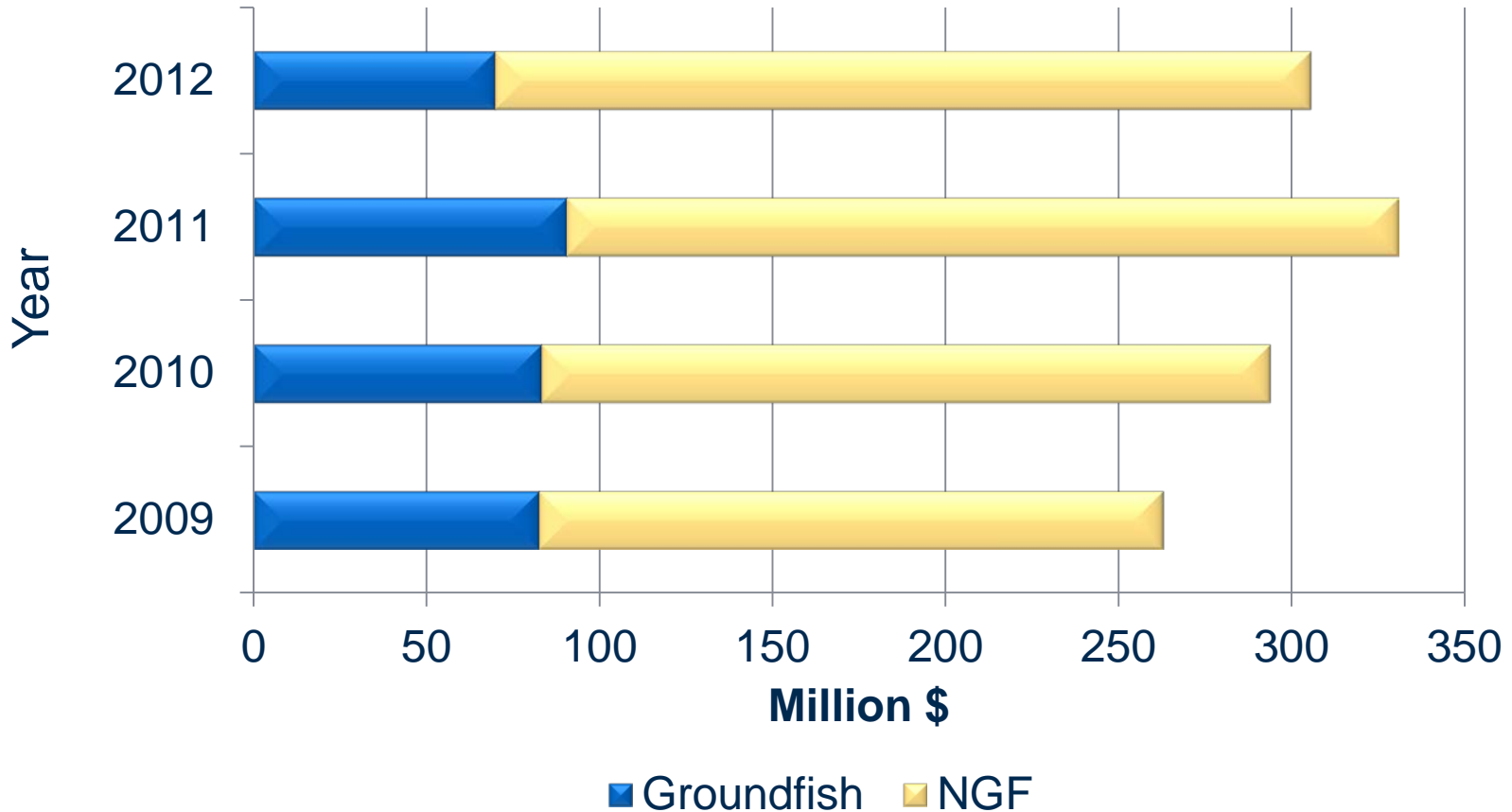
**Landings for all groundfish vessels, May-April
all trips, all species, million pounds**





**Lower Gross Total Revenues in 2012, compared to 2011
GF revenues at a 4 year low, NGF revenues down from 2011**

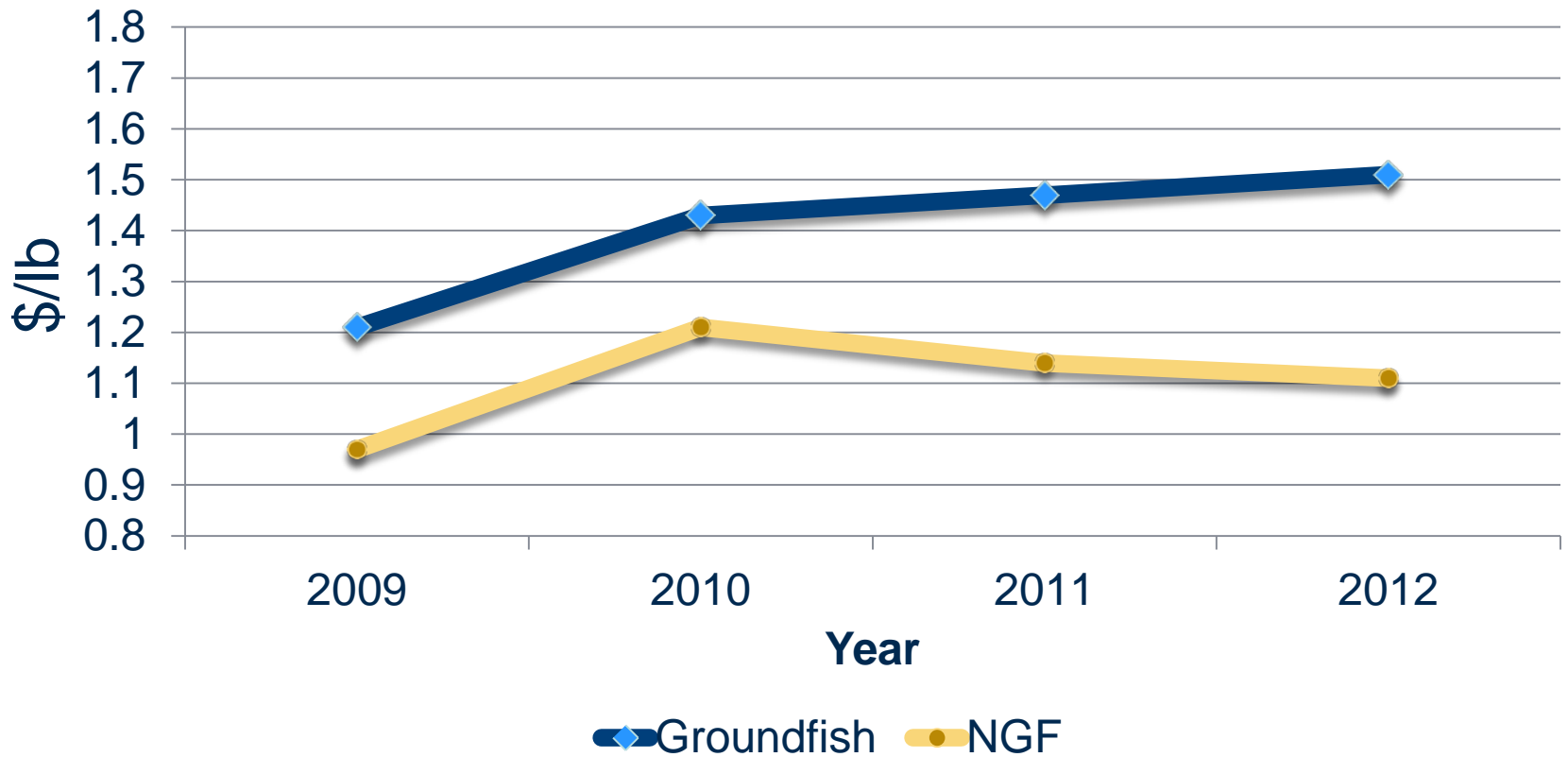
**Revenues for all groundfish vessels, May-April
all trips, all species, million \$**





Higher Average GF Price
Lower Average NGF Price

Average price per pound
all groundfish vessel landings, May-April

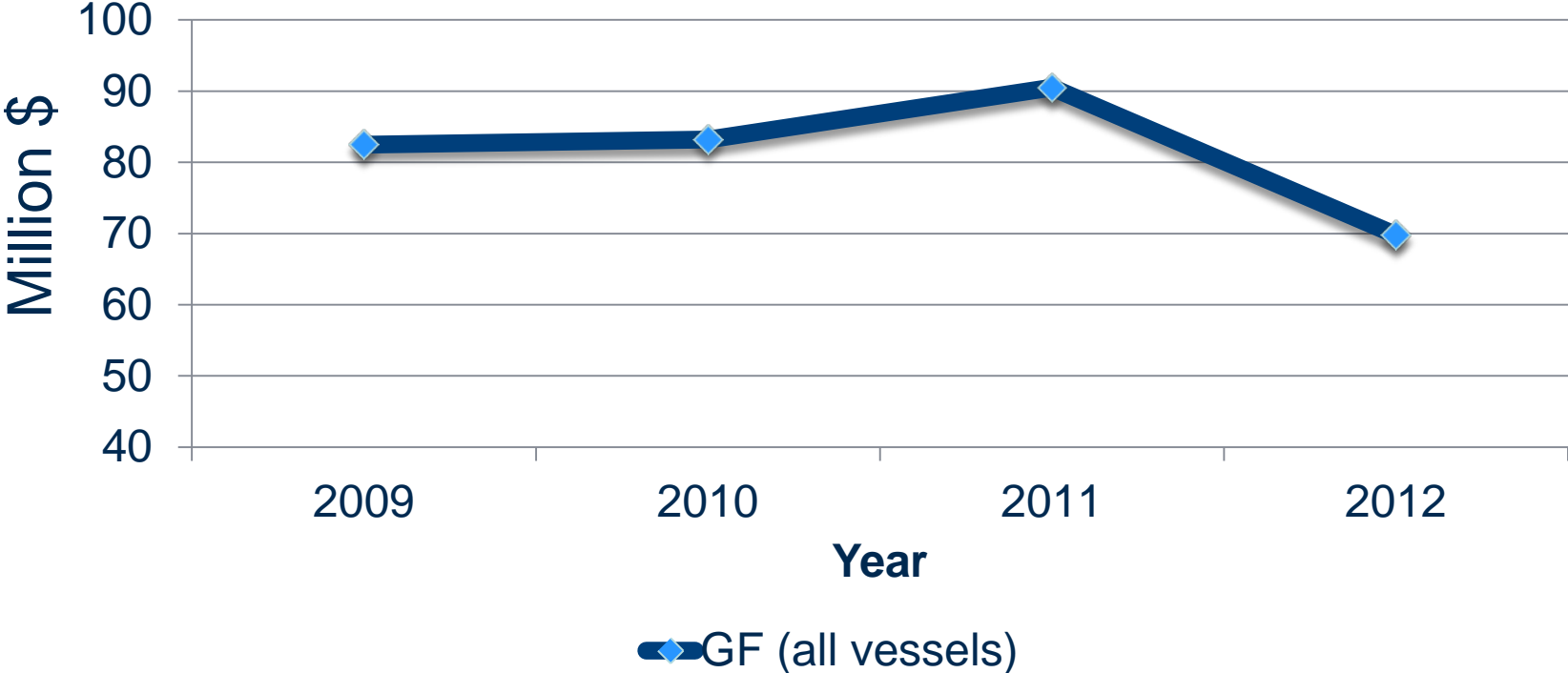


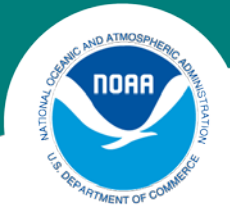


GF Revenues at a 4 year low

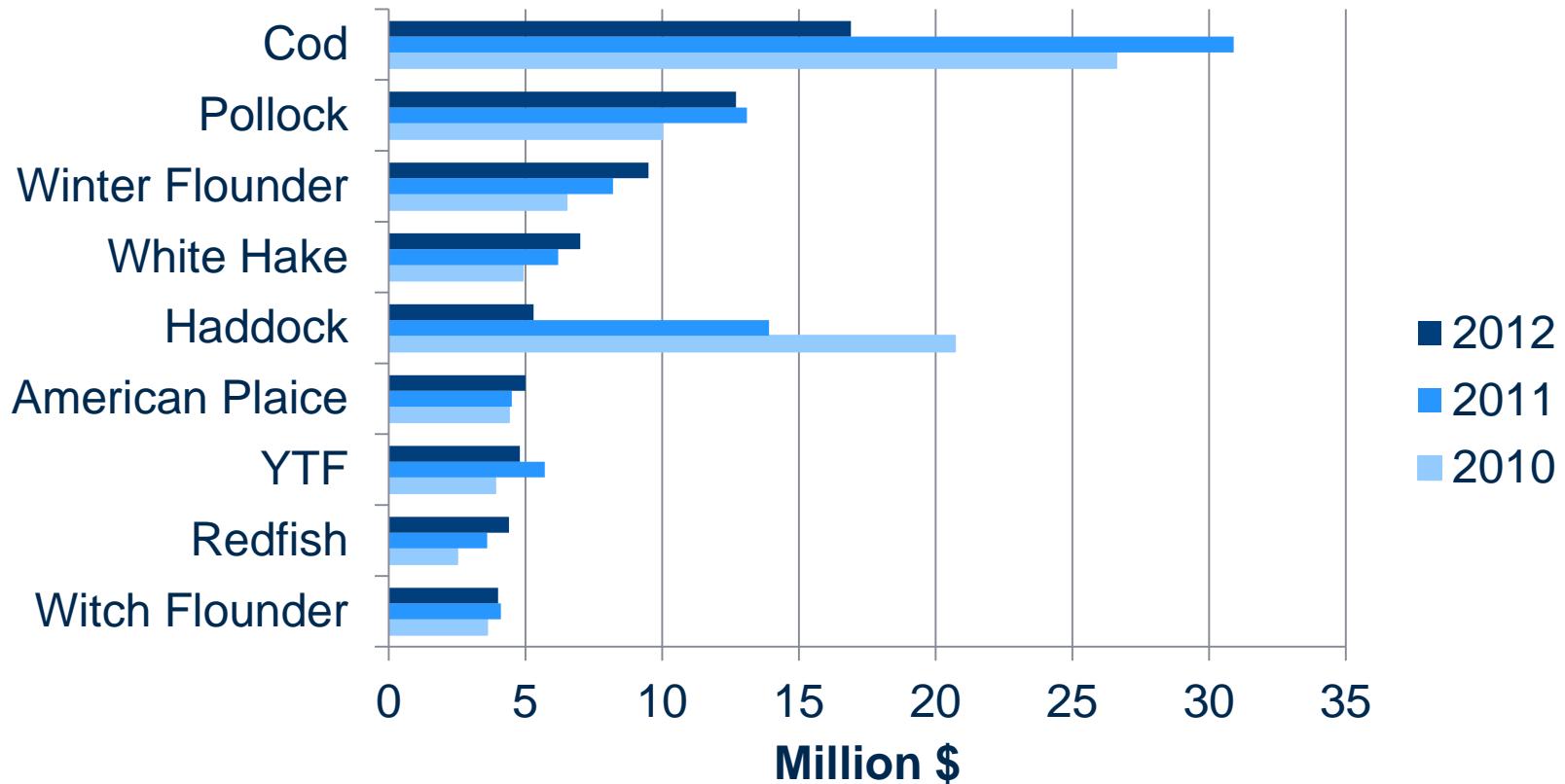
**Nominal Value of Groundfish Landings
million \$, May-April**

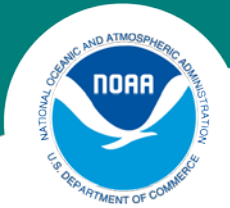
Groundfish, all trips



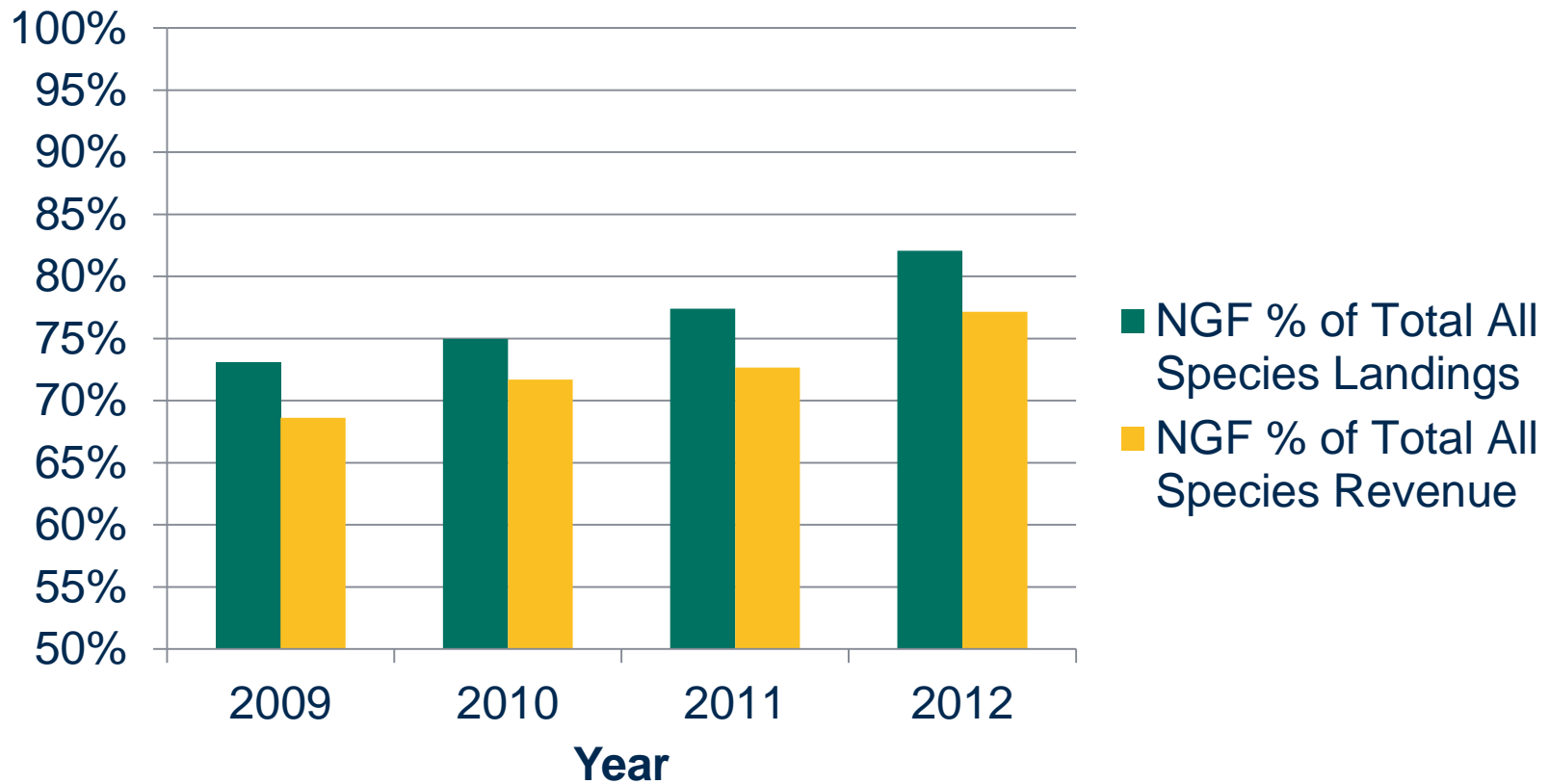


Nominal Value of 9 Allocated GF Species landed by GF vessels, million \$, May-April





Non-Groundfish Portions of All Species Landings and Revenues Earned by Active GF Fleet, All Trips, May-April

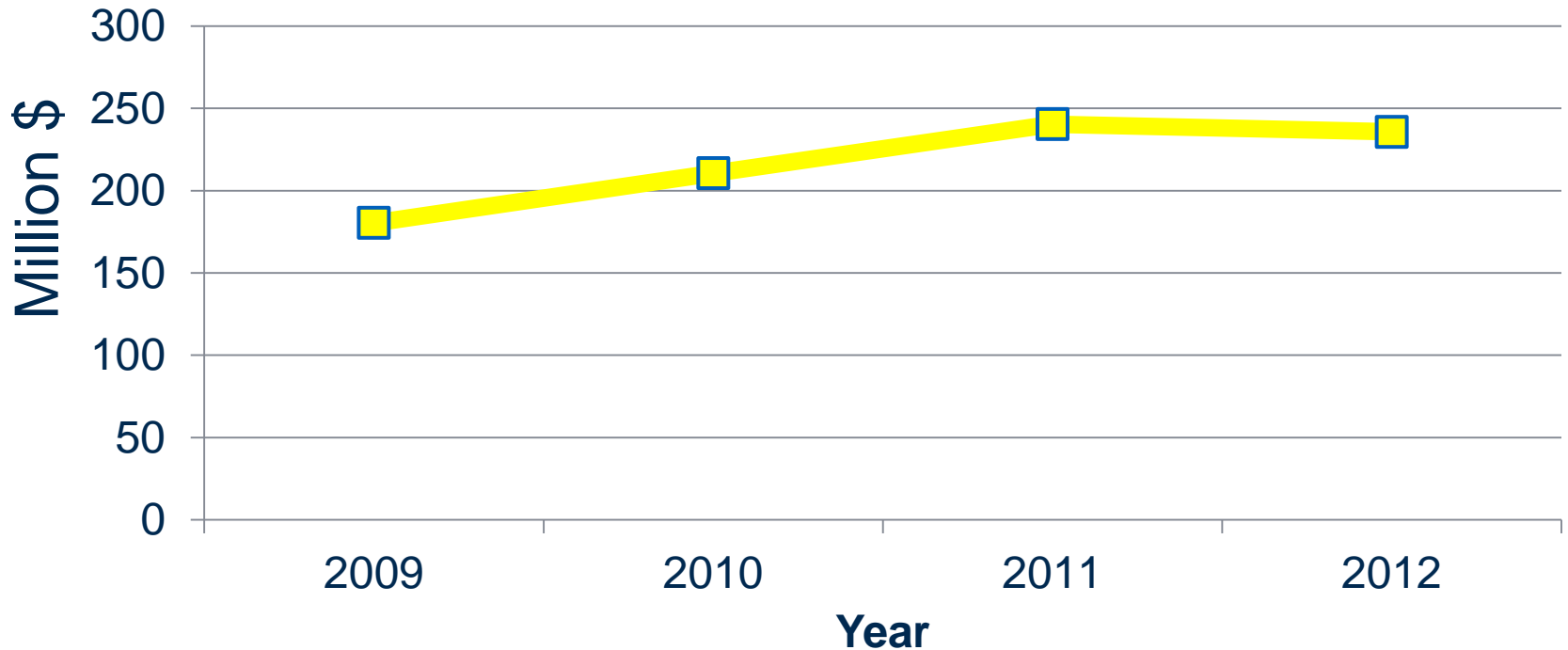


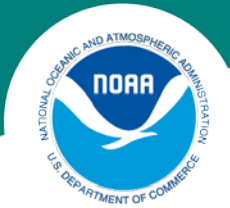


NGF Revenues declined slightly in 2012

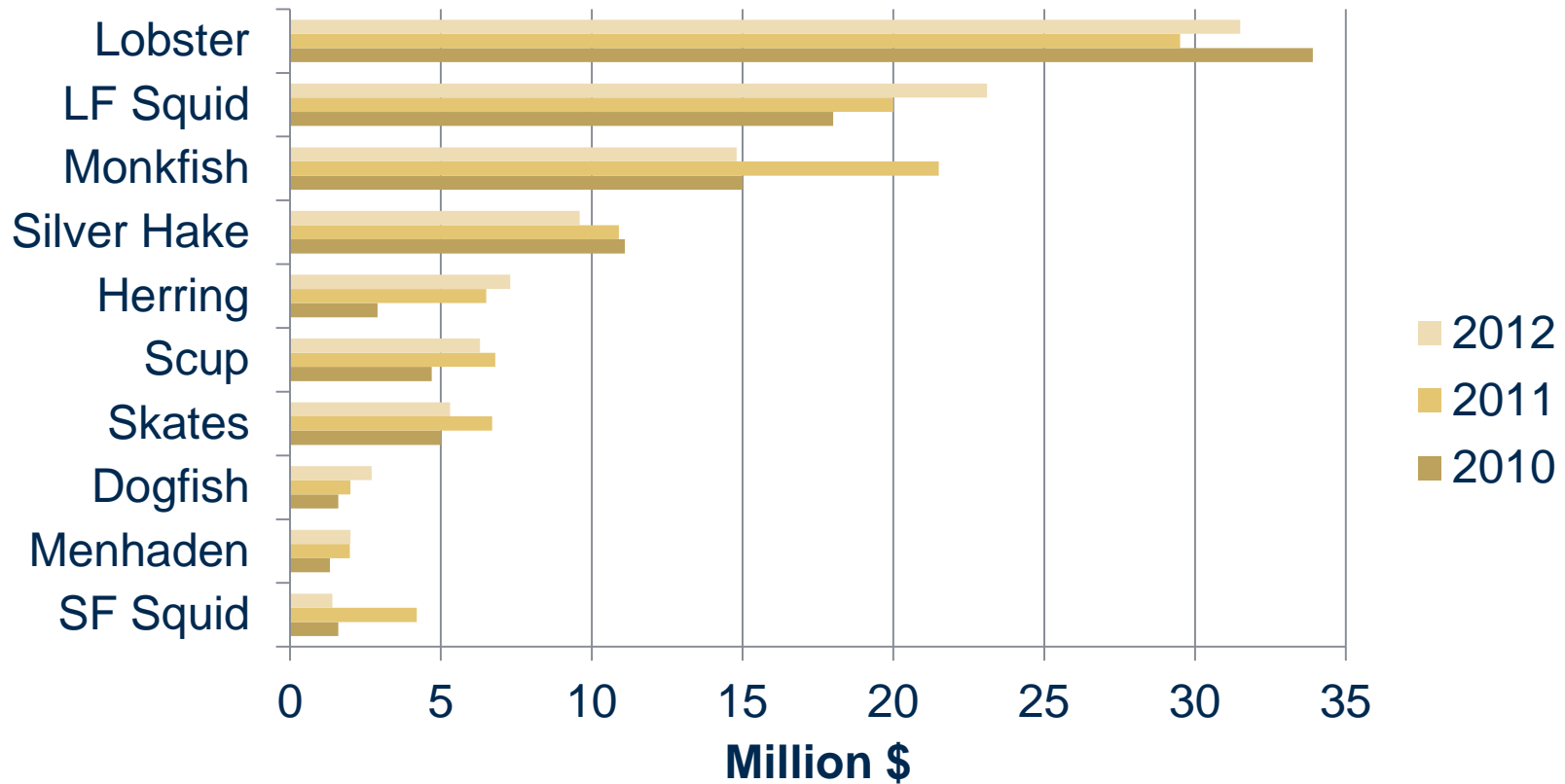
**Nominal Value of Non-Groundfish Landings
million \$, May-April**

