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

February 4, 2014

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

NOAA FISHERIES SERVICE

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.

NOAA
FISHERIES
SERVICE

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

NOAA FISHERIES SERVICE

Section I

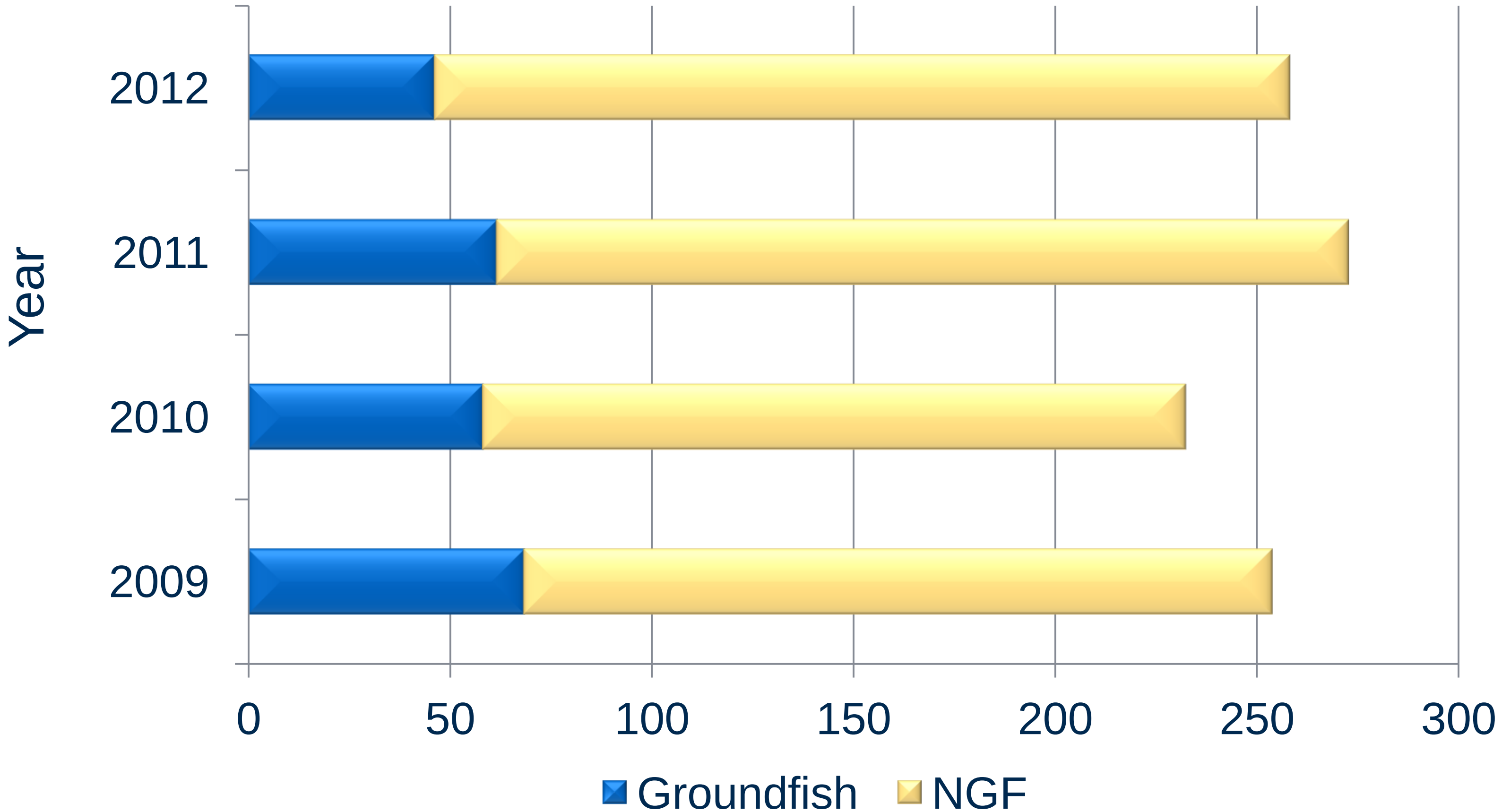
Landings, Prices & Gross Nominal Revenues

NOAA FISHERIES SERVICE

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