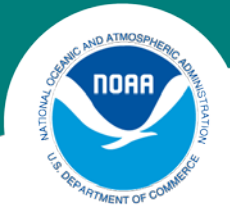
Non-Groundfish Revenue, all trips





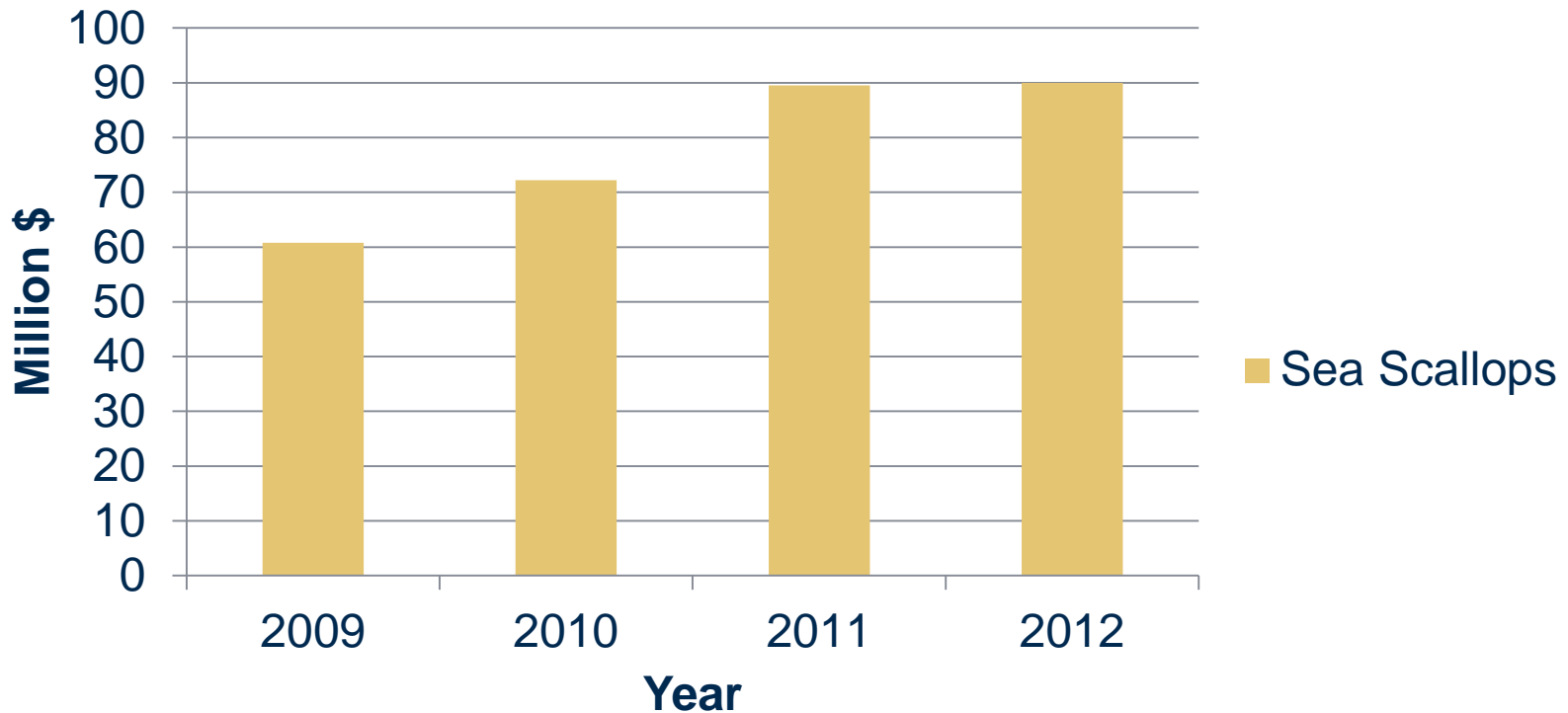
**Nominal Value of Top NGF Species
landed by GF vessels (excluding sea scallops),
million \$, May-April**

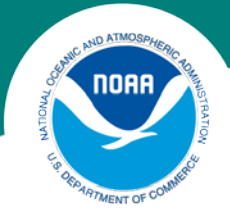




**Nominal Value of Sea Scallops
Top NGF Species by Value landed by GF Fleet
million \$, May-April**

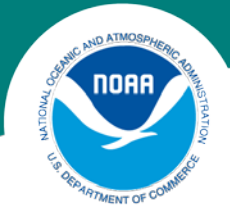
Sea Scallops





Section II

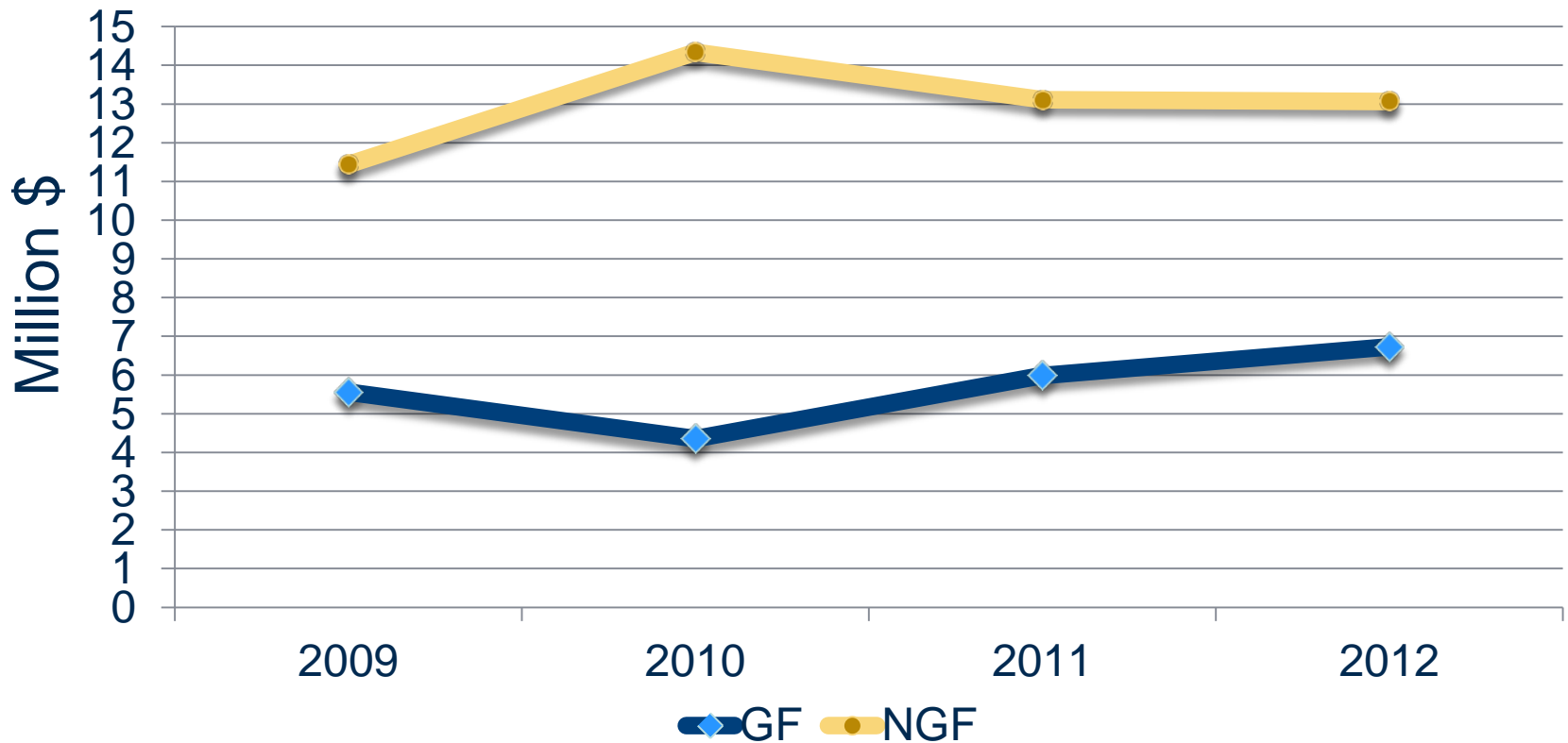
Gross Nominal Revenues by Landed Port State



GF, all species at a 4 high in 2012 (34% of all species revenue from GF)

NGF revenues nearly constant

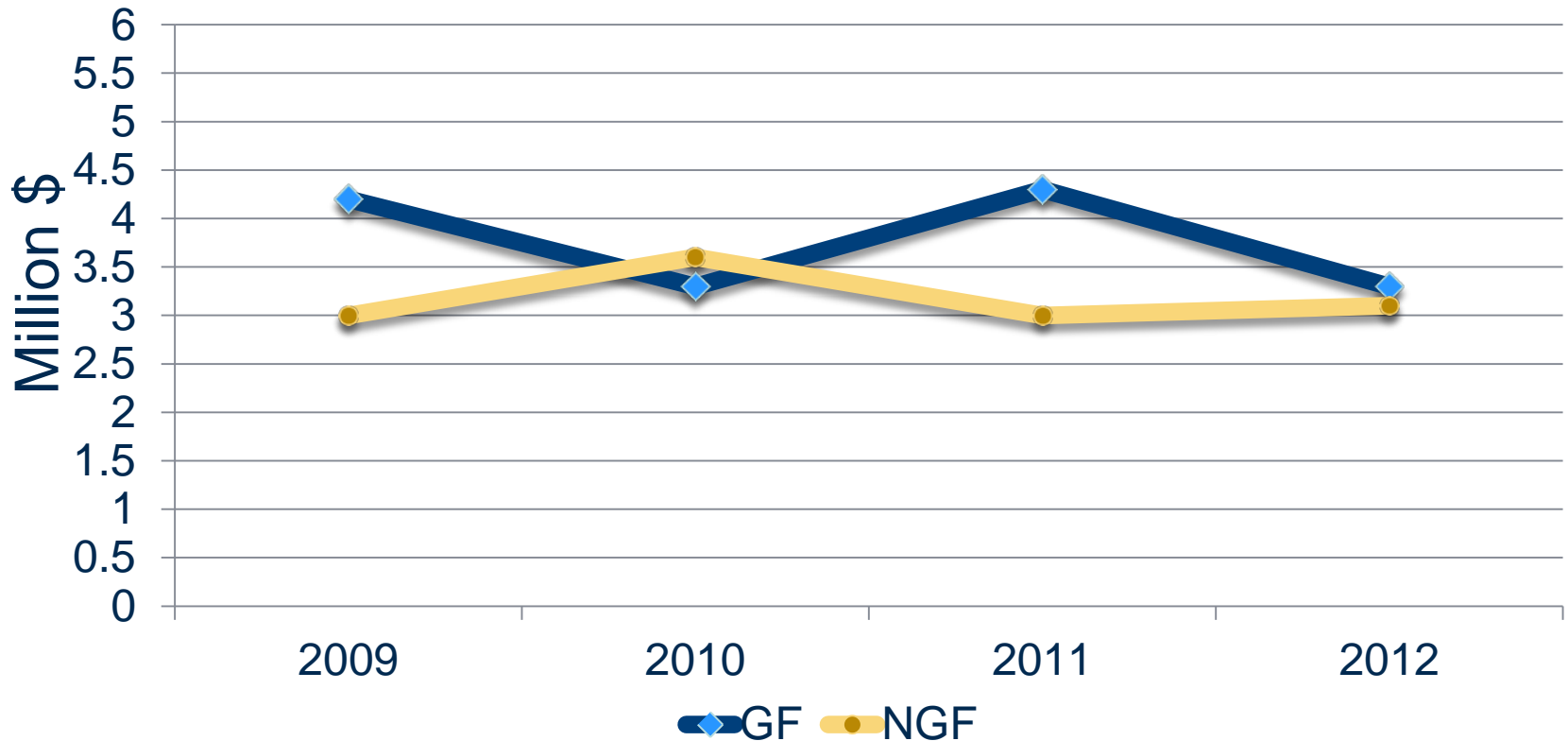
Nominal Value of Landings by Landed Port State
all trips, million \$, May-April





New Hampshire
GF, all species at a 4 year low in 2012 (51% of all species rev from GF)
NGF revenues nearly constant

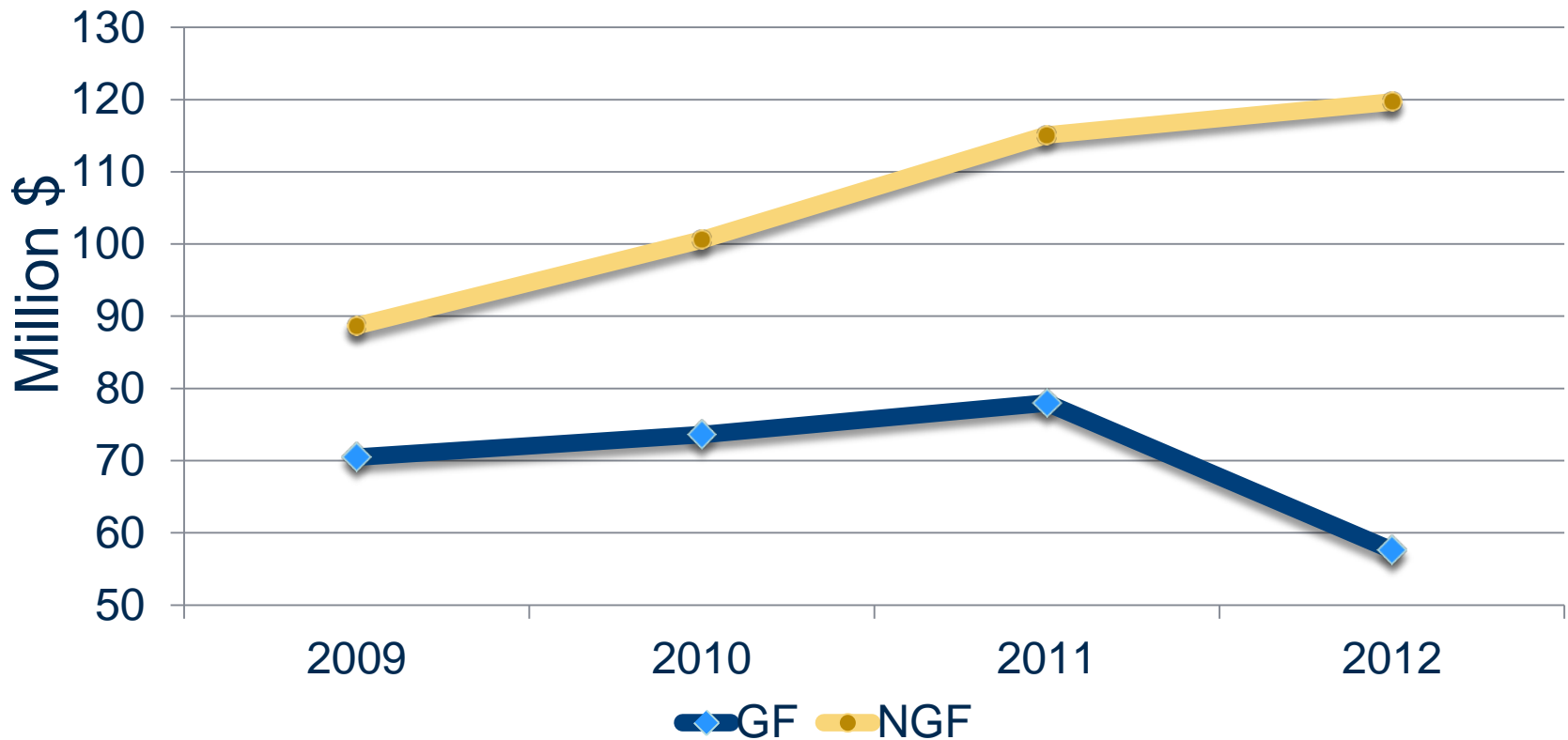
Nominal Value of Landings by Landed Port State
all trips, million \$, May-April





Massachusetts
GF at a 4 year low, NGF at a 4 year high in 2012
All species down from 2011 (33% of all species revenue from GF)

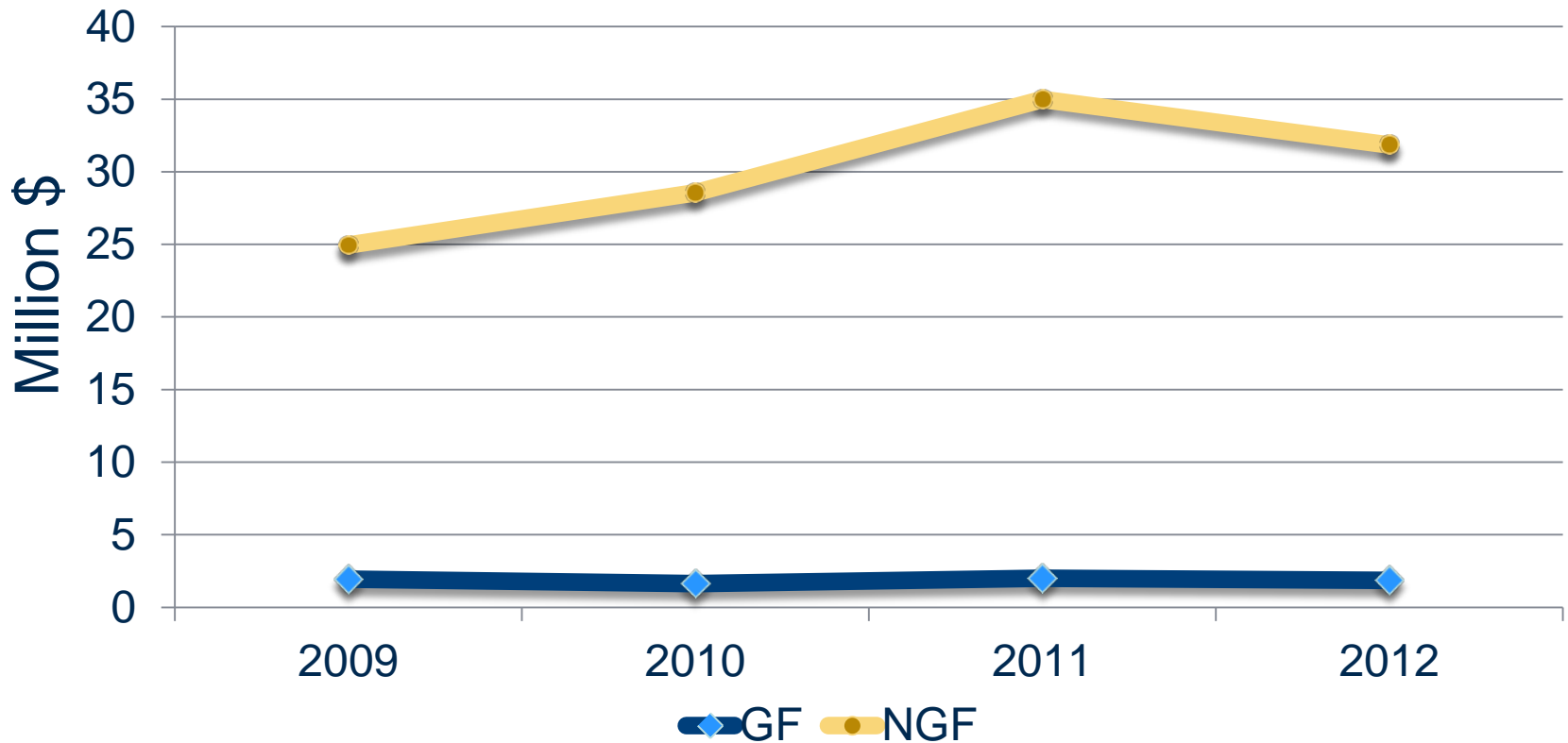
**Nominal Value of Landings by Landed Port State
all trips, million \$, May-April**





Rhode Island
GF, NGF, and all species revenues down from 2011
(5.5% of all species rev from GF)

Nominal Value of Landings by Landed Port State
all trips, million \$, May-April

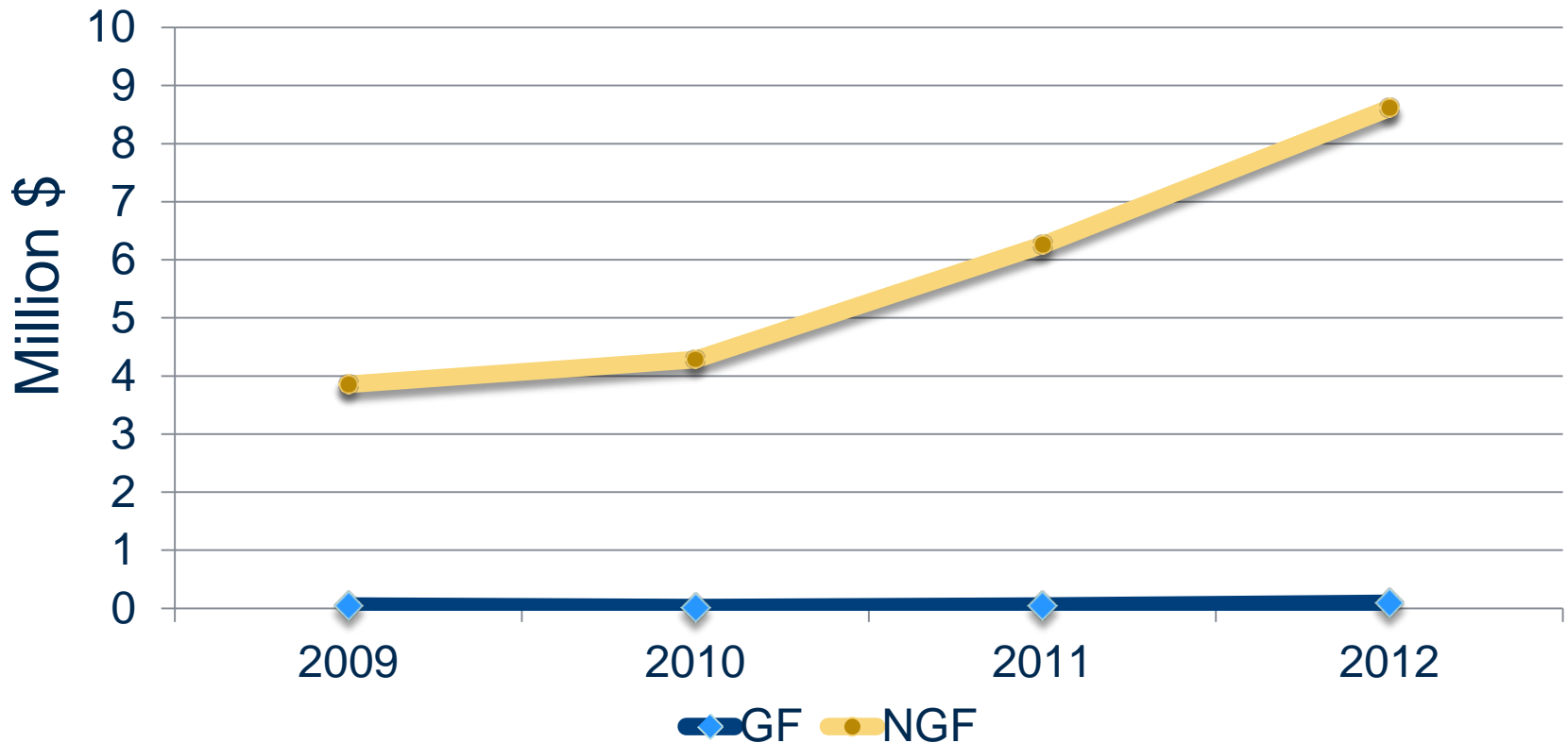




Connecticut

Both GF and NGF revenue at a 4 year high in 2012
All species at a 4 yr high in 2012 (1% of all species revenue from GF)

Nominal Value of Landings by Landed Port State all trips, million \$, May-April



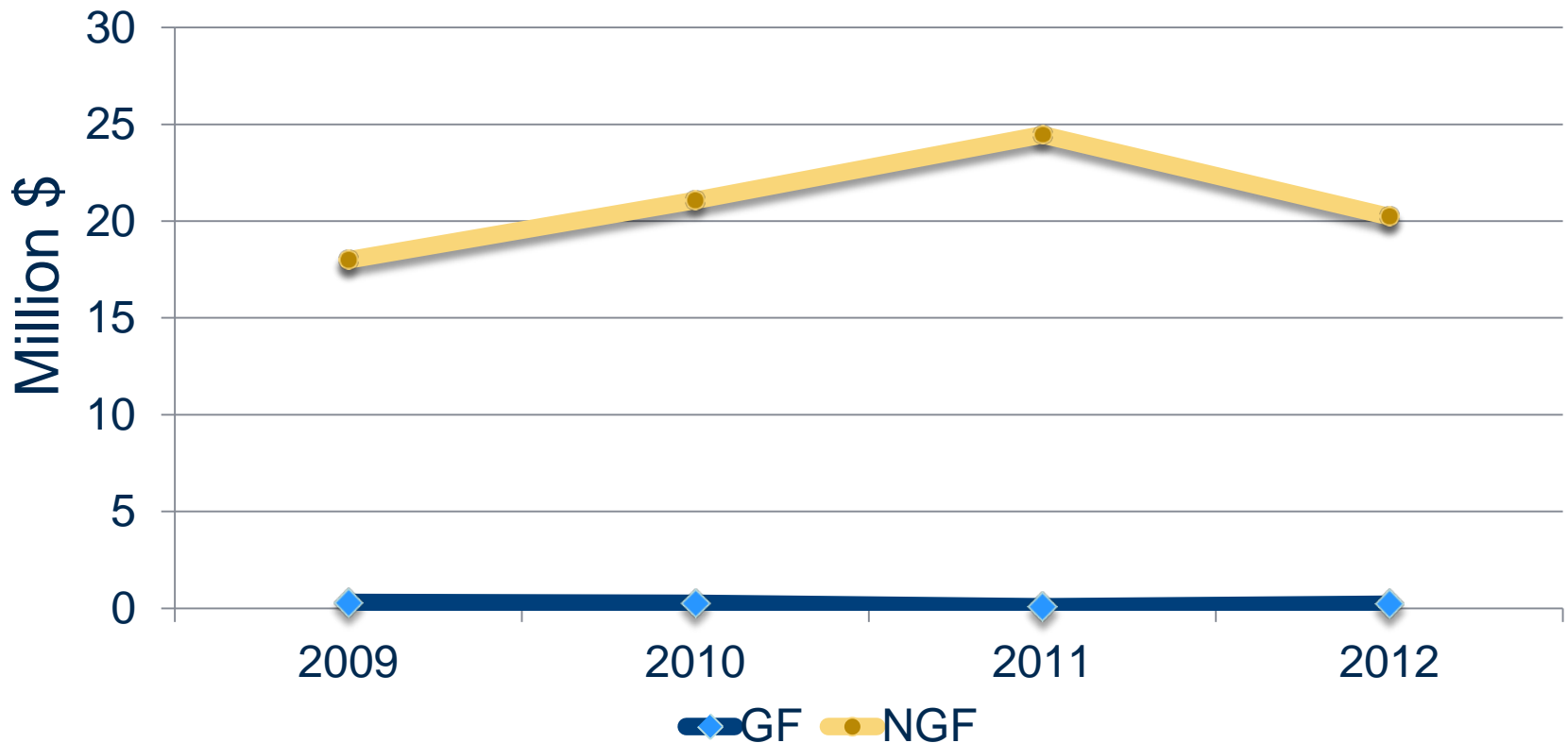


New York

GF revenues up from 2011 (1% of all species rev from GF)

All species, NGF revenues down from 2011

Nominal Value of Landings by Landed Port State all trips, million \$, May-April



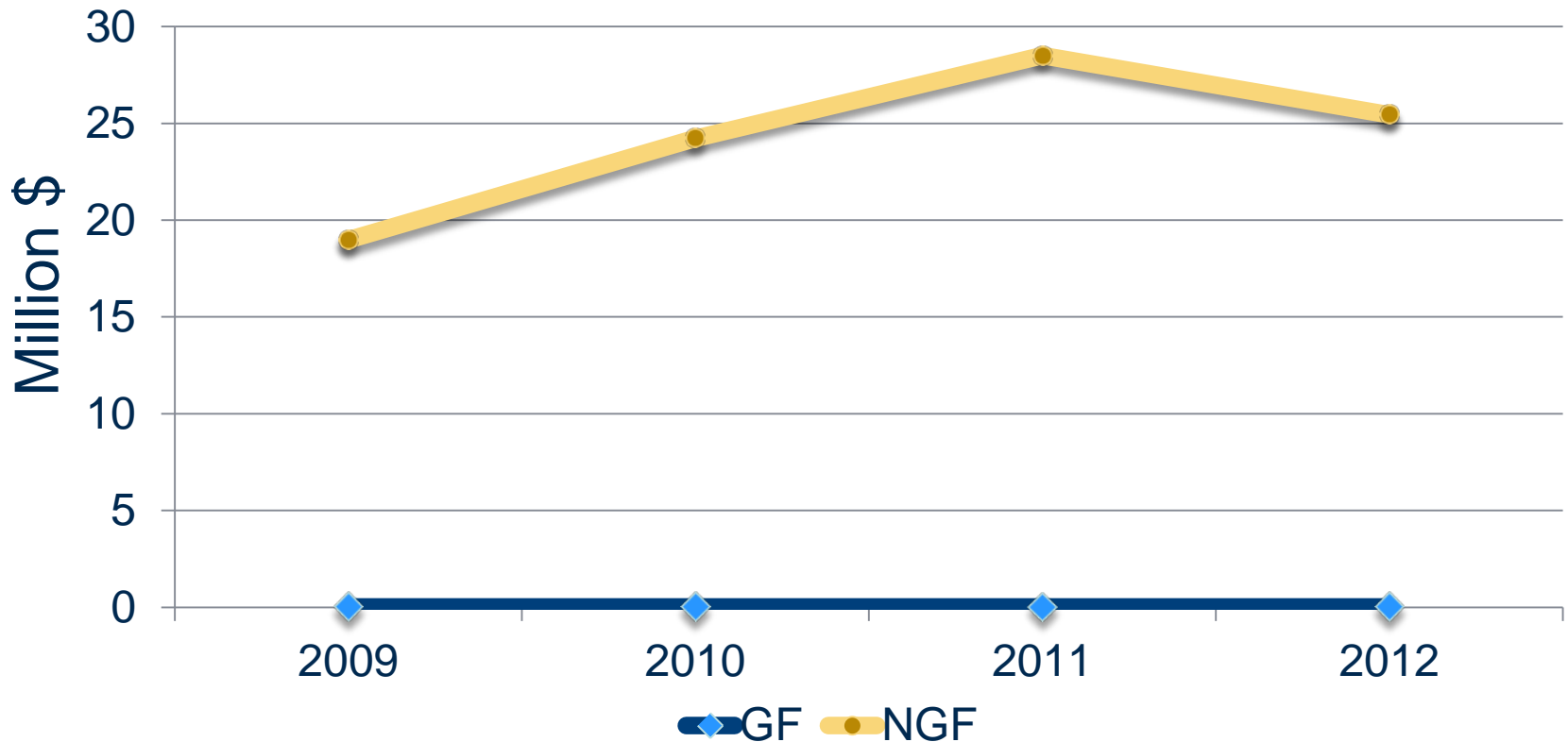


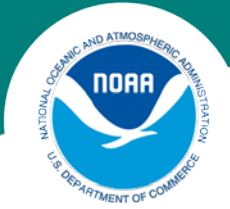
New Jersey

GF at a 4 year high in 2012 (less than 1% of all species rev from GF)

All species, NGF revenues down from 2011

Nominal Value of Landings by Landed Port State all trips, million \$, May-April





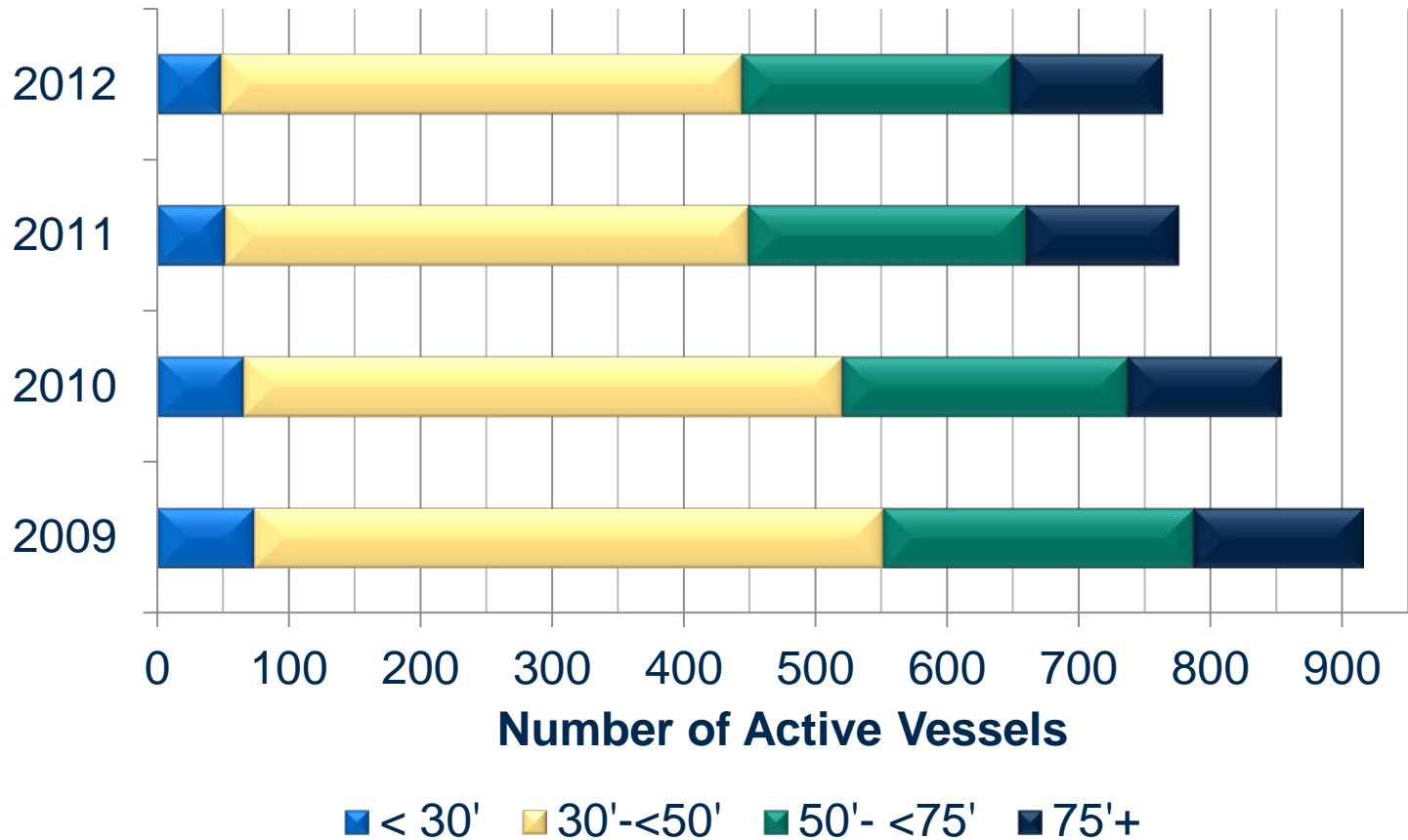
Section III

Number of Vessels and Vessel Affiliations



Fewer Active Vessels
across all vessel length classes

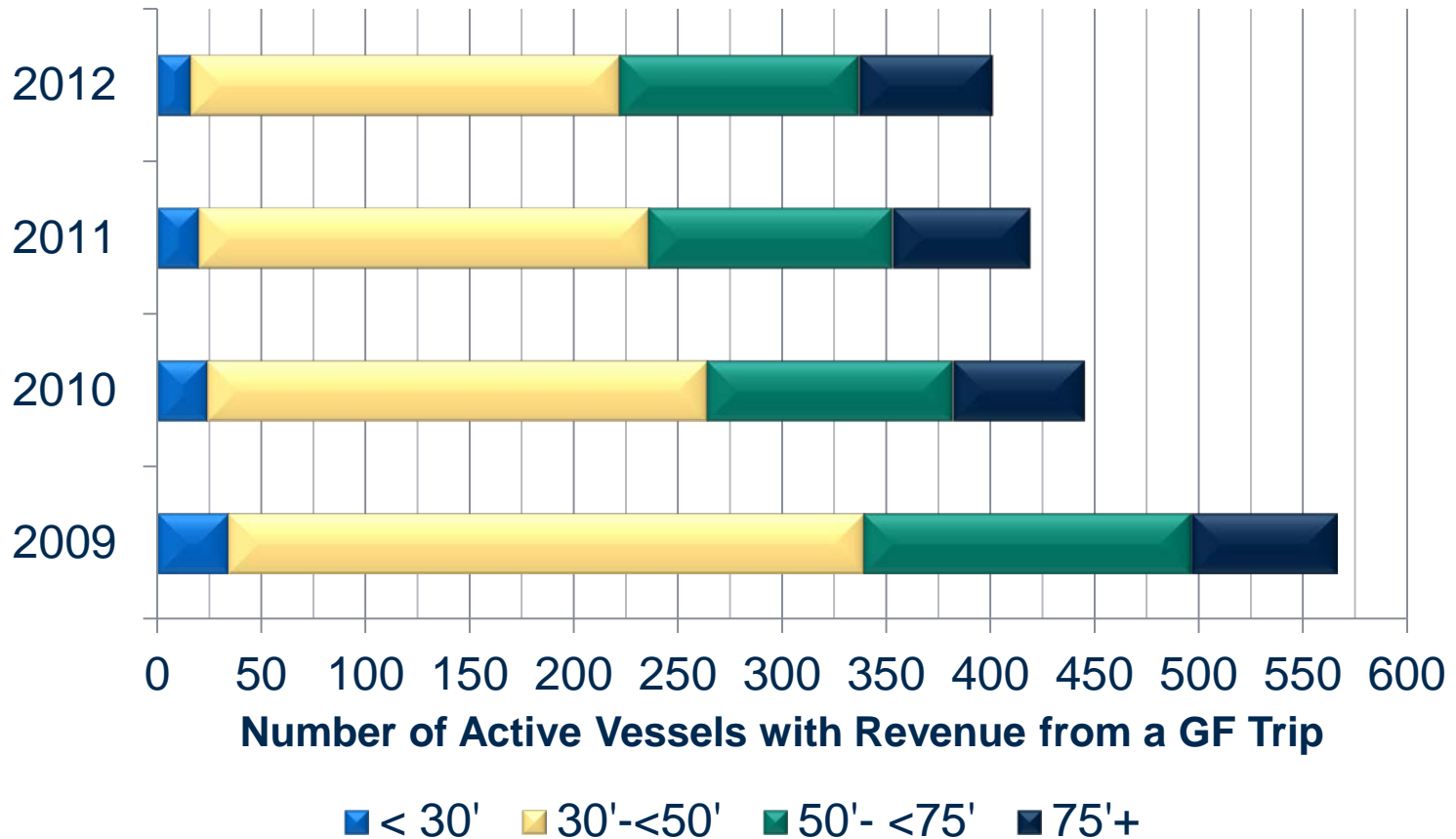
Number of groundfish vessels
with revenue from any species, May-April





Fewer Active Vessels Targeting GF
across all vessel length classes

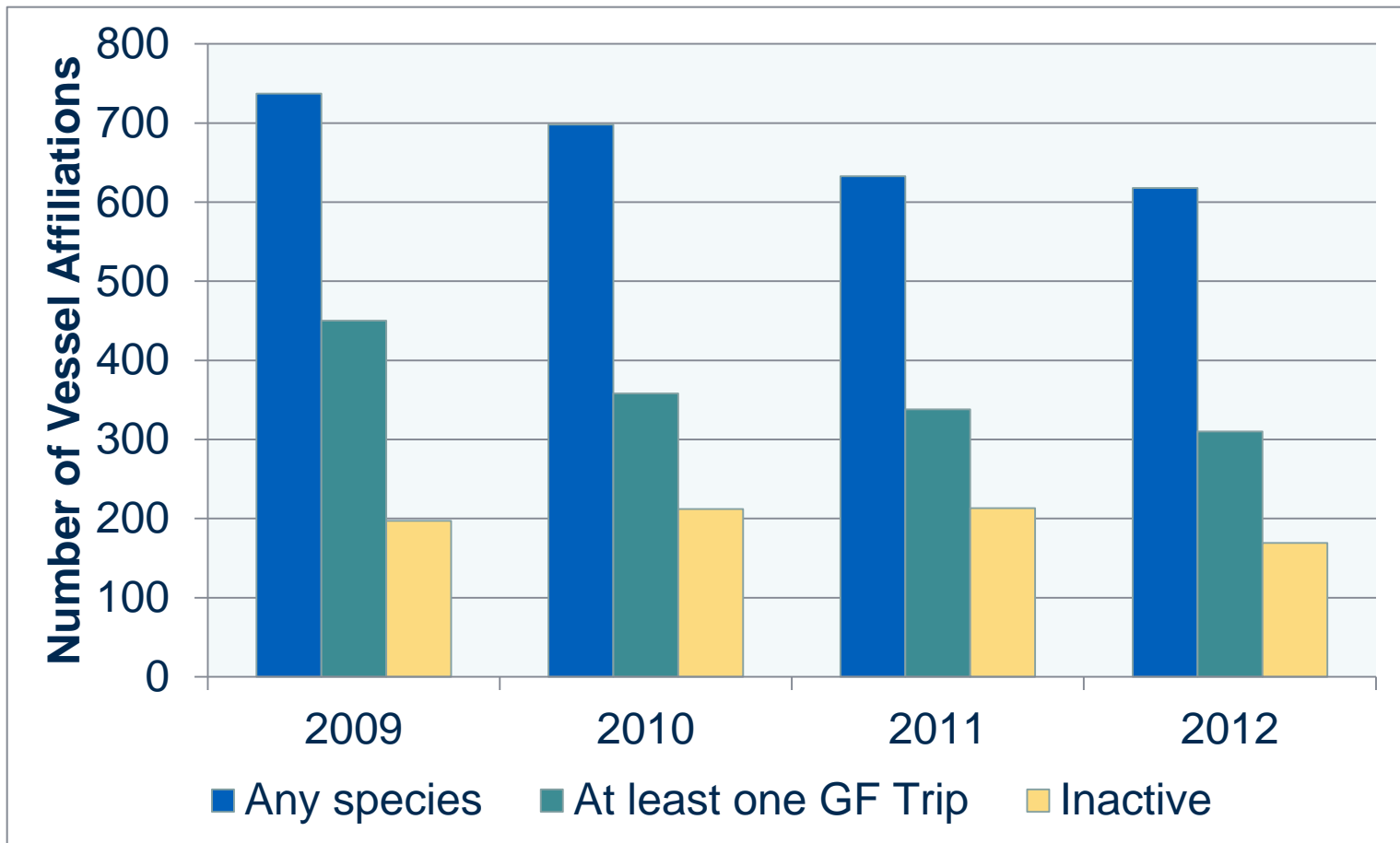
Number of groundfish vessels
with revenue from at least one GF trip, May-April

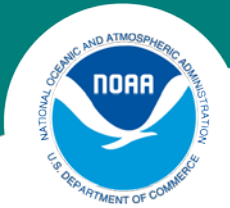




Fewer Active Vessel Affiliations

Number of Vessel Affiliations
(w/ revenue from any species and from GF, and inactive)





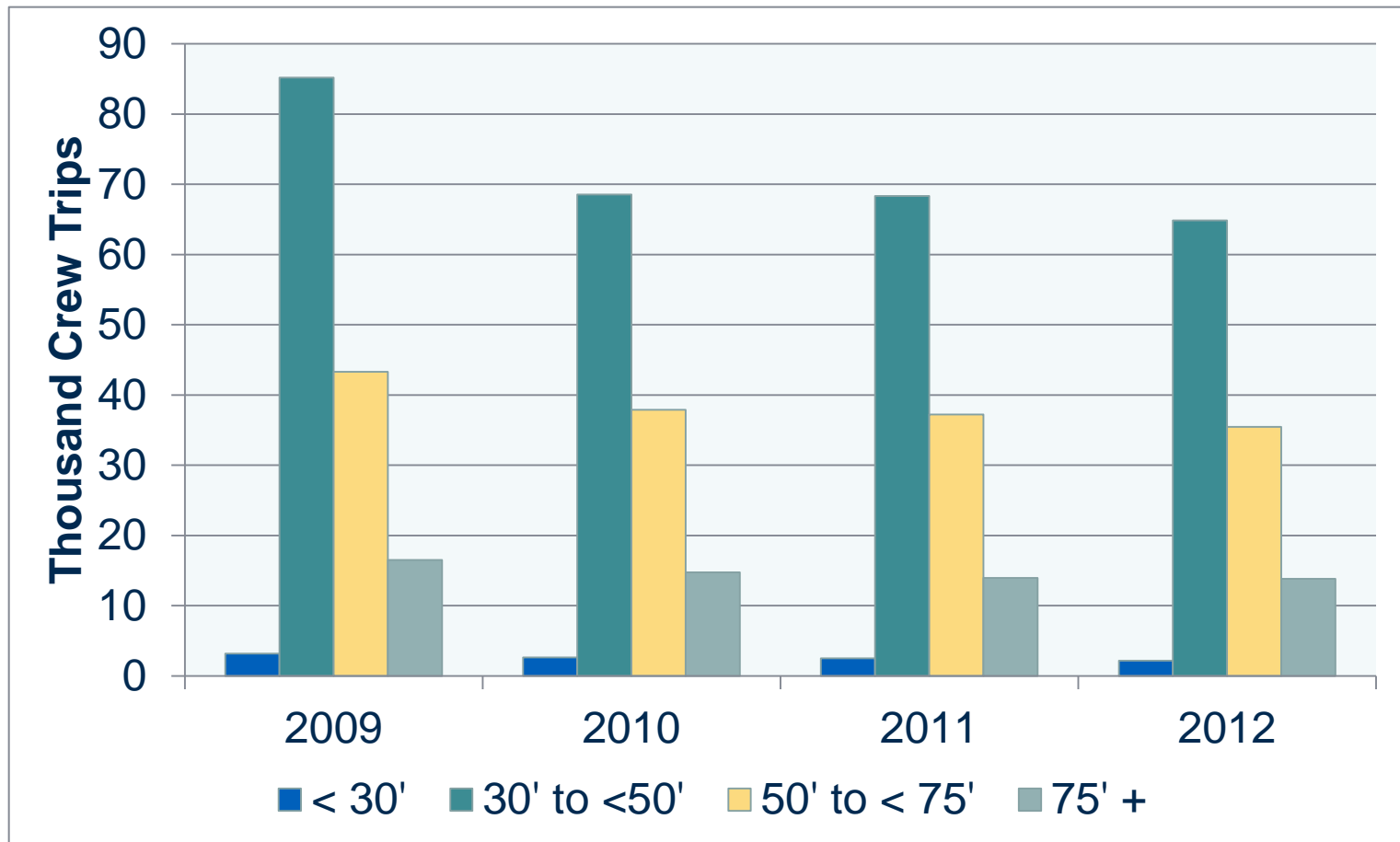
Section IV

Crew Employment

4 year low in 2012 across vessel length classes



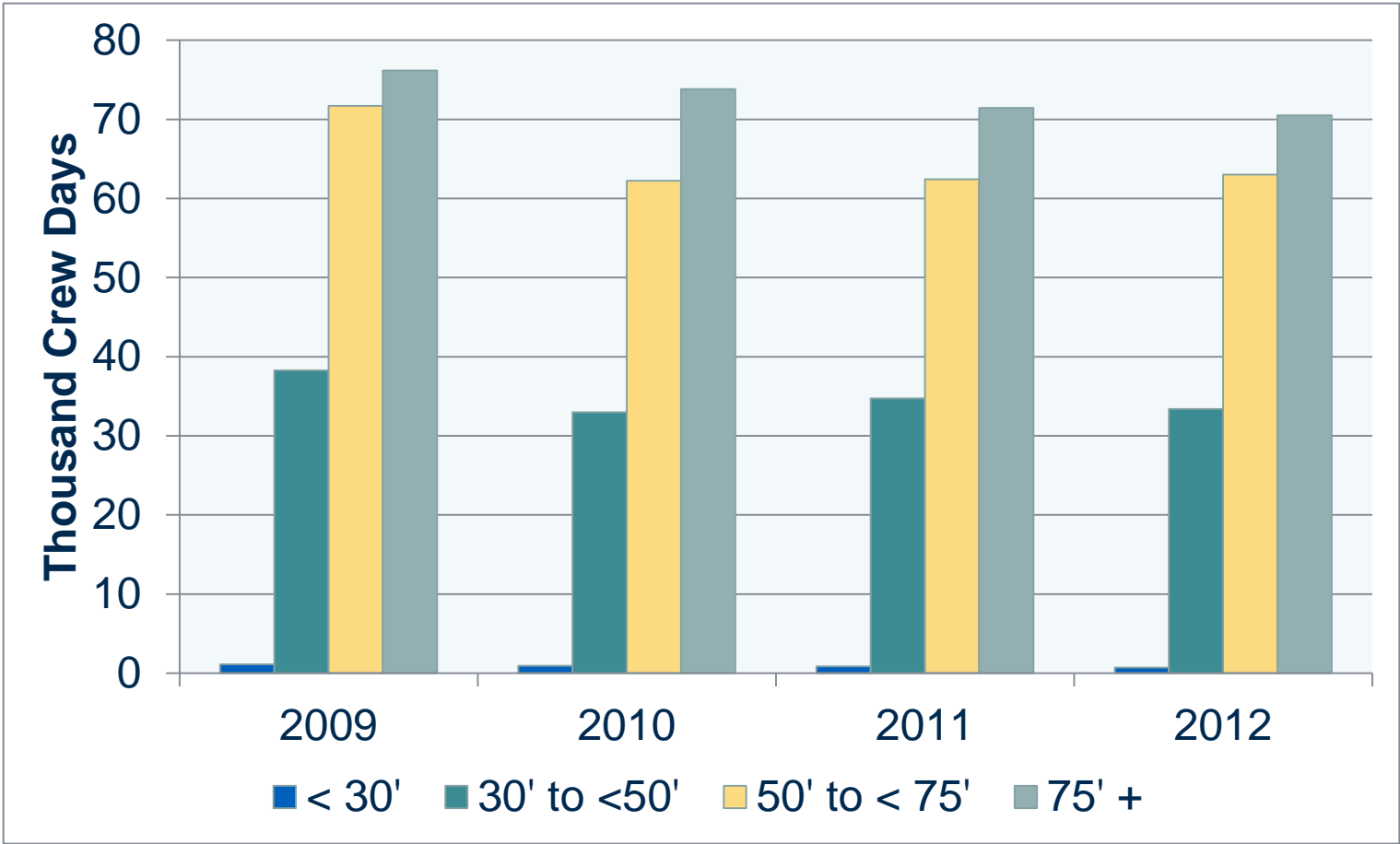
Number of Crew Trips by Vessel Size Category (thousand trips, all trips, May-April)

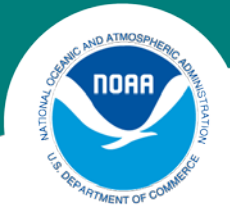




4 year low in 2012 for <30', 75'+,
down in for 30' to <50', up less than 1% for 50' to <75'

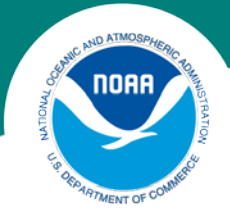
**Number of Crew Days by Vessel Size Category
(thousand days, all trips, May-April)**





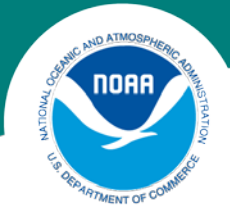
Summary of Crew Employment

- The number of crew positions declined by about 1% for the 3 largest vessel length classes and 5.1% for the under 30' length class in 2012.
- The number of crew positions fell in 2012 in all home port states except ME and NJ. NH had the largest percentage decline, -9%.
- Total crew trips fell 4.6% in 2012. Declines occurred across vessel length classes.
- All home port states saw decreases in the number of crew trips except CT and ME. Crew trips are at a 4 year low in MA, NH, NJ, NY, and RI.

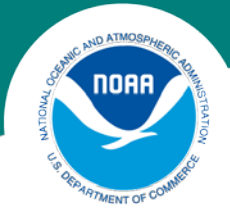


Summary of Crew Employment (continued)

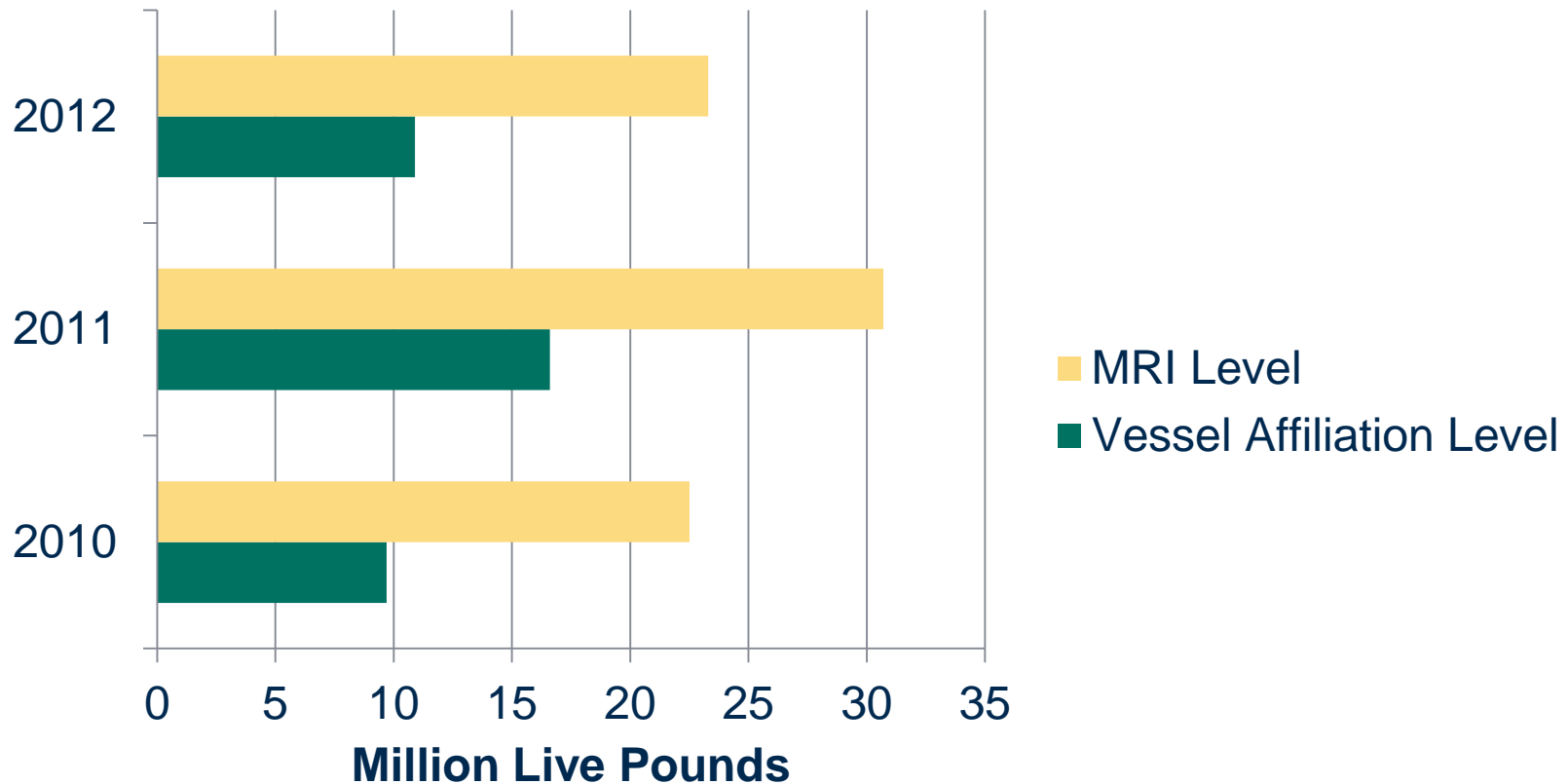
- The total number of crew days decreased 1.1% overall in 2012, and fell for all vessel length classes except 50' to <75', where it rose 1%.
- The number of crew days fell in MA, NY, and RI and rose in CT, ME, NH, NJ.
- The time spent per earning opportunity (crew days/crew trips) is increasing in all home port states except NY and RI.

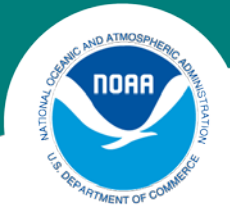


Section V Leasing Activity

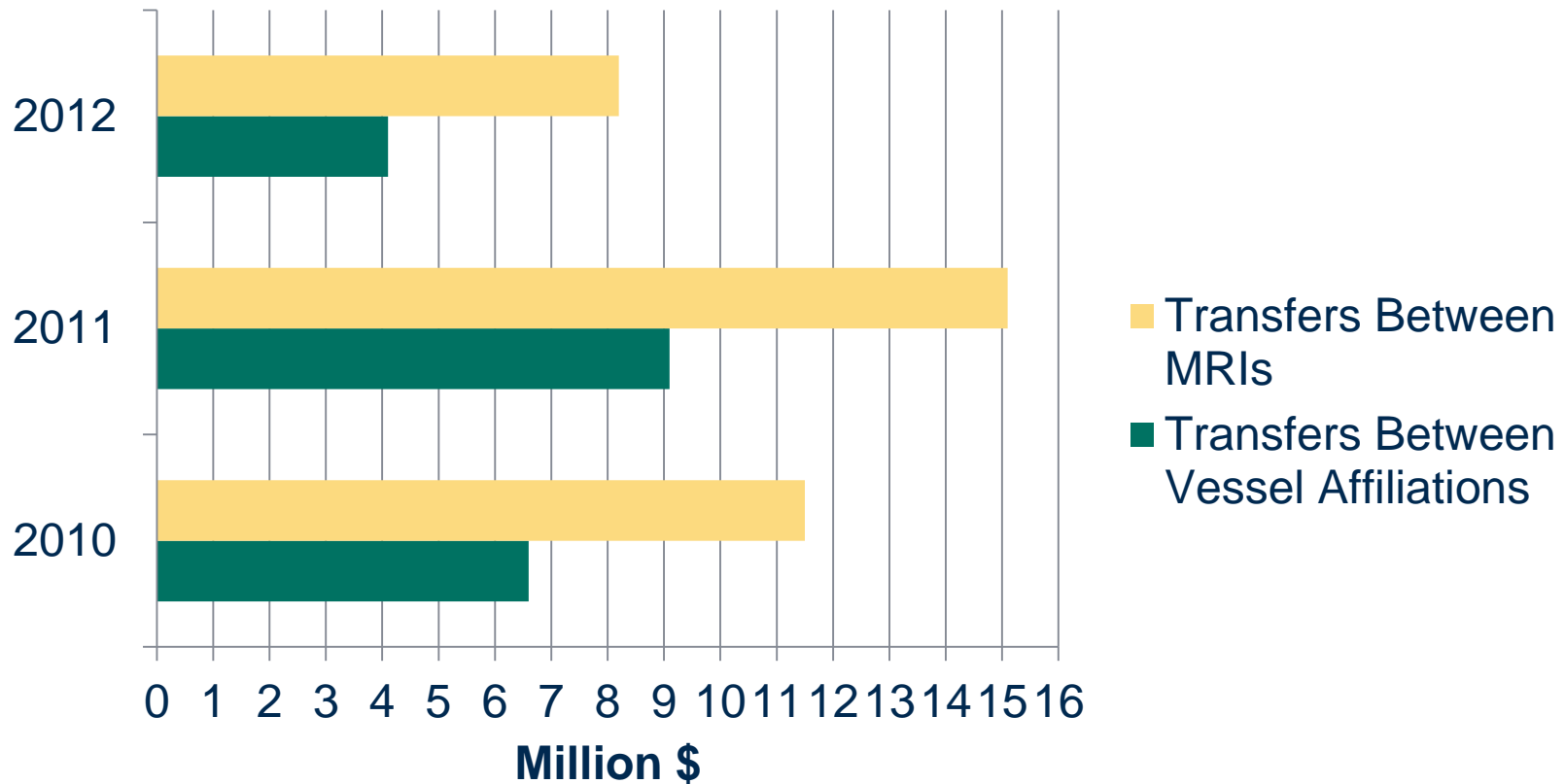


ACE/PSC Leasing (million live pounds, May-April)





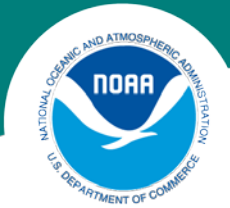
Value of ACE/PSC Leasing (million \$, May-April)





Summary of Leasing Activity

- Both the weight and value of the quota market was down in 2012. The value of quota leased declined 45.8% from 2011 to 2012.
- About 32% of allocated ACE was caught in 2012, down from 41% in 2011.
- On the stock level, utilization rates ranged from 4% (GB West Haddock) to 85% (CC/GOM YTF).
- The home port state of MA and major home port of Gloucester have the largest number of lessees.
- Vessels 30' to <50' account for the largest percentage (44%) of lessees.



Section VI

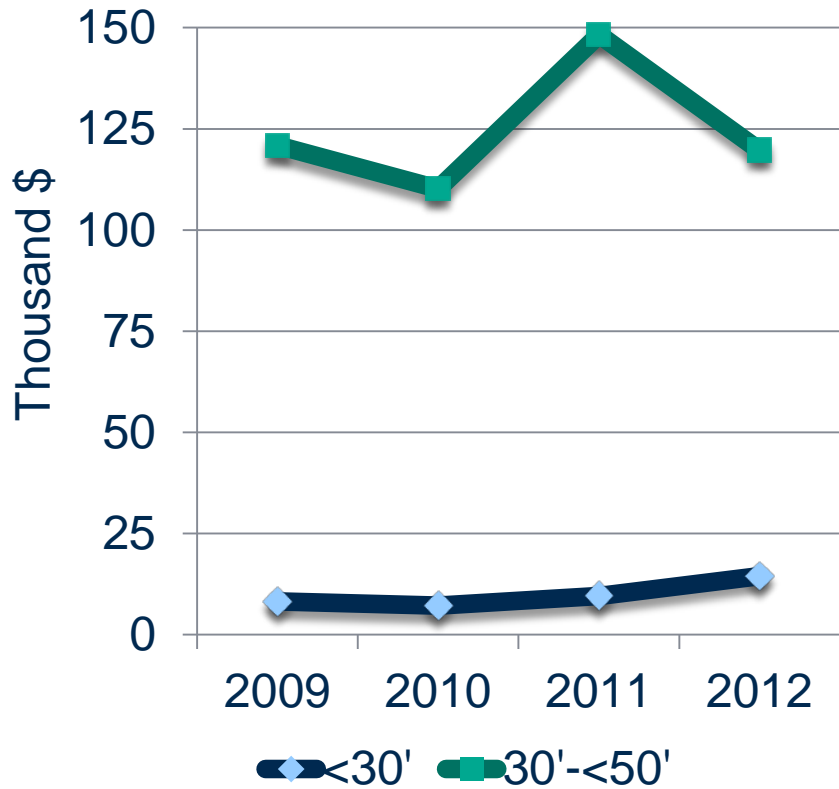
Economic Performance of the Active GF Fleet (unadjusted for leasing activity)



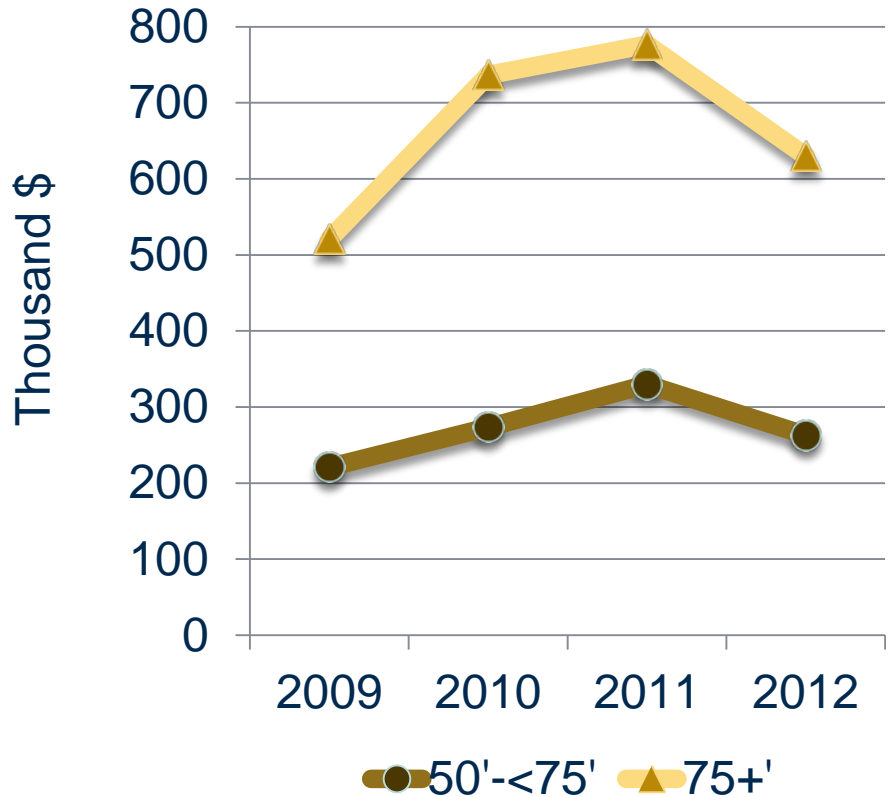
**Mostly Lower Average All Species Revenue
Per Vessel on GF Trips in 2012**

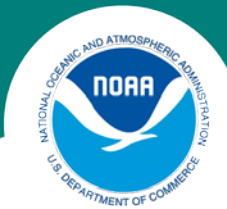
All species, GF trips, thousand \$, May-April

Smaller vessels



Larger vessels

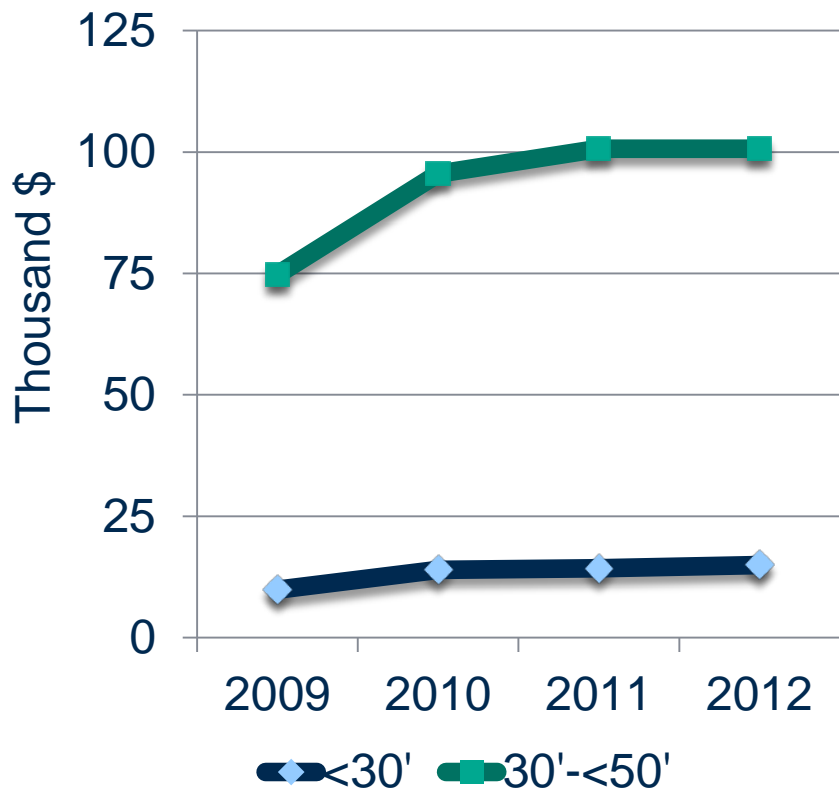




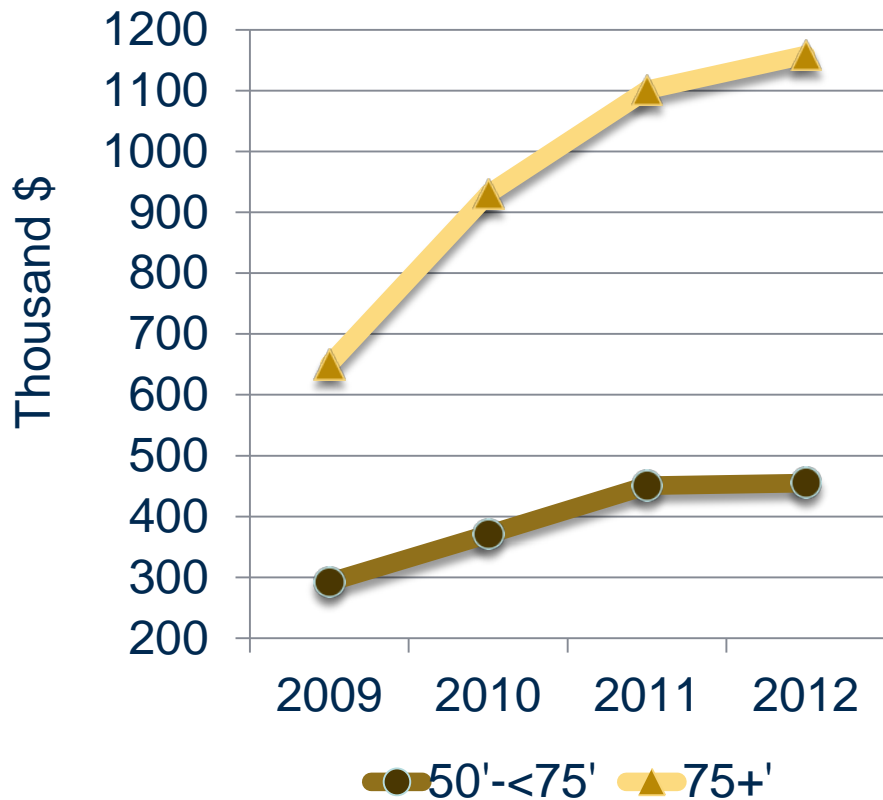
Constant or Higher Average All Species Revenue Per Vessel on Non-GF Trips in 2012

All species, NGF trips, thousand \$, May-April

Smaller vessels



Larger vessels





Estimation of Net Revenue (unadjusted for leasing)

- **Net Revenue = Gross Revenue – Trip Costs**
 - Trip costs included: fuel, oil, ice, bait, food, water and damages, lumpers' fees, and sector membership fees.
 - Communication and trucking costs are not accounted for.

- **Limitations**
 - Does not account for quota leasing costs incurred or leasing revenues received (more on this later).
 - Does not reflect fixed costs.
 - Net revenue is not a measure of profitability.



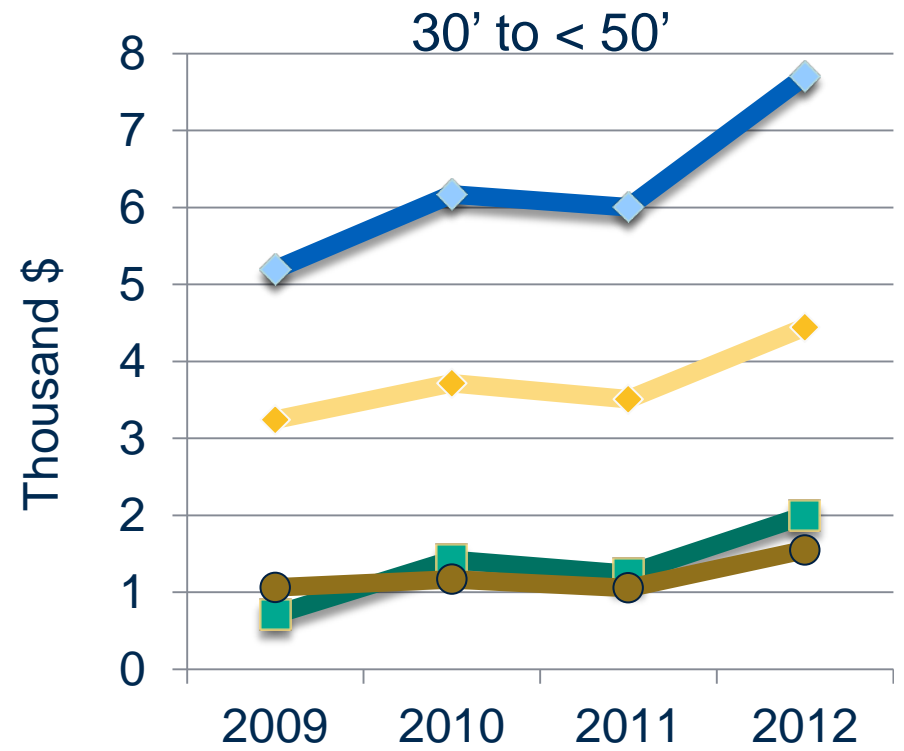
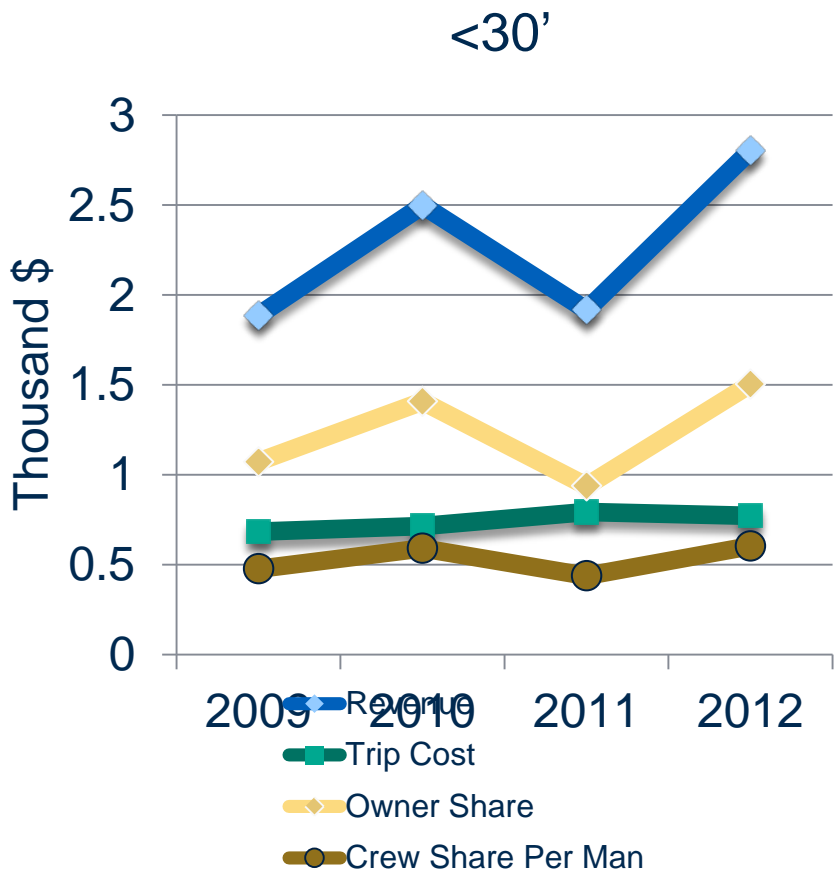
Estimation of Net Revenue (unadjusted for leasing)

- Methodology & Assumptions
 - Trip costs for all trips are estimated using cost information from sampled trips. Average trip costs per day absent were estimated for 80 vessels types.
 - Vessel type was based on gear, vessel length, trip duration & fishing year.
 - Assumptions about whether the vessel is operated by the owner or by a hired captain.
 - Vessels < 75':
 - Crew of < 3: operator is the owner.
 - Crew of 3+: operator is a hired captain.
 - Vessels 75'+: operator assumed to be a hired captain.



Average Per Day Values on GF Trips
Higher Revenues & Shares for smaller vessels
 (unadjusted for leasing)

Groundfish trips, May-April

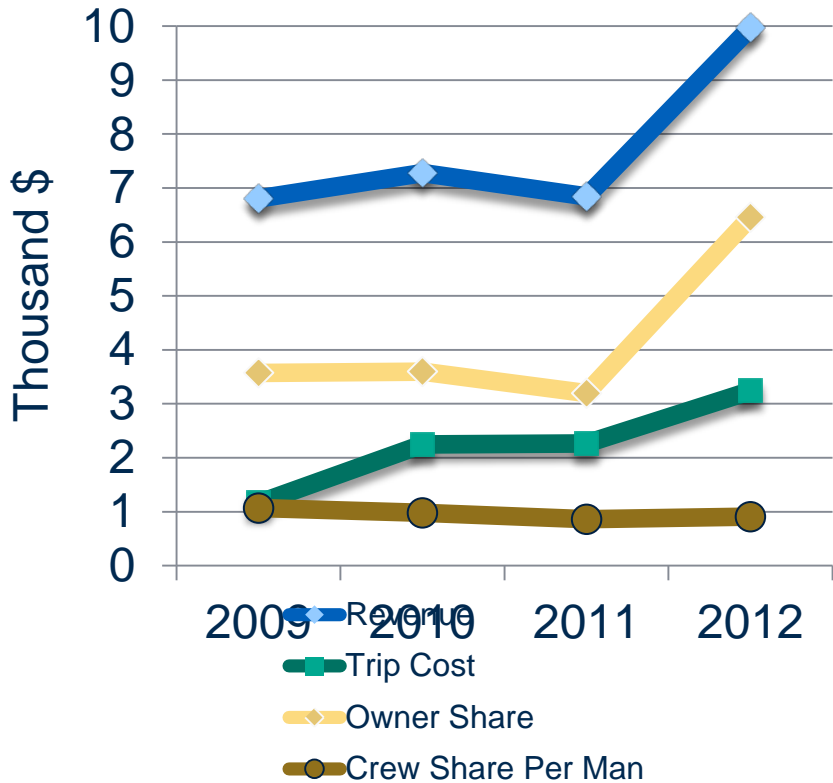




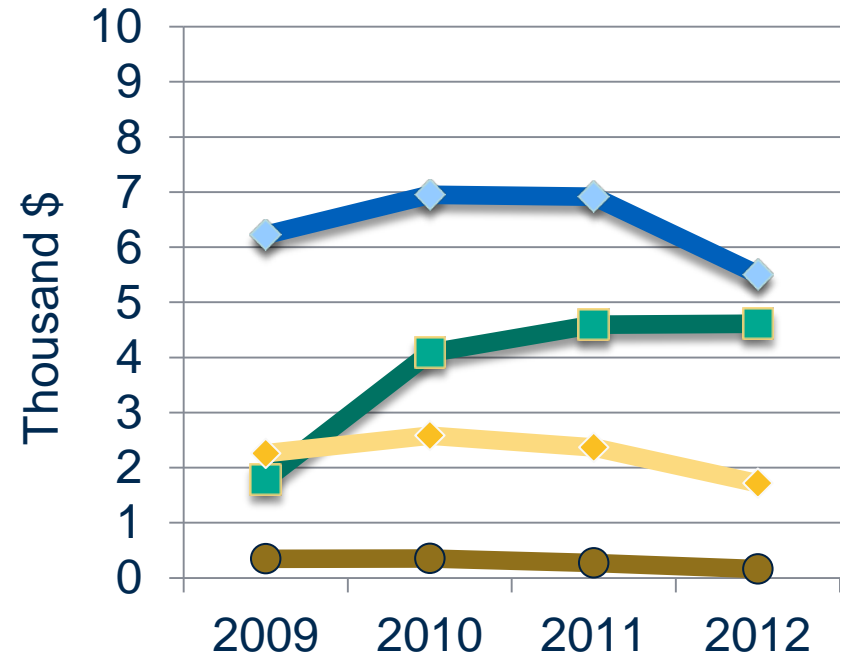
Average Per Day Values on GF Trips
 Revenues & Shares are up for 50' to <75', at a 4 year low for 75'+
 (unadjusted for leasing)

Groundfish trips, May-April

50' to <75'



75'+

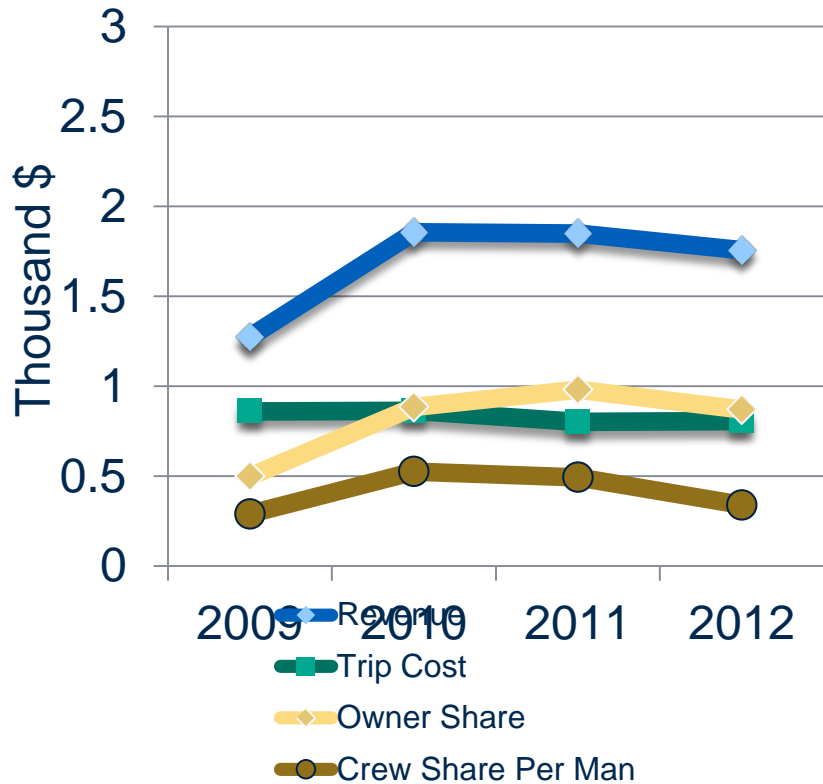




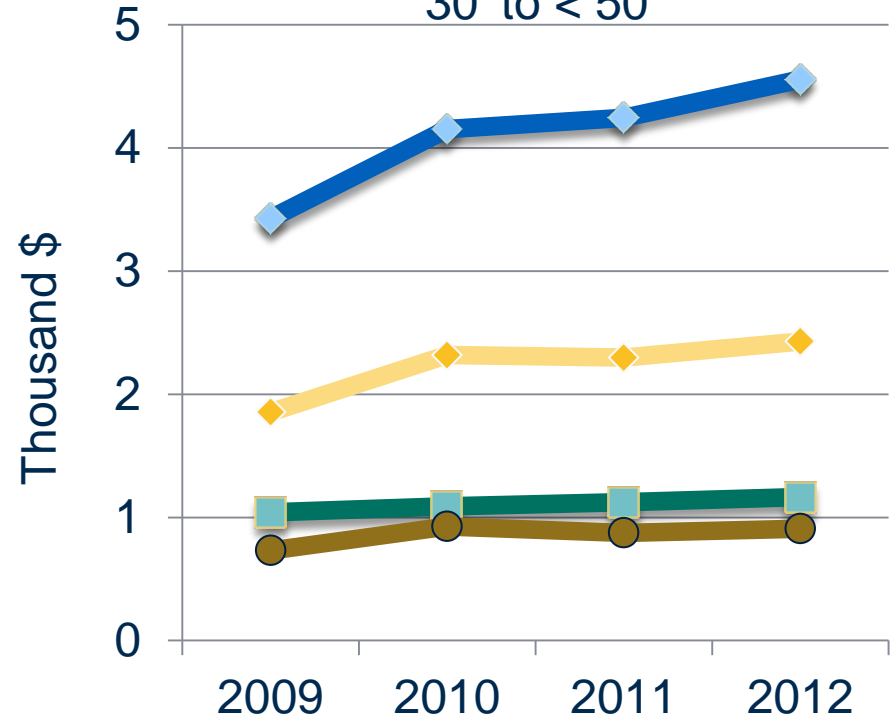
Average Per Day Values on NGF Trips
Revenues and Shares down for <30', slightly up for 30' to <50'

Non-Groundfish trips, May-April

<30'



30' to < 50'

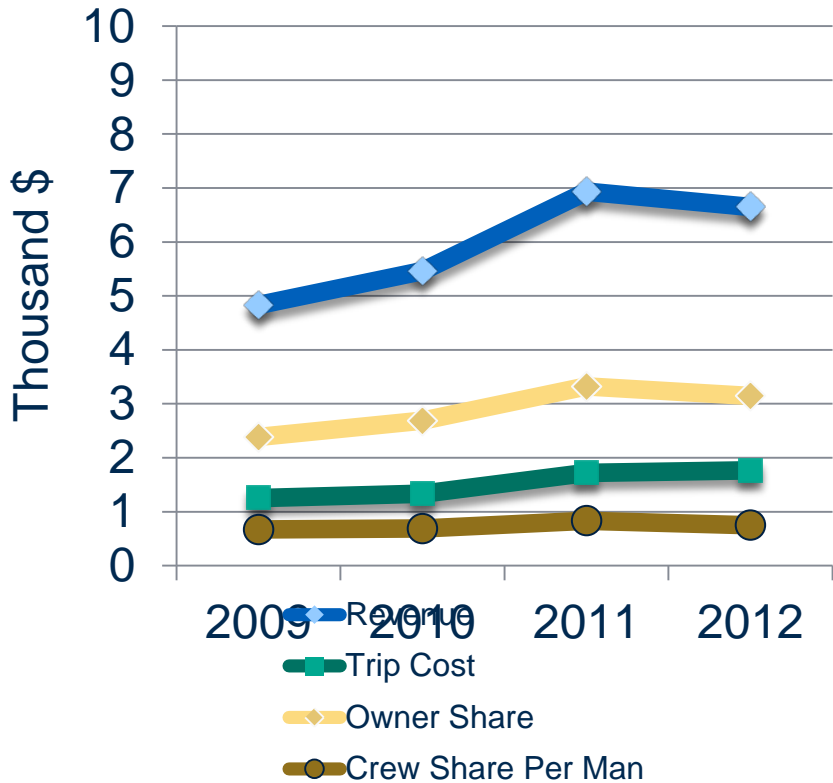




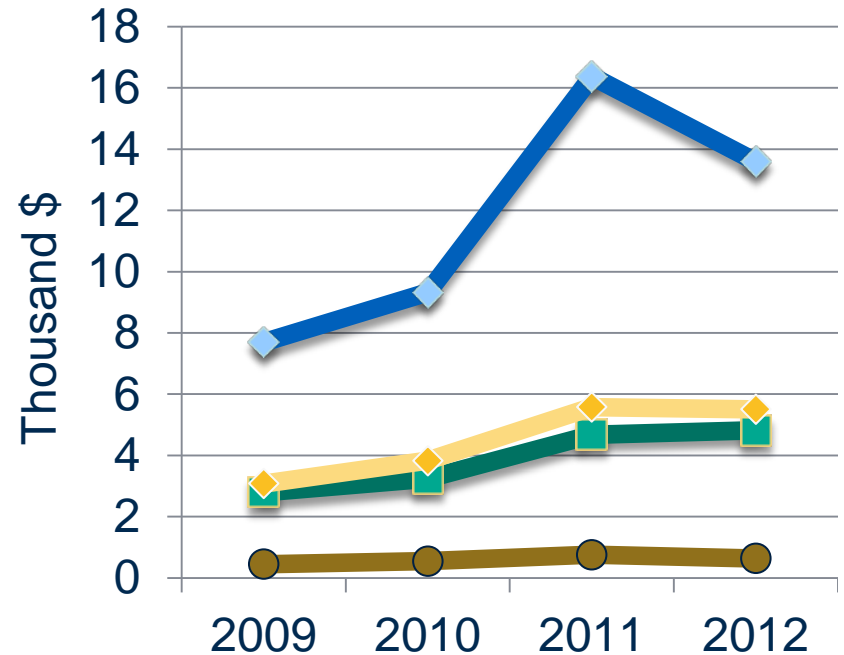
**Average Per Day Values on NGF Trips
Revenues & Shares down for 50' to <75', 75'+**

Non-Groundfish trips, May-April

50' to <75'



75'+

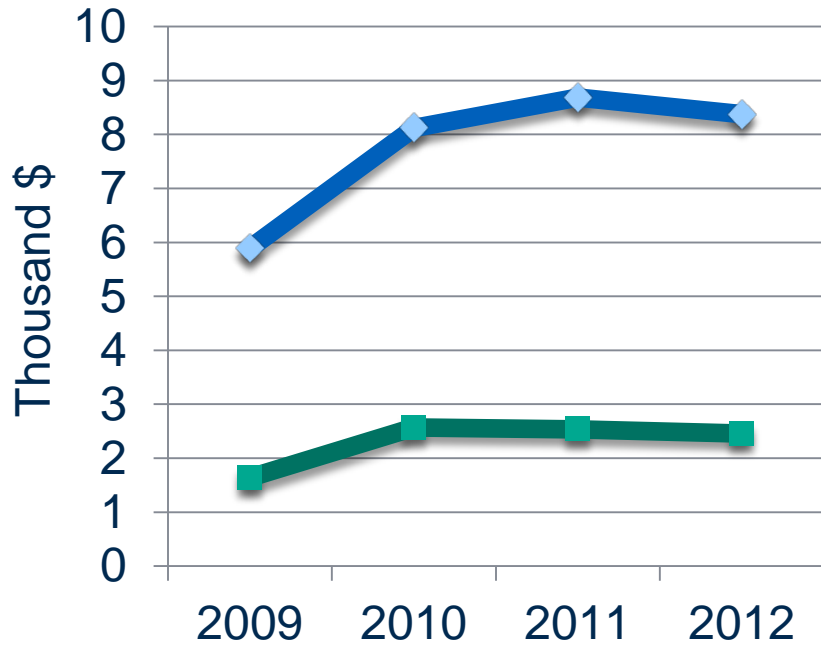




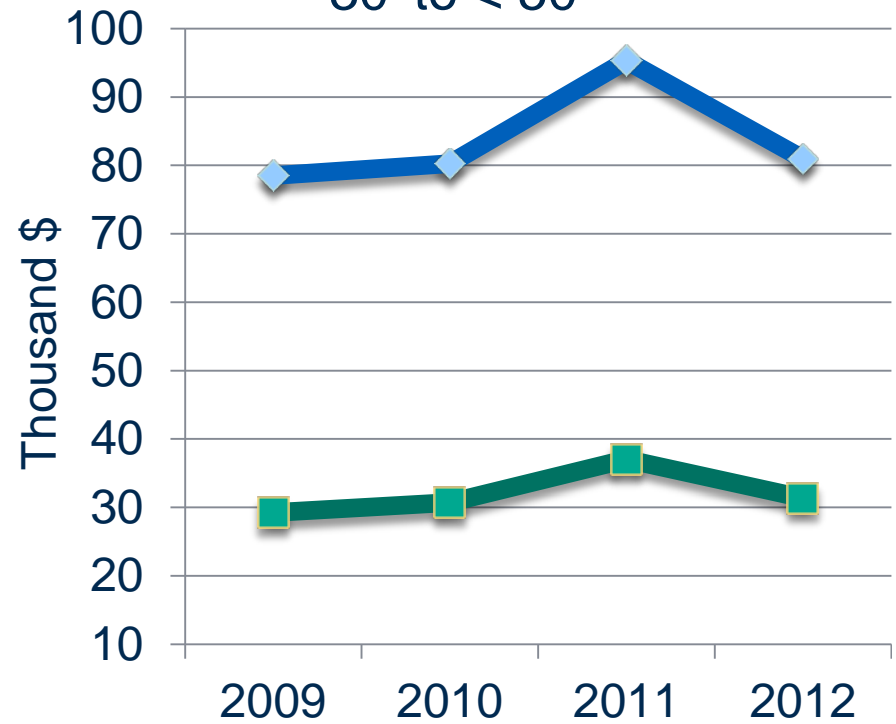
Lower Average Per Vessel Shares in 2012 compared to 2011 for <30' and 30' to <50' (unadjusted for leasing)

All trips, May-April

<30'



30' to < 50'



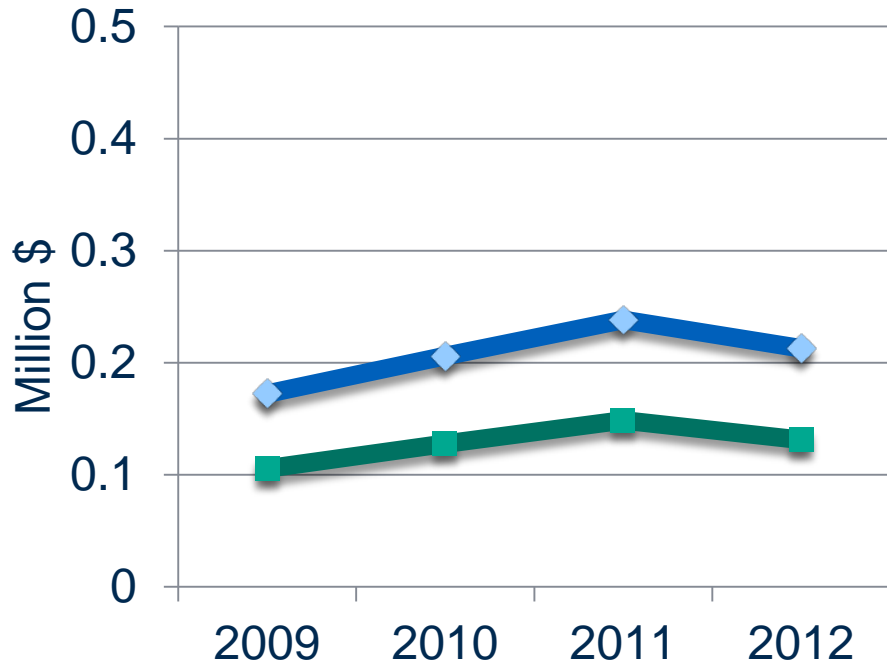
◆ Owner Share ■ Crew Share



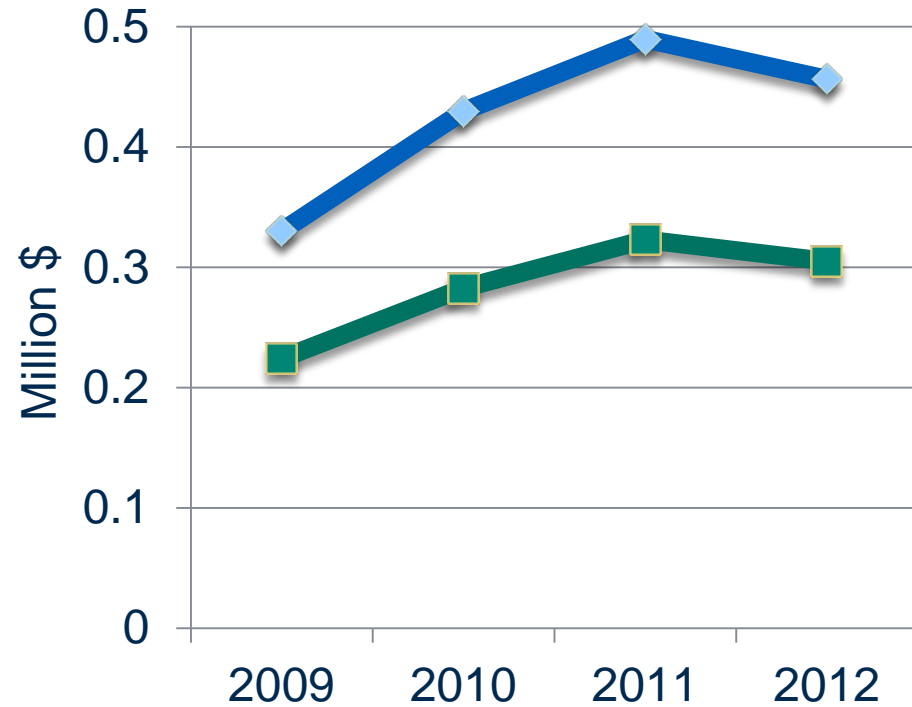
Lower Average Per Vessel Shares in 2012 compared to 2011 for 50 to <75' and 75'+ (unadjusted for leasing)

All trips, May-April

50' to <75'



75'+



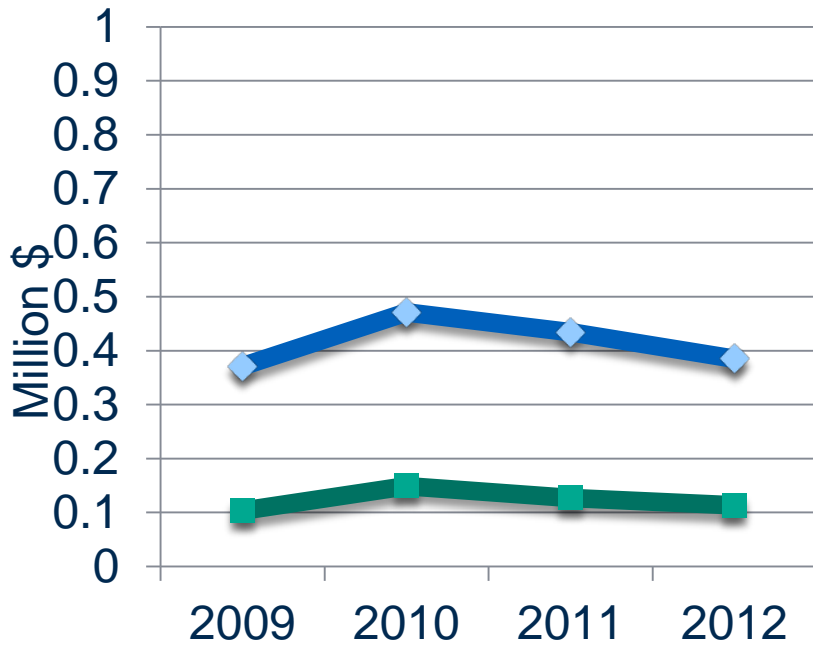
◆ Owner Share ■ Crew Share



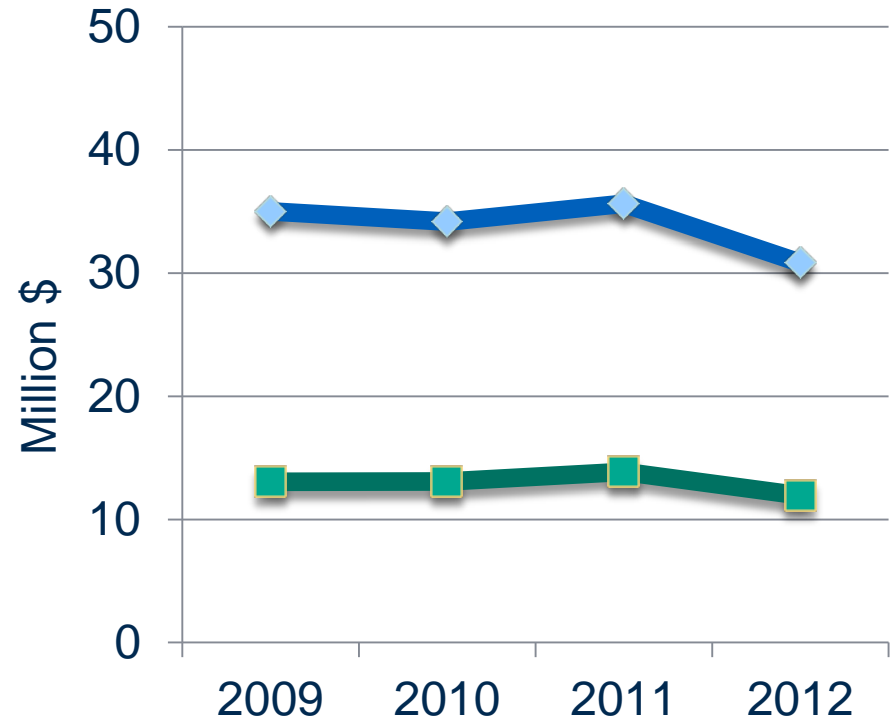
**Lower Fleet Level Shares in 2012
for <30' and 30' to <50' (unadjusted for leasing)**

All trips, May-April

<30'



30' to < 50'



◆ Owner Share ■ Crew Share



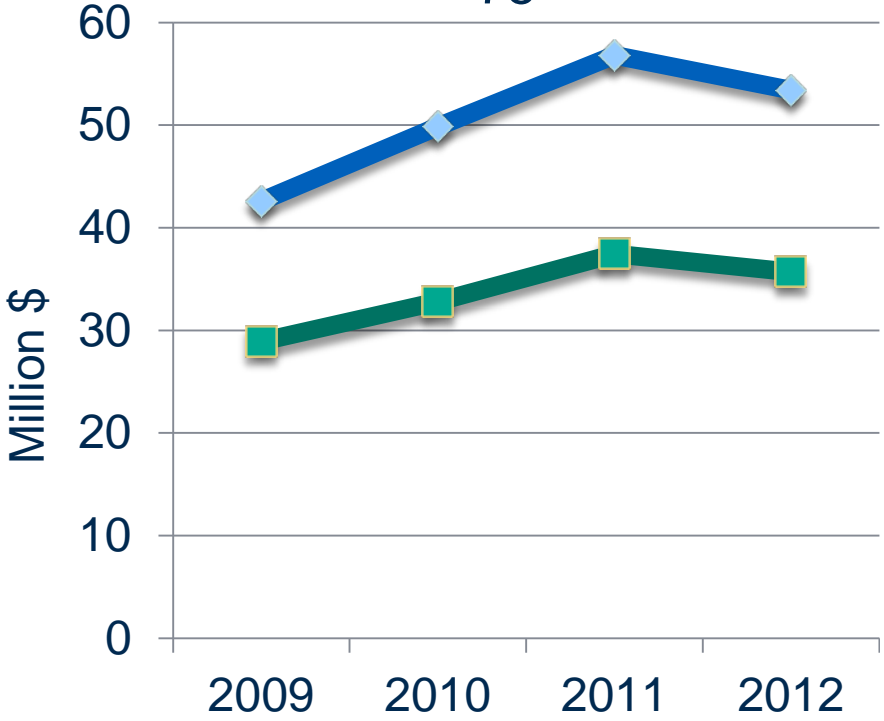
**Lower Fleet Level Shares in 2012
for 50' to <75' and 75'+ (unadjusted for leasing costs)**

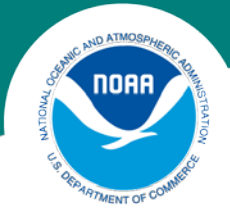
All trips, May-April

50 to <75'



75'

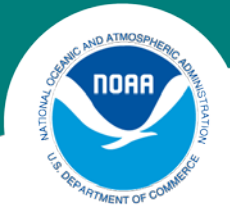




Section VII

Consolidation and Distribution of Revenues

among active vessels and vessel affiliations



Consolidation & Distribution of Revenues from Landings by the active GF fleet

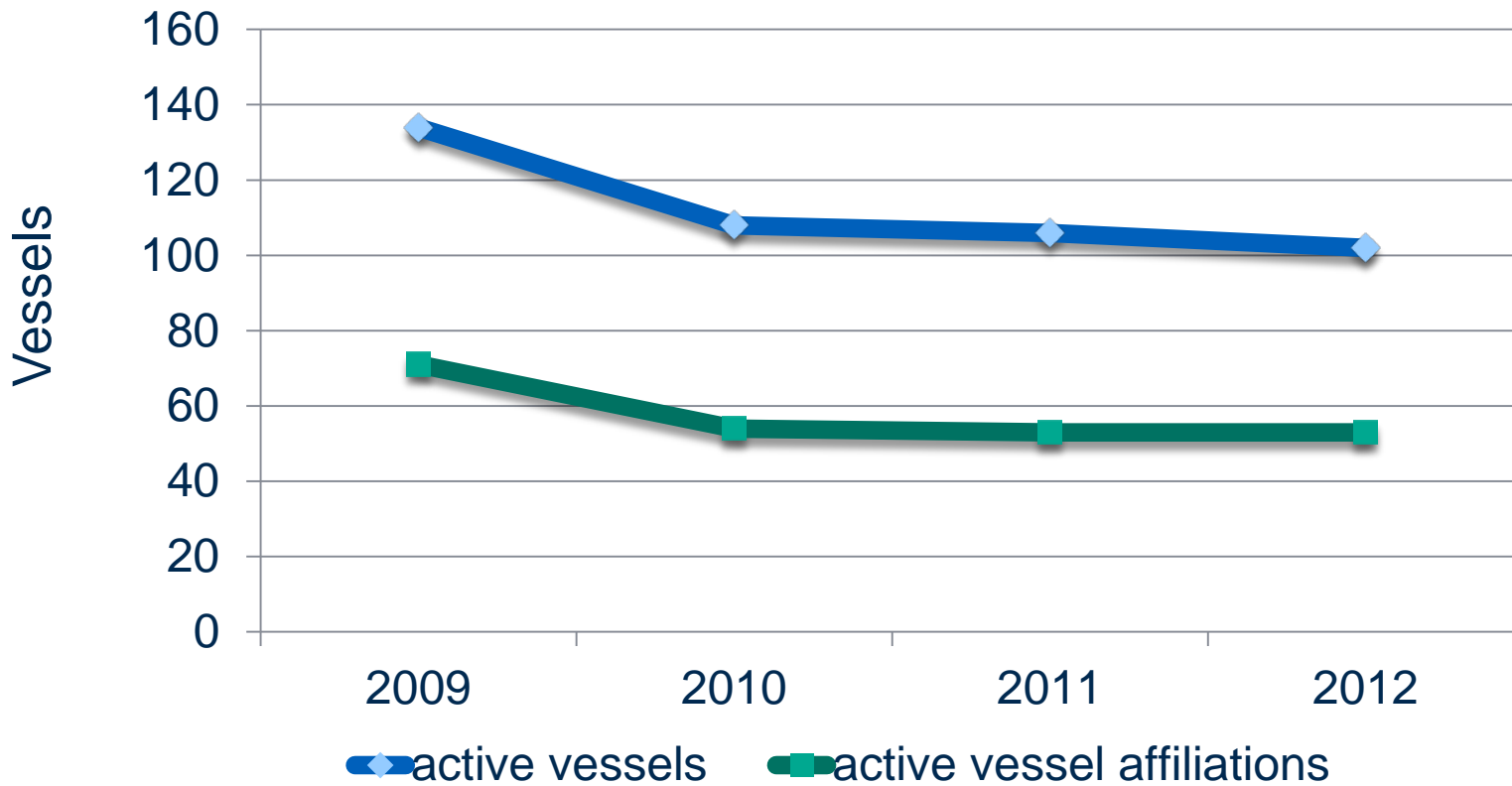
- Consolidation of revenues:
 - A shift in the GF fishery towards fewer active vessels or active vessel affiliations earning GF and all species revenues.

- Distribution of revenues:
 - The distribution of GF and all species revenues among the remaining active vessels or active vessel affiliations in the fishery.



Revenue Consolidation

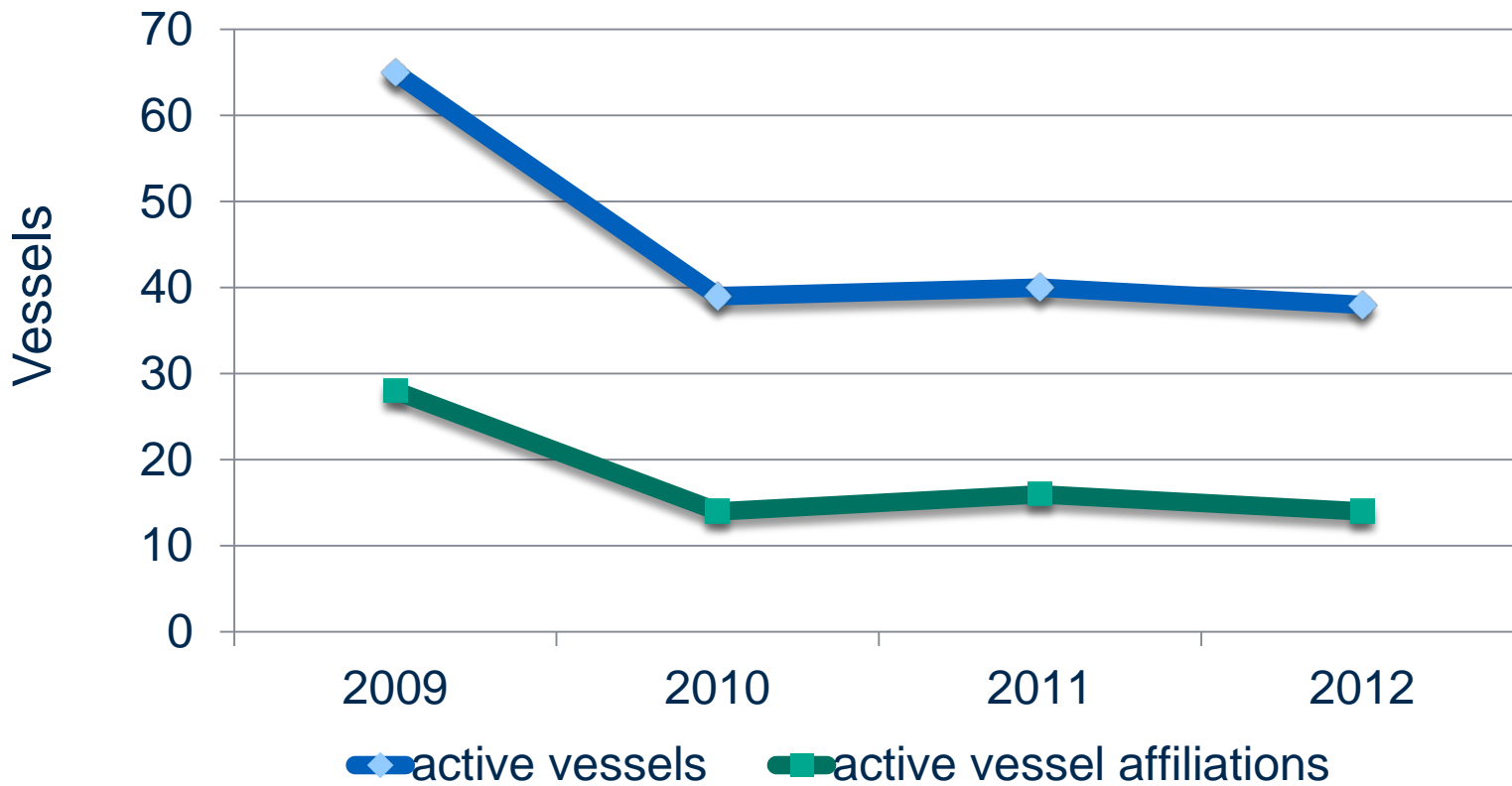
Number of vessels and vessel affiliations landing top 50% of all species revenue





Revenue Consolidation

Number of vessels and vessel affiliations landing top 50% of groundfish revenue

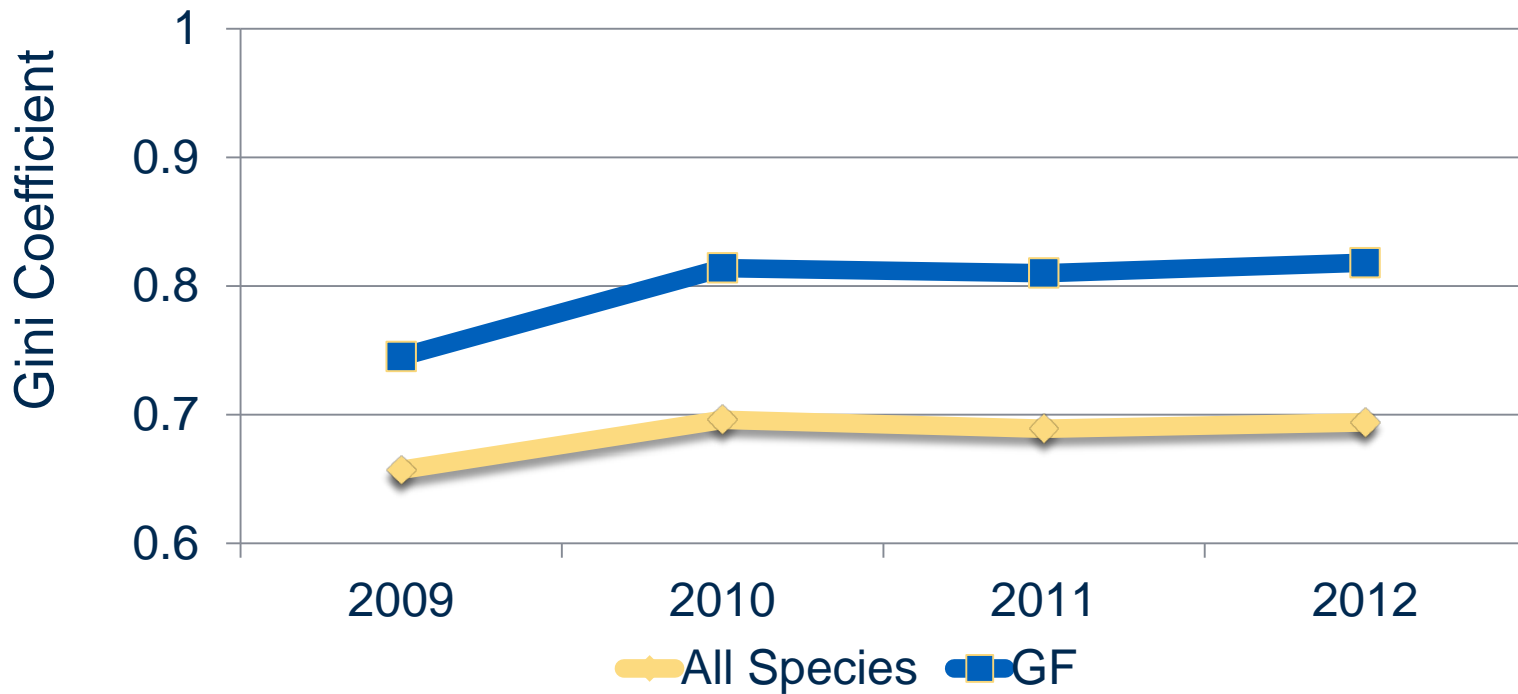


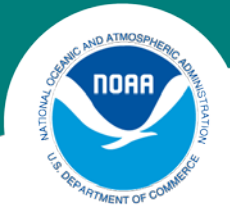


Revenue Distribution

All Species Revenue and Groundfish Revenue

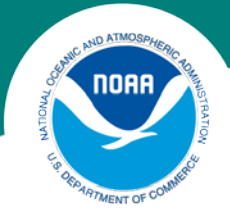
Vessel Affiliations





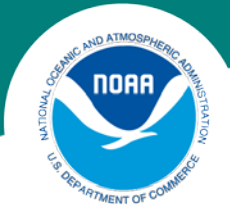
Section VIII

Adjusting Net Revenue for Leasing Activity



Adjusting for Leasing Activity- Background

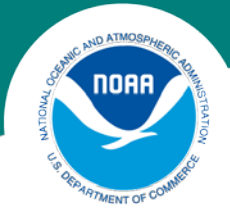
- Between sector trades are tracked by NMFS.
- Within sector trades are not tracked by NMFS, but are voluntarily reported by sectors in their year end reports.
- Sectors also voluntarily report which sector members transfer quota out of the sector and which receive quota from another sector.
- Not all sectors voluntarily report within and between sector trades in the same fashion.
- 17 of 20 sectors provided a member ID number and a cross link to the MRIs associated with each sector member (2 of those that didn't provide this information are permit banks).
- Associating vessels with actual quota trades is difficult b/c fishing permits can be associated with different MRIs & can move in and out of CPH.



Analysis of Quota Trade Impacts

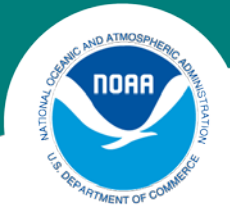
- Analysis is limited to the impact of quota trades on net revenue at the sector member level.

- The average net revenues adjusted for quota trading are only for sector members that were identified in year-end sector reports.
 - Earlier, unadjusted net revenues reported were for the entire population of active vessels and included CP vessels.



Analysis of Quota Trade Impacts

- The average revenues and costs presented here from quota trading are also based on the subset of traders that could be tracked through the sector-year end reports.
- All trades of a given stock are assumed to be at a constant price (weak, but unavoidable assumption).



Quota Trading Activity in FY2012- Summary

- The total value of quota traded through 2012 was \$14.1 million.
- The total value of quota traded between sectors was \$6.2 million.
- The total value of quota traded within sectors was \$7.9 million.

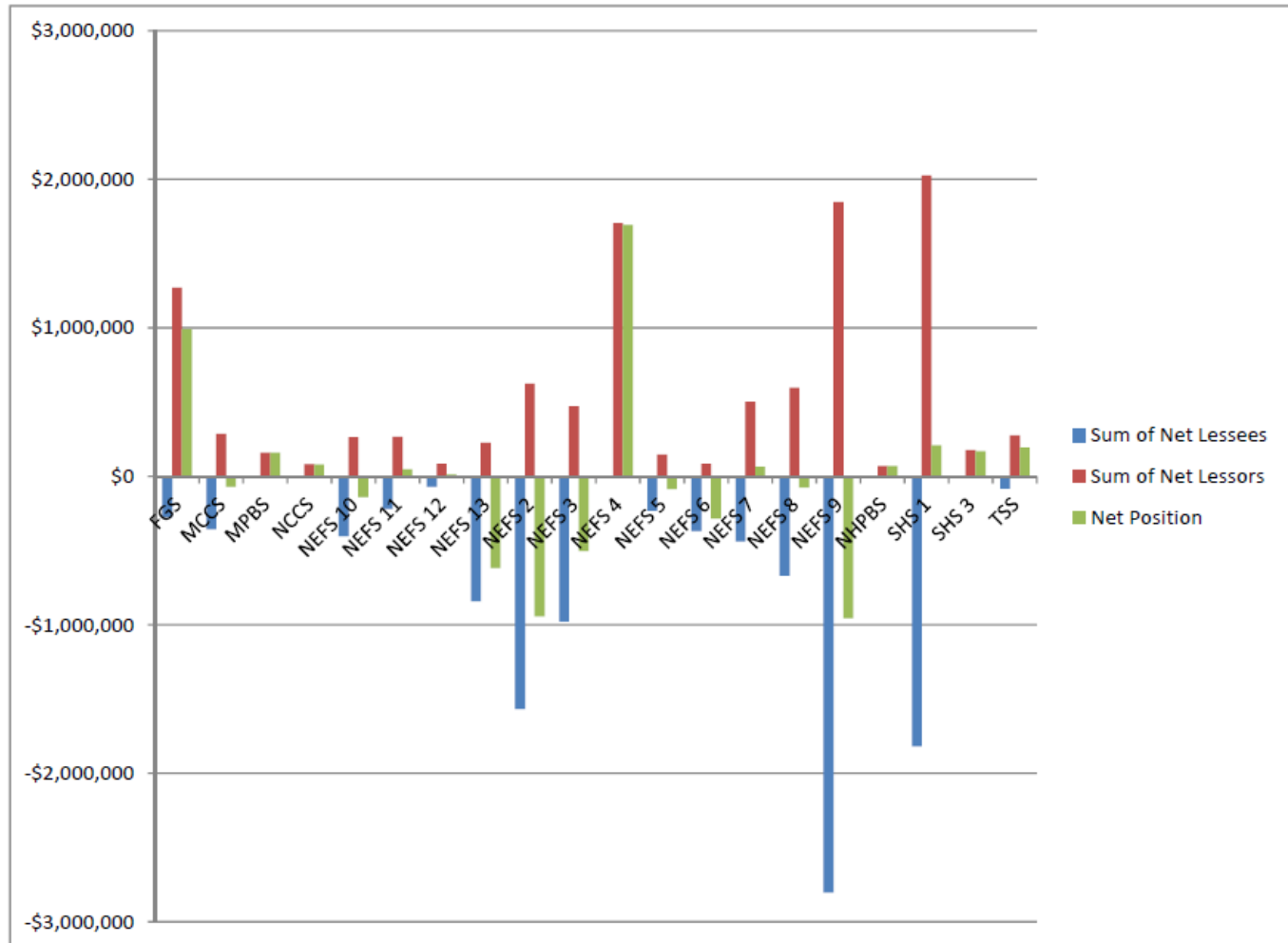


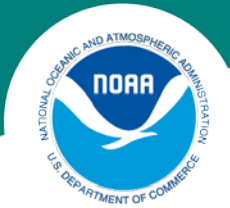
Quota Trading Activity-Summary (continued)

- Four highest stocks for net quota traded value:
 1. GB Winter Flounder (\$1.9M)
 2. White Hake (\$1.8M)
 3. GOM Cod (\$1.6M)
 4. Western GB cod (\$1.6M)
- Two sectors with the largest net quota expenses:
 1. NEFS 9 (\$1.0M)
 2. NEFS 2 (\$0.9M)
- Two sectors with the largest net quota revenues:
 1. NEFS 4 (\$1.7M)
 2. FGS (\$1.0M)



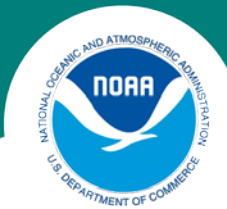
Final Net Quota Positions by Sector





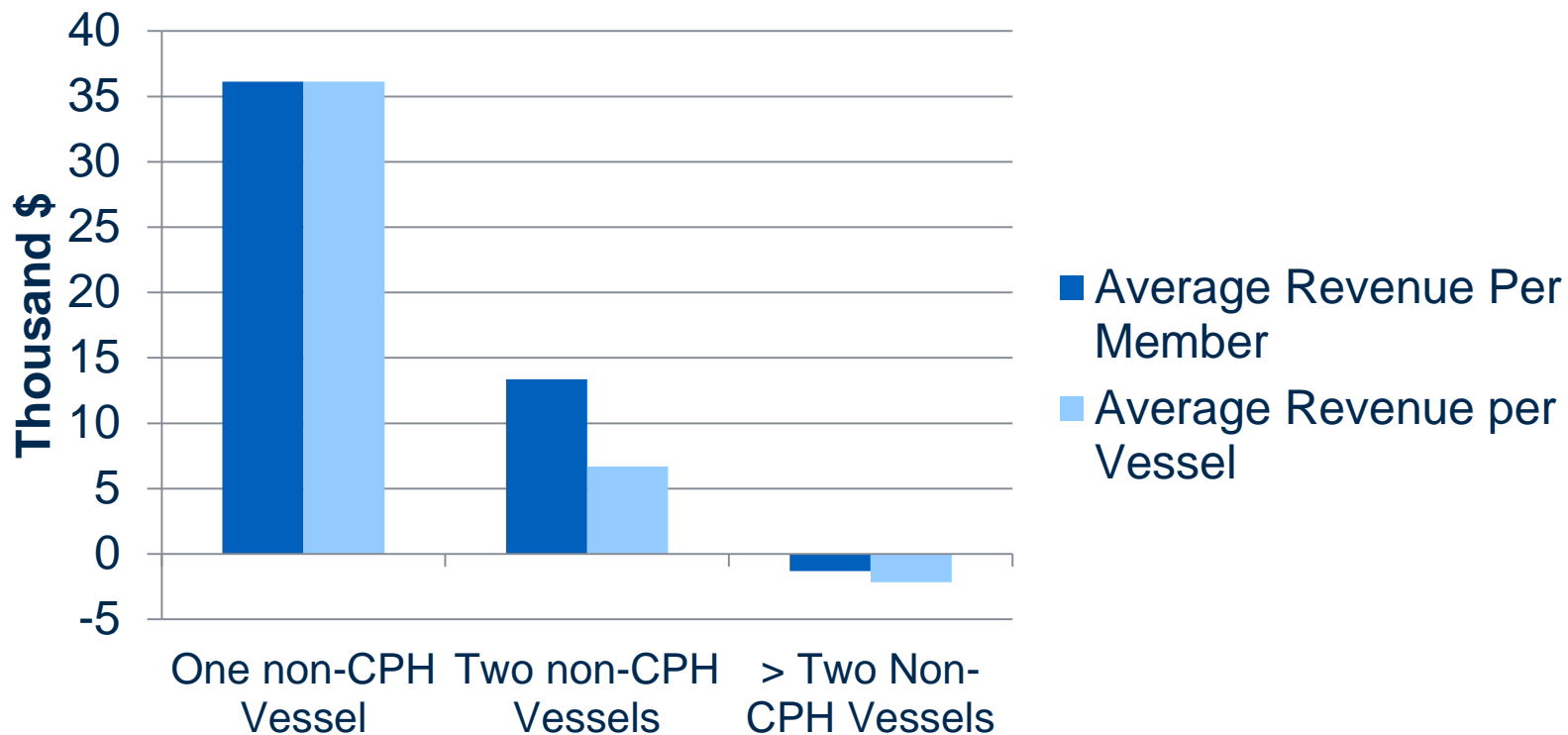
Adjusting Net Revenue for Leasing Activity

- Sector member average net revenues were adjusted by average trading revenues or costs.
- 12 Sector Member ‘Types’: 4 vessel length categories and 3 vessel owner ship categories.
- Assumption that the vessel owner pays leasing costs - therefore adjustments are made to owner’s share only – and not crew share.



Average Revenue from Quota Trades per sector member and per vessel (active and inactive sector members, no CP)

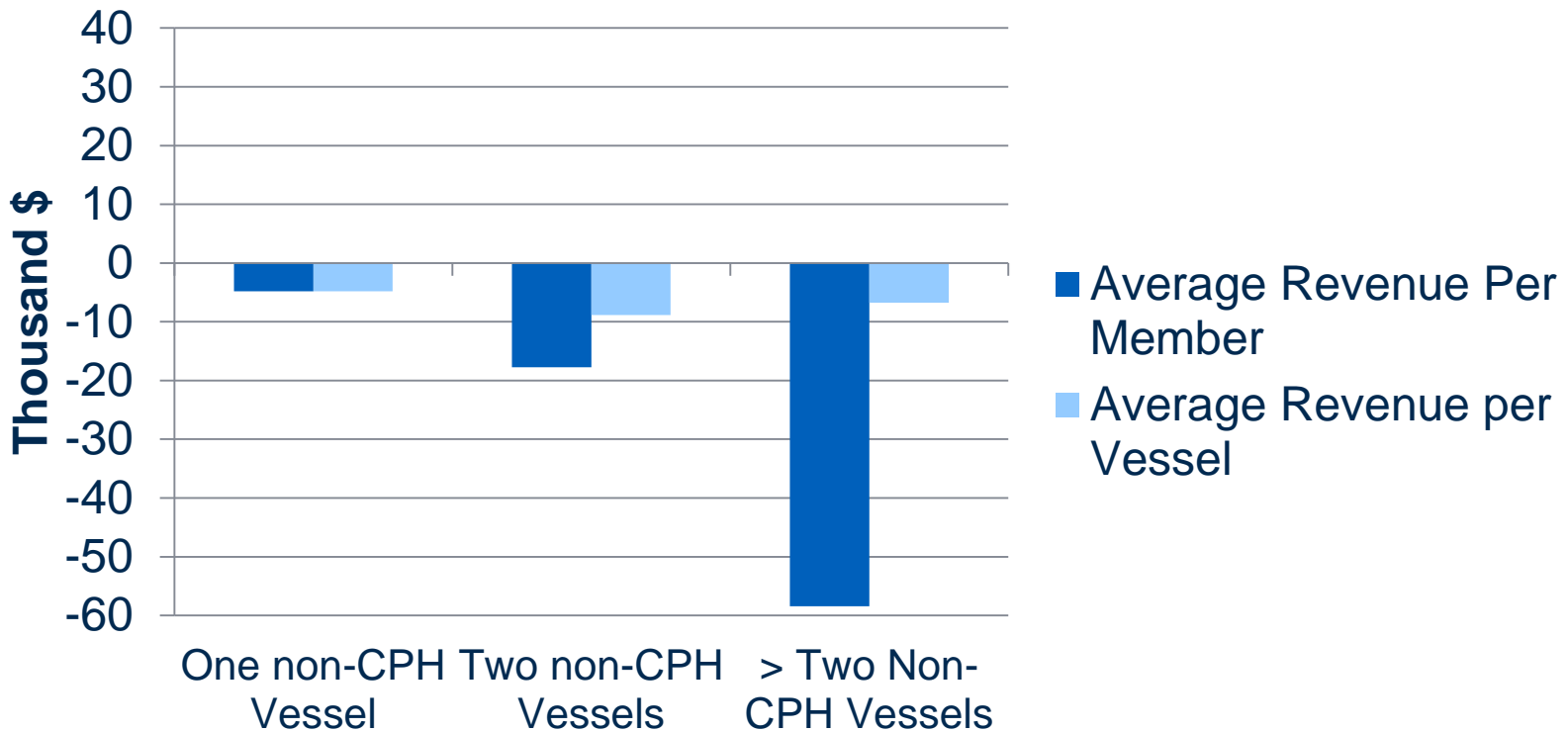
Vessel Average Length <30'

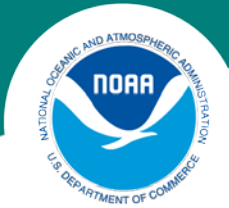




Average Revenue from Quota Trades
per sector member and per vessel
(active and inactive sector members, no CP)

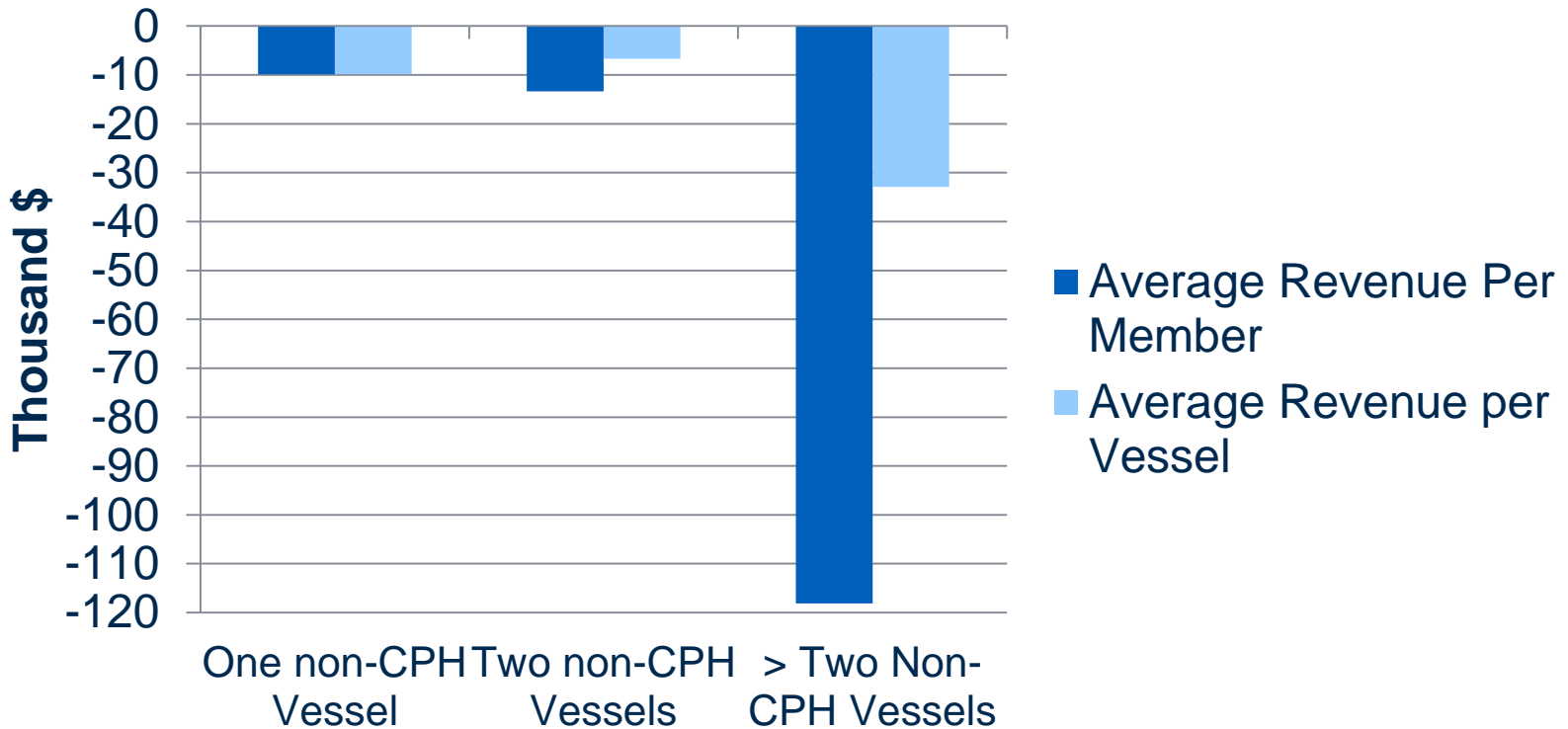
Vessel Average Length 30' to <50'

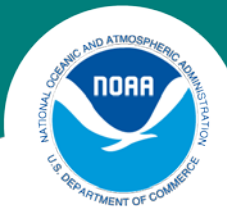




Average Revenue from Quota Trades
per sector member and per vessel
(active and inactive sector members, no CP)

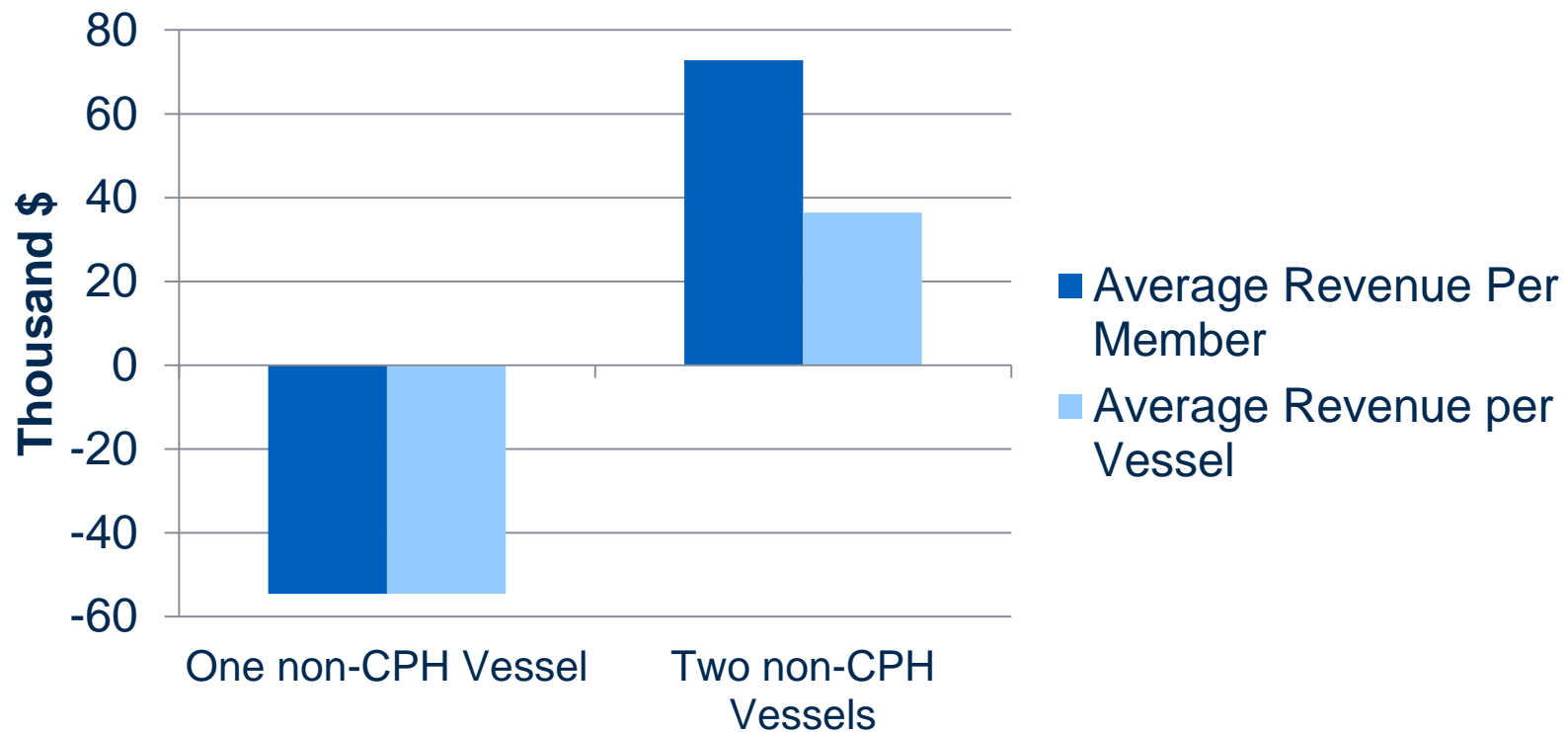
Vessel Average Length 50' to <75'





Average Revenue from Quota Trades per sector member and per vessel (active and inactive sector members, no CP)

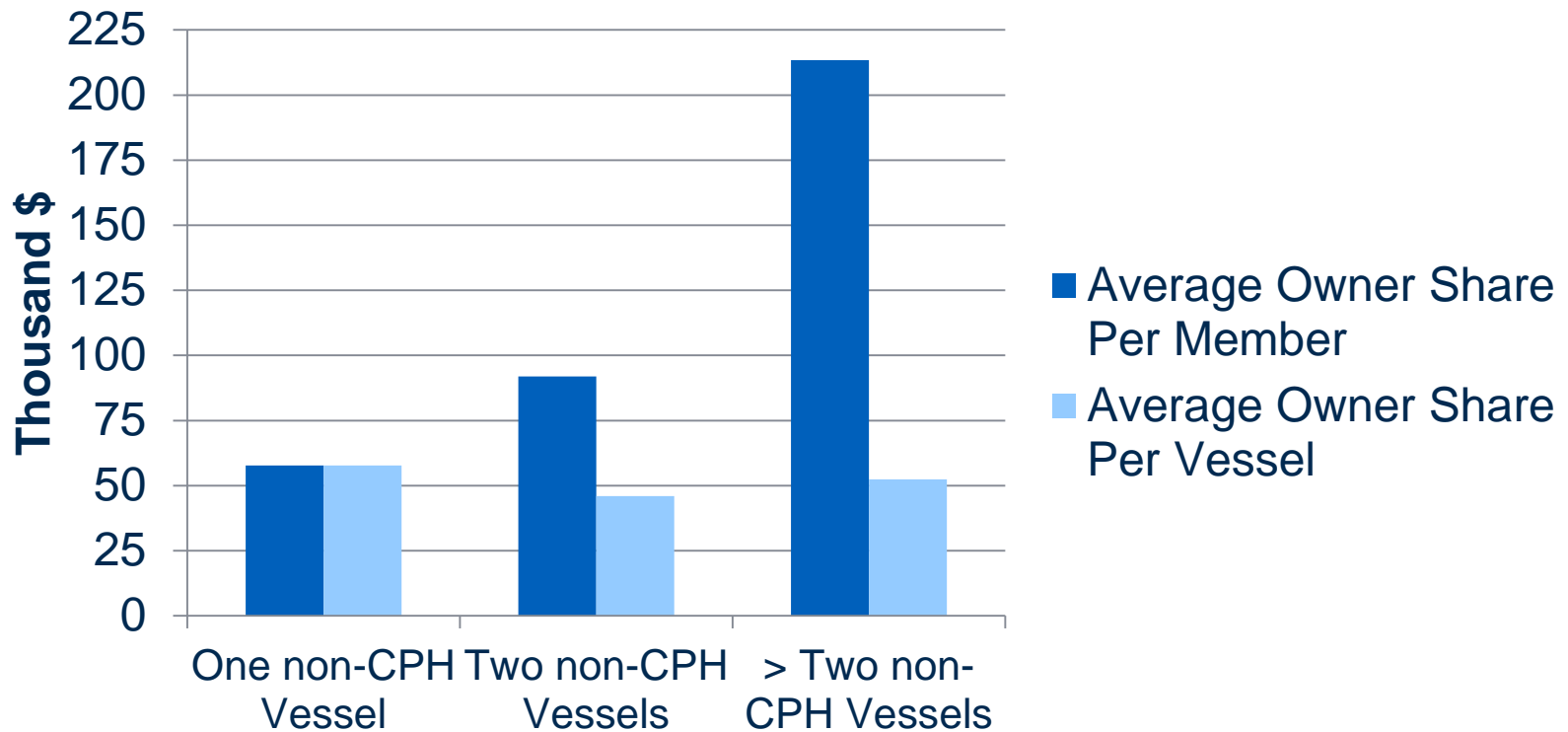
Vessel Average Length 75'+





Average Post-Quota Trading Owner Share per sector member and per vessel (assuming owner pays all quota costs)

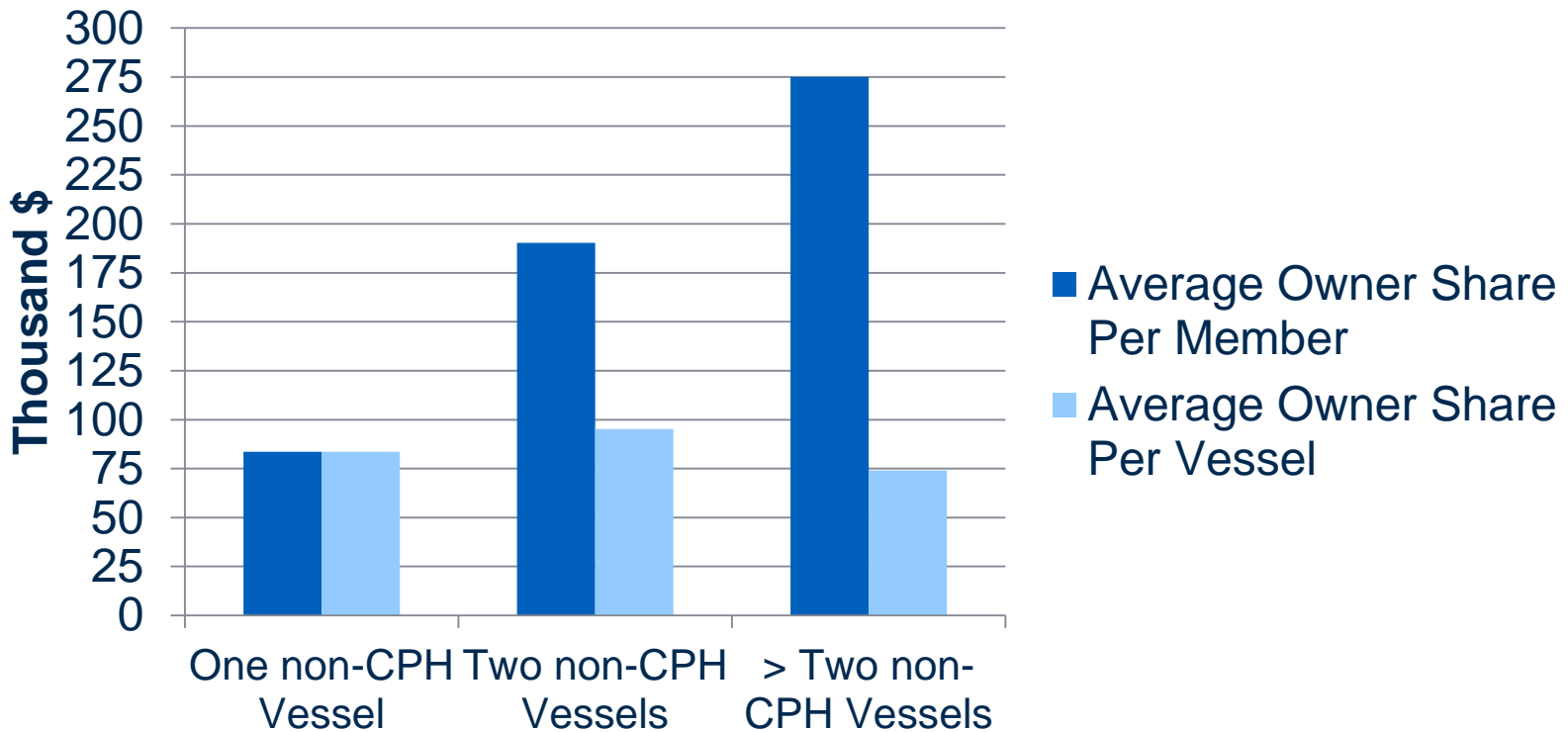
Vessel Average Length <30'





Average Post-Quota Trading Owner Share per sector member and per vessel (assuming owner pays all quota costs)

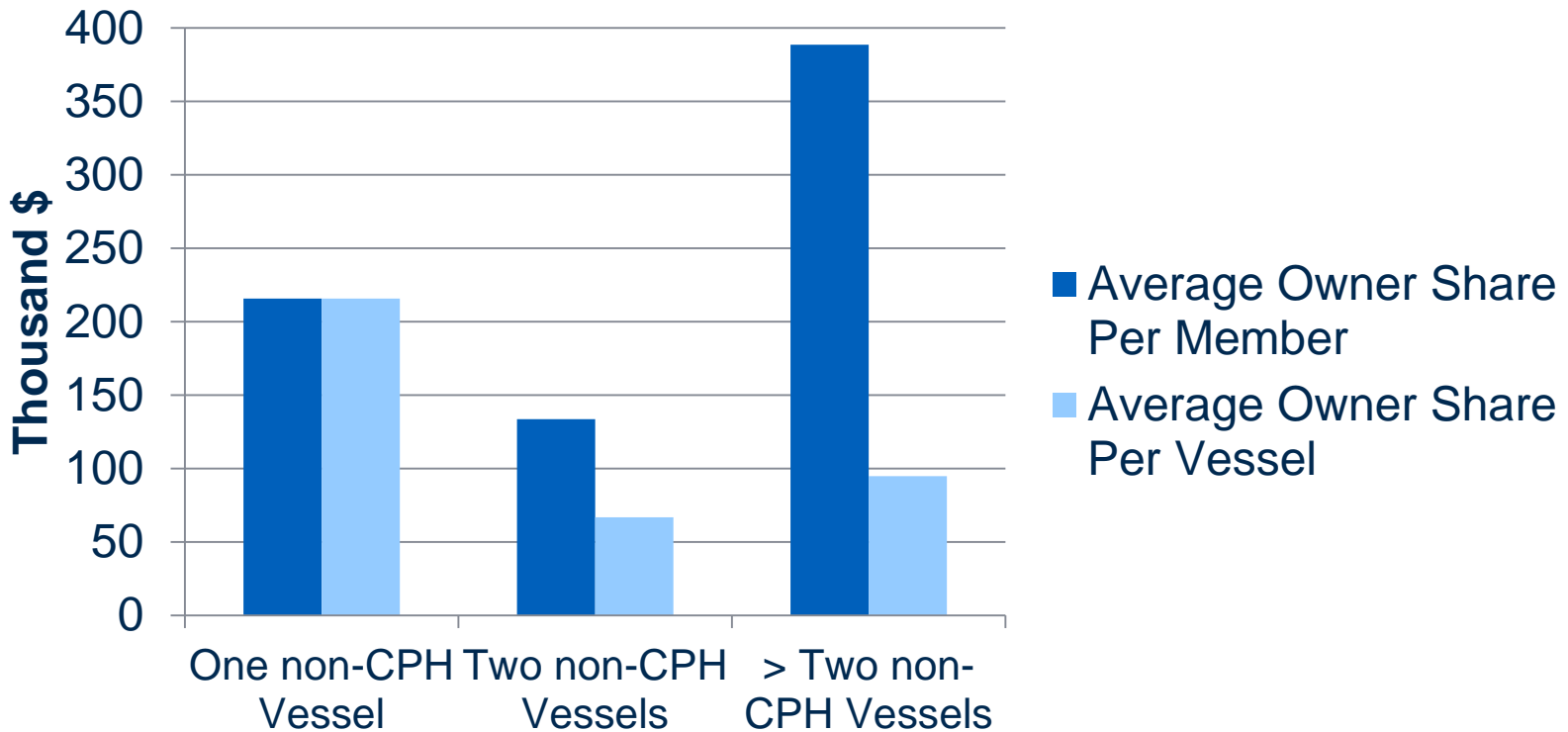
Vessel Average Length 30' to <50'





Average Post-Quota Trading Owner Share per sector member and per vessel (assuming owner pays all quota costs)

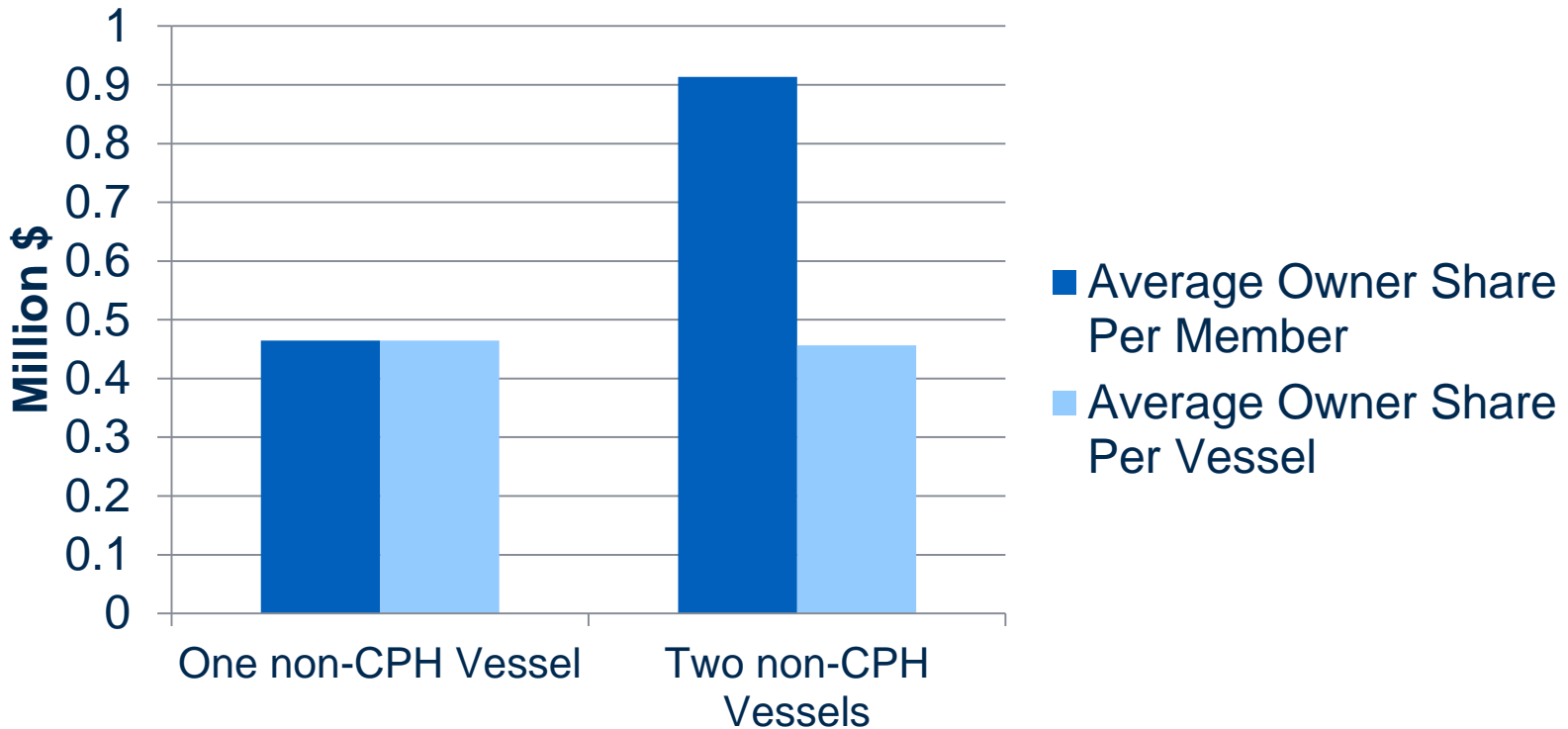
Vessel Average Length 50' to <75'





Average Post-Quota Trading Owner Share per sector member and per vessel (assuming owner pays all quota costs)

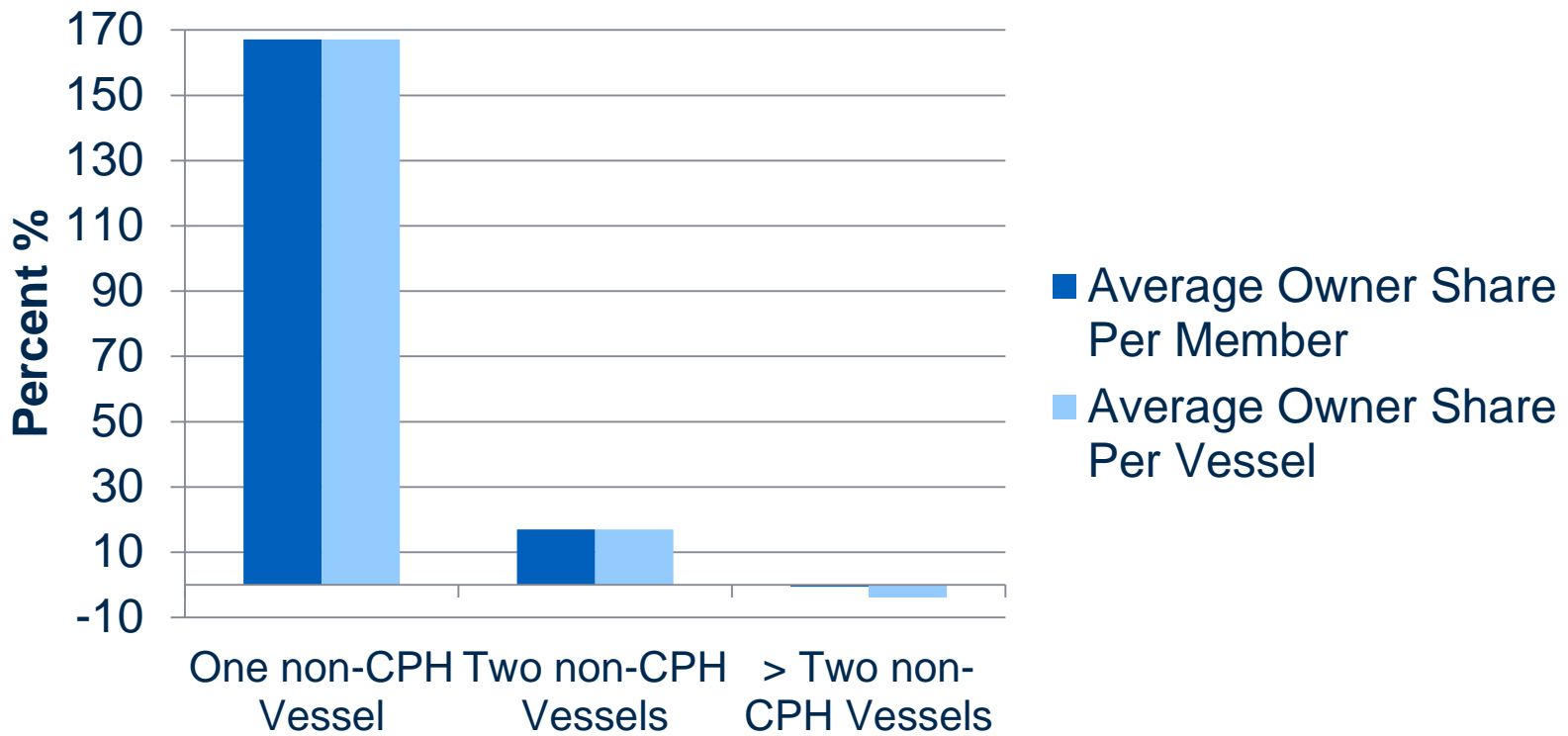
Vessel Average Length 75'+

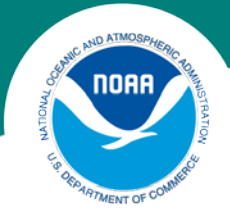




Percent Change in Average Owner Share After Adjusting for Leasing Activity per sector member and per vessel (assuming owner pays all quota costs)

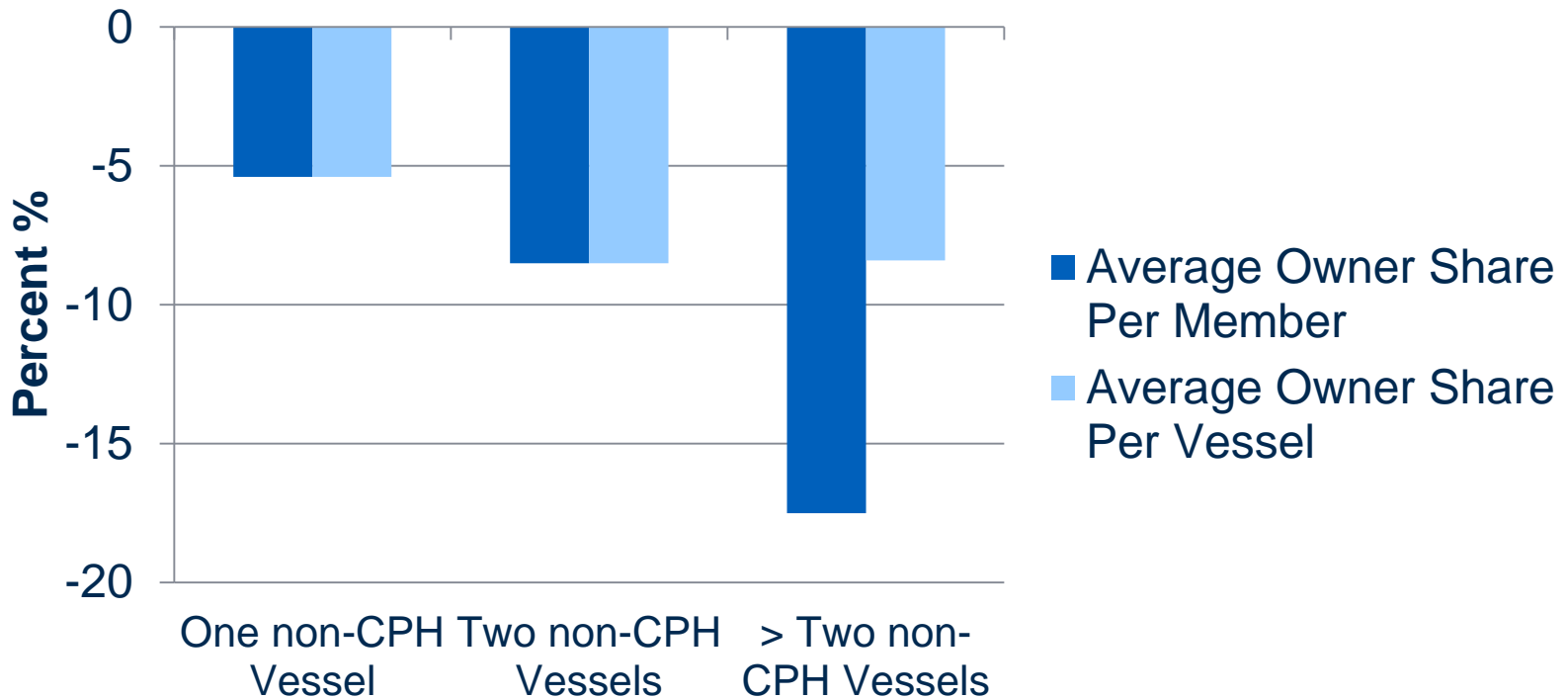
Vessel Average Length <30'

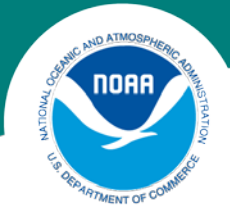




Percent Change in Average Owner Share After Adjusting for Leasing Activity per sector member and per vessel (assuming owner pays all quota costs)

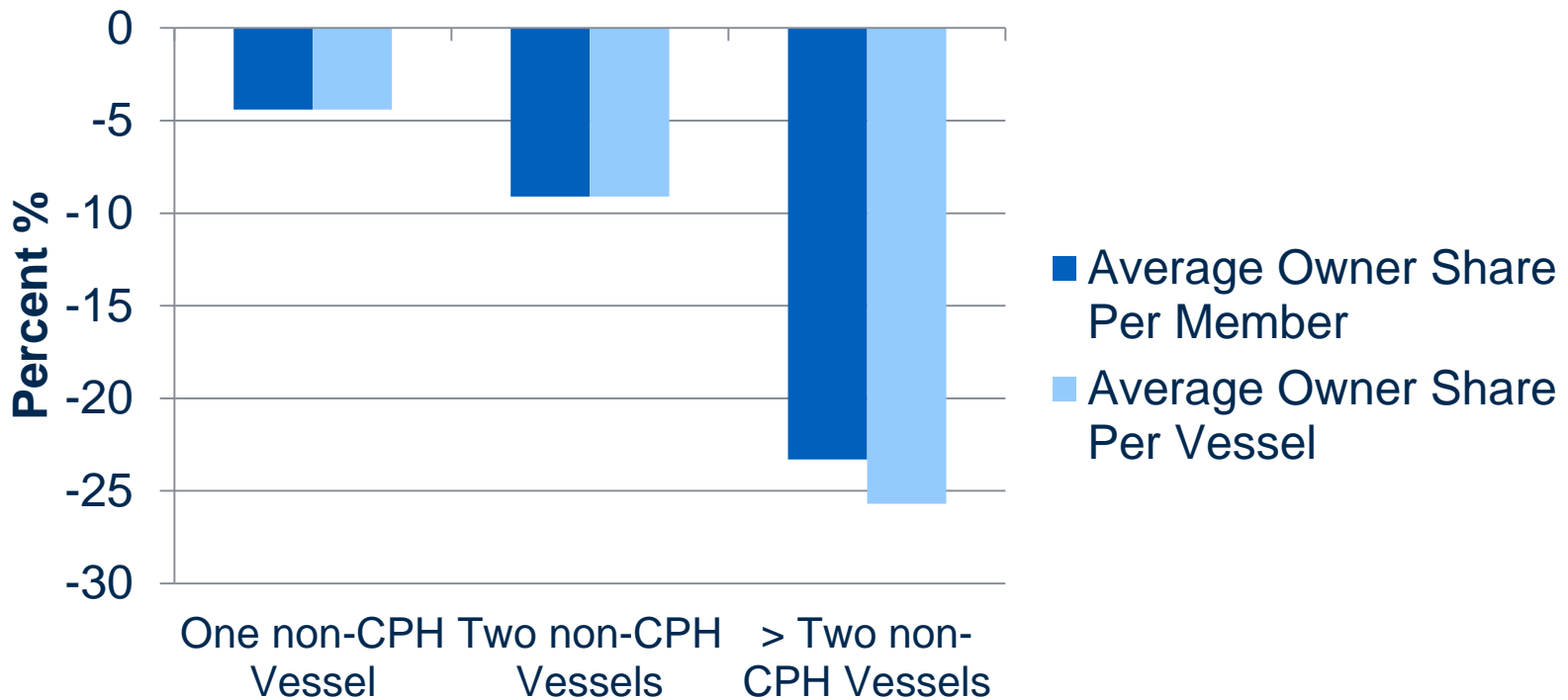
Vessel Average Length 30' to <50'





Percent Change in Average Owner Share After Adjusting for Leasing Activity per sector member and per vessel (assuming owner pays all quota costs)

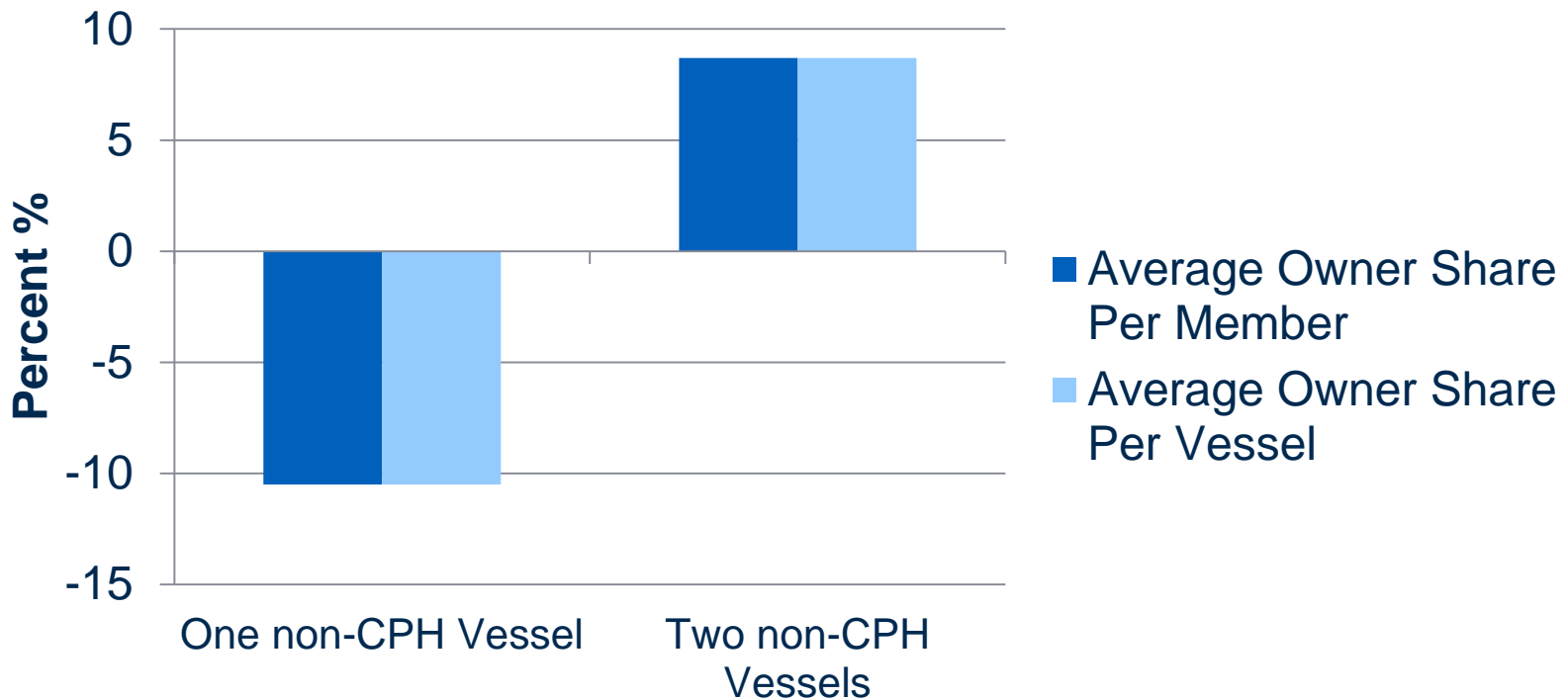
Vessel Average Length 50' to <75'

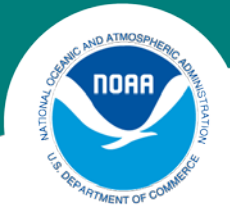




Percent Change in Average Owner Share After Adjusting for Leasing Activity per sector member and per vessel (assuming owner pays all quota costs)

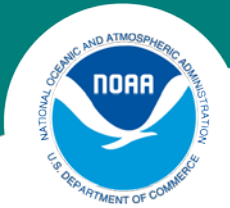
Vessel Average Length 75'+





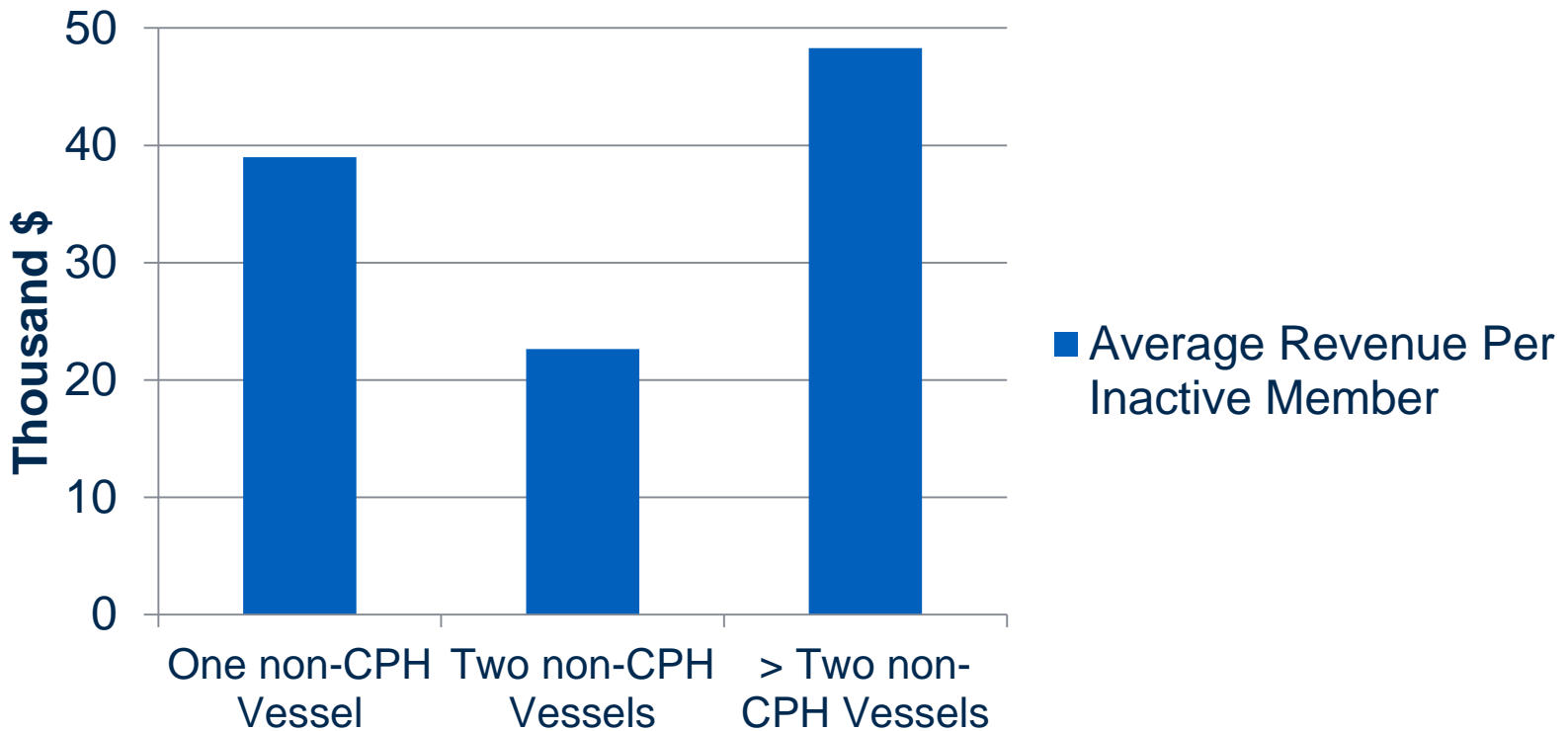
Summary of Quota Trading Impacts on Net Revenue for those that fished for allocated groundfish

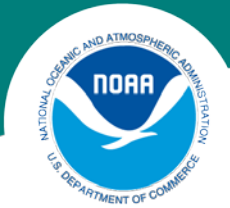
- **Leasing Costs:**
 - Reductions in the average owner share of net revenue per vessel due to quota costs range from 3.9% to 25.7%.
- **Leasing Revenues:**
 - Sector members that own a single vessel <30' in length were net sellers of quota; their average net revenues increased by 167.1%.
 - For sector members with two vessels-
 - with the average length of those vessels <30', average net revenues increased by 17%.
 - with the average length of vessels > 75', average net revenues increased by 8.7%.



Average Revenue from Quota Trading for Sector Members that Did Not Fish for Allocated GF and Leased Quota

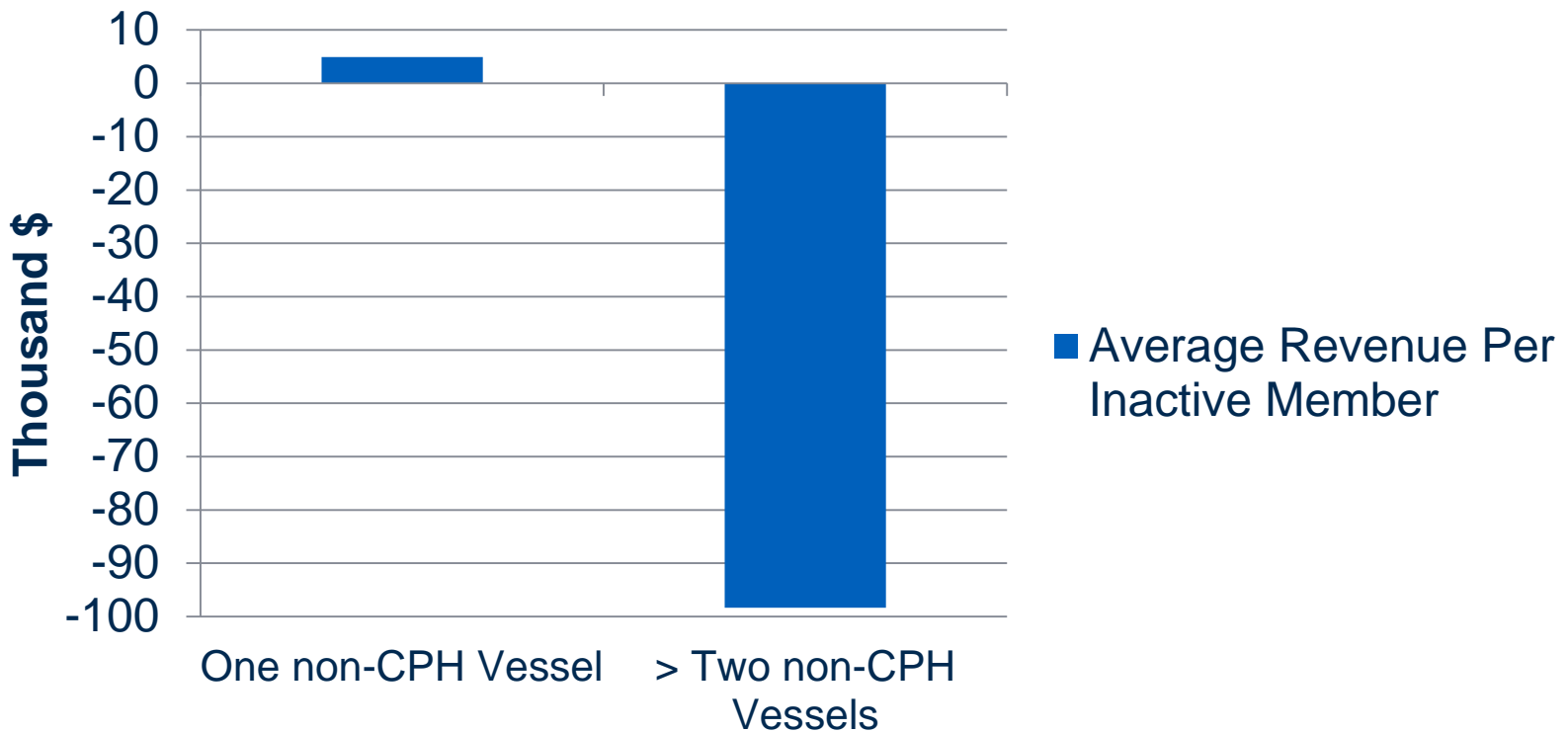
Vessel Average Length <30'





Average Revenue from Quota Trading for Sector Members that Did Not Fish for Allocated GF and Leased Quota

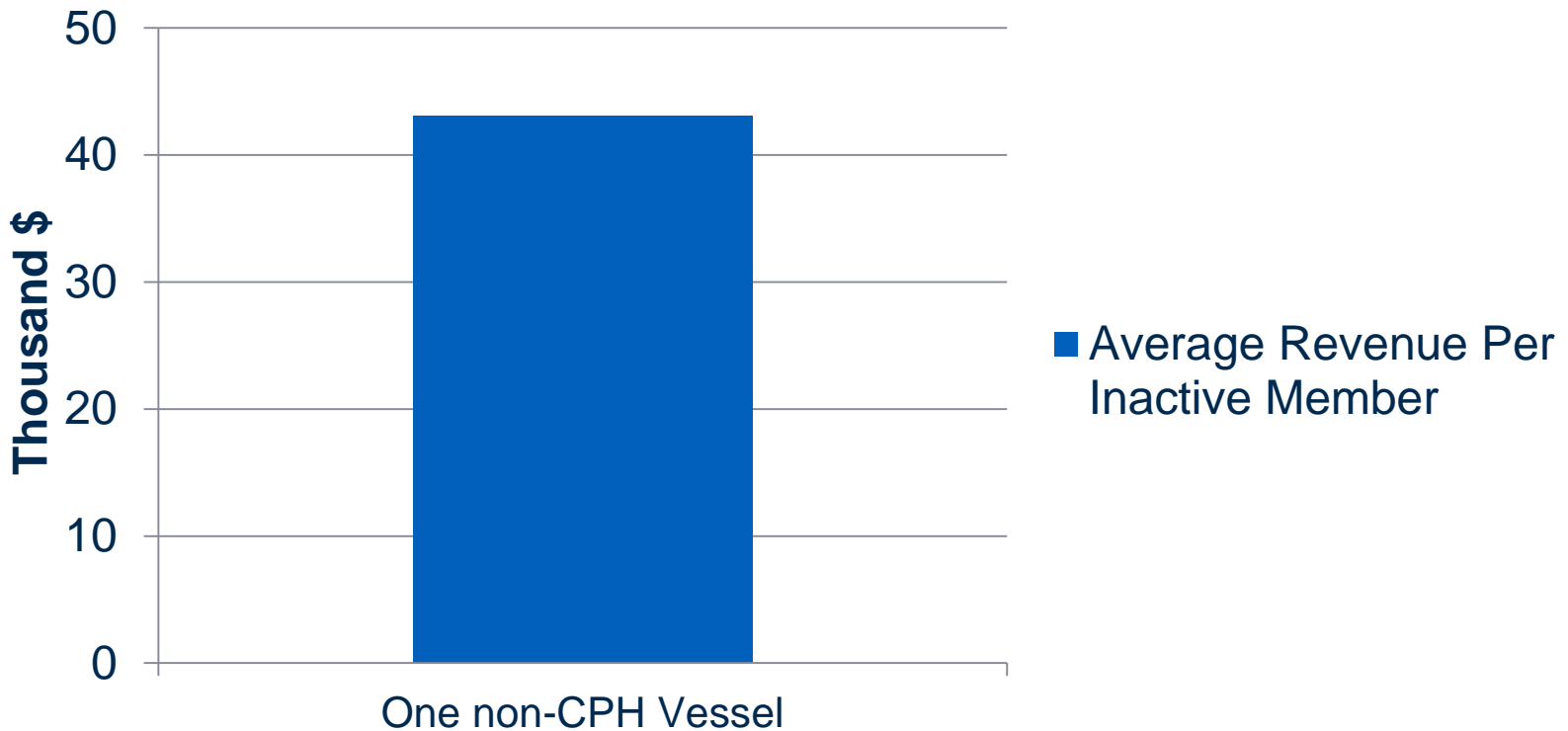
Vessel Average Length 30' to <50'





Average Revenue from Quota Trading for Sector Members that Did Not Fish for Allocated GF and Leased Quota

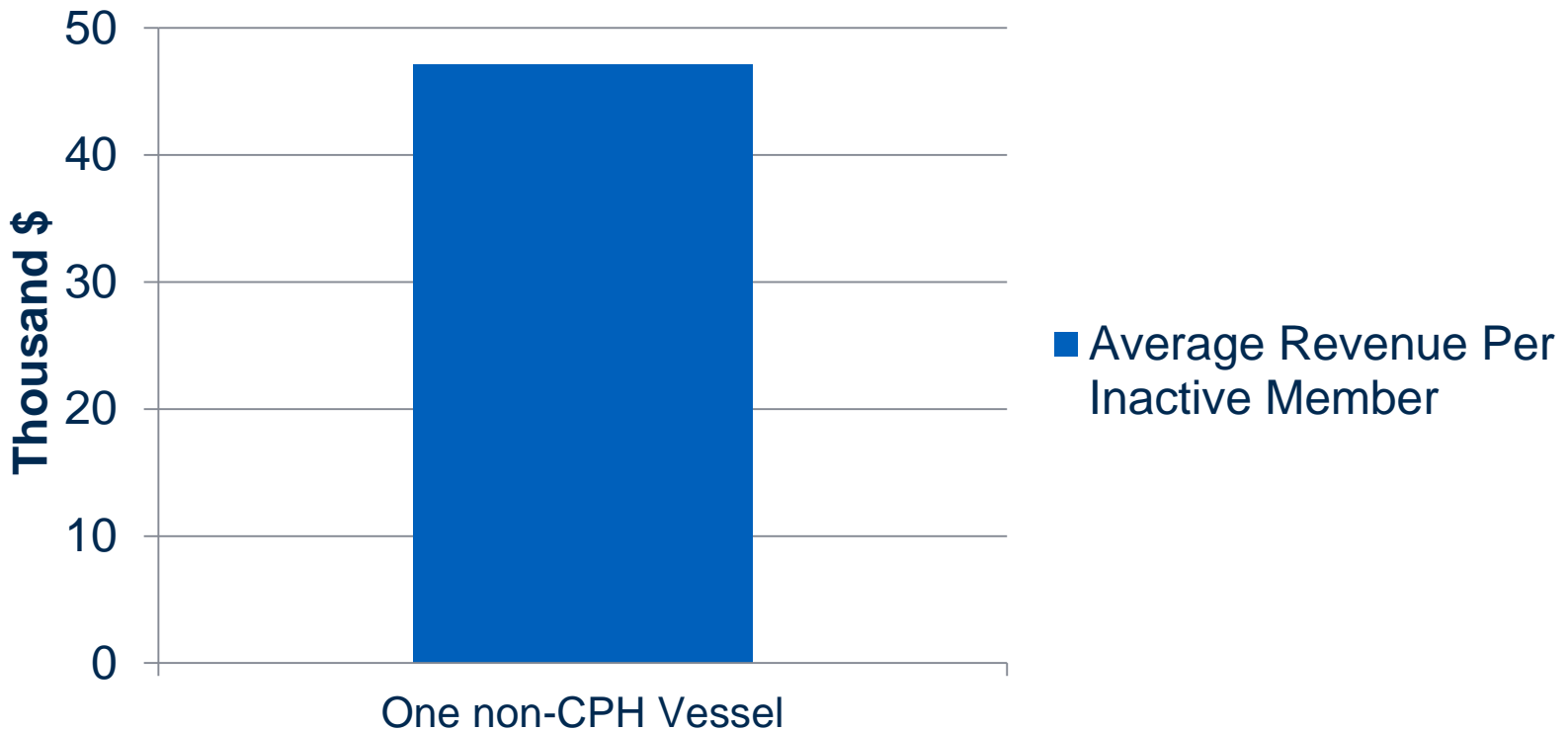
Vessel Length 50' to <75'





Average Revenue from Quota Trading for Sector Members that Did Not Fish for Allocated GF and Leased Quota

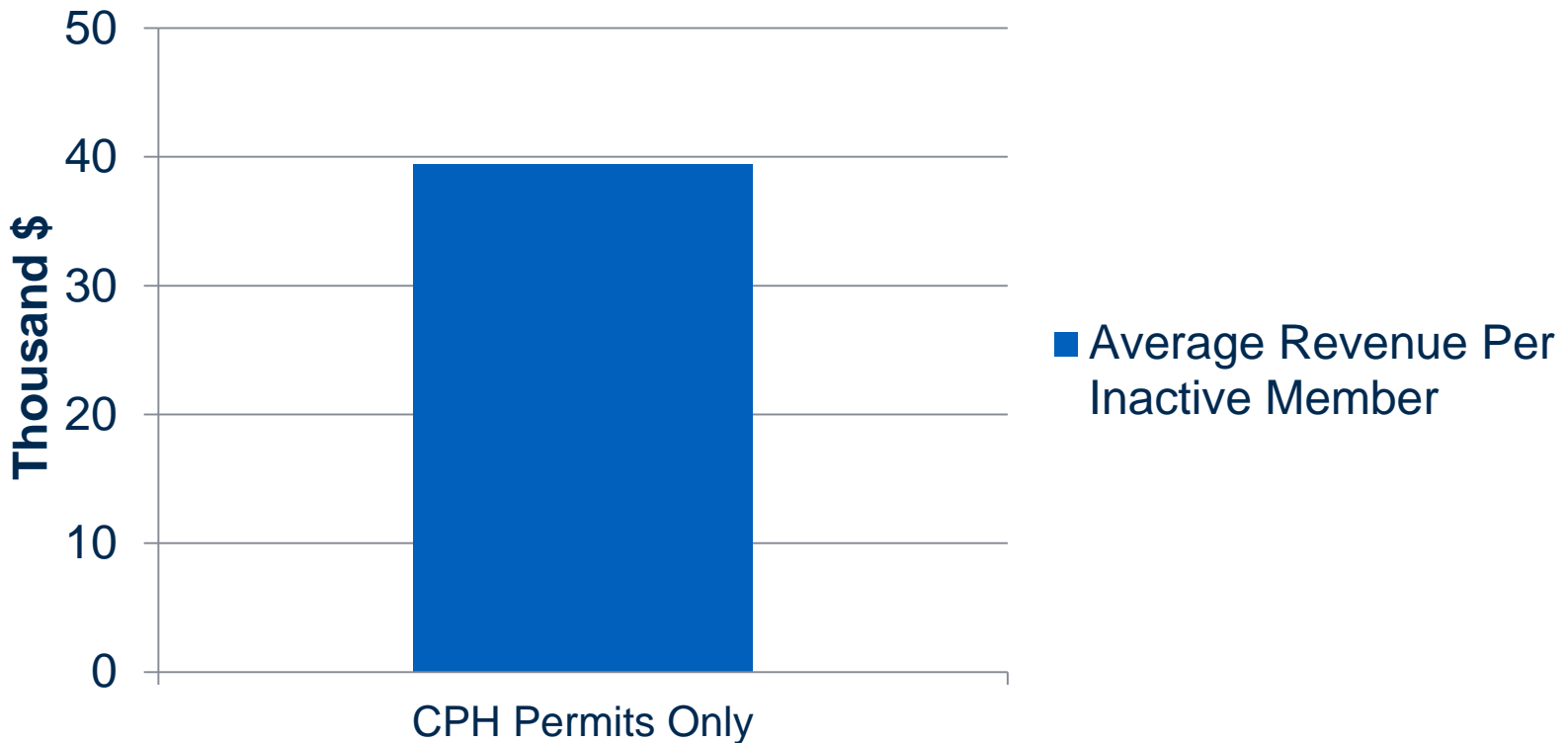
Vessel Length 75'+

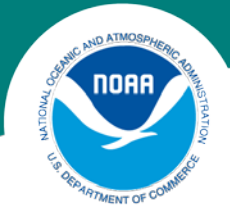




Average Revenue from Quota Trading for Sector Members that Did Not Fish for Allocated GF and Leased Quota

11 Sector Members with CPH Permits Only





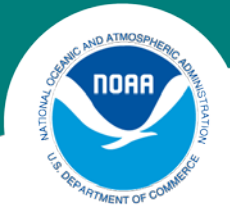
Summary of Quota Trading Impacts on Net Revenue for those that did not fish for allocated groundfish

- One third of vessels enrolled in sectors do not fish for allocated GF and lease to vessels that do fish for allocated GF.
- Average revenue for these inactive sector members that leased out quota ranged from \$4,900 to \$48,287.



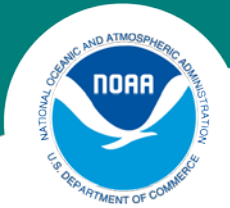
Section IX

Moving Forward



How is the NEFSC working to improve its analysis of what's going on?

- Analysis of cost data from surveys of costs incurred in 2011 and 2012.
- Participation in a series of workshops designed to understand what constrained fishing activity in FY2012.
- Building profitability profiles for various segments of the fleet (importance of fixed cost data from surveys).
- Ethnographic interviews to understand the decision making processes and impacts for GF fishermen that are facing adaptation and transition.



More Information

- Murphy T, Kitts A, Records D, Demarest C, Caless D, Walden J, Benjamin S. 2014. 2012 Final Report on the Performance of the Northeast Multispecies (Groundfish) Fishery (May 2012 -April 2013). US Dept Commer, Northeast Fish Sci Cent Ref Doc. 14-01; 111 p. Available from: National Marine Fisheries Service, 166 Water Street, Woods Hole, MA 02543-1026, or online at <http://www.nefsc.noaa.gov/nefsc/publications/>
- Visit SSB on the web at <http://www.nefsc.noaa.gov/read/socialsci/>



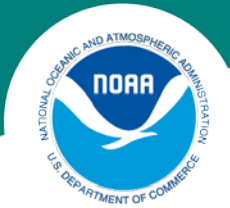
More Information

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More Information

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For questions about Social Science Branch activities, please contact:

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Northeast Fisheries Science Center
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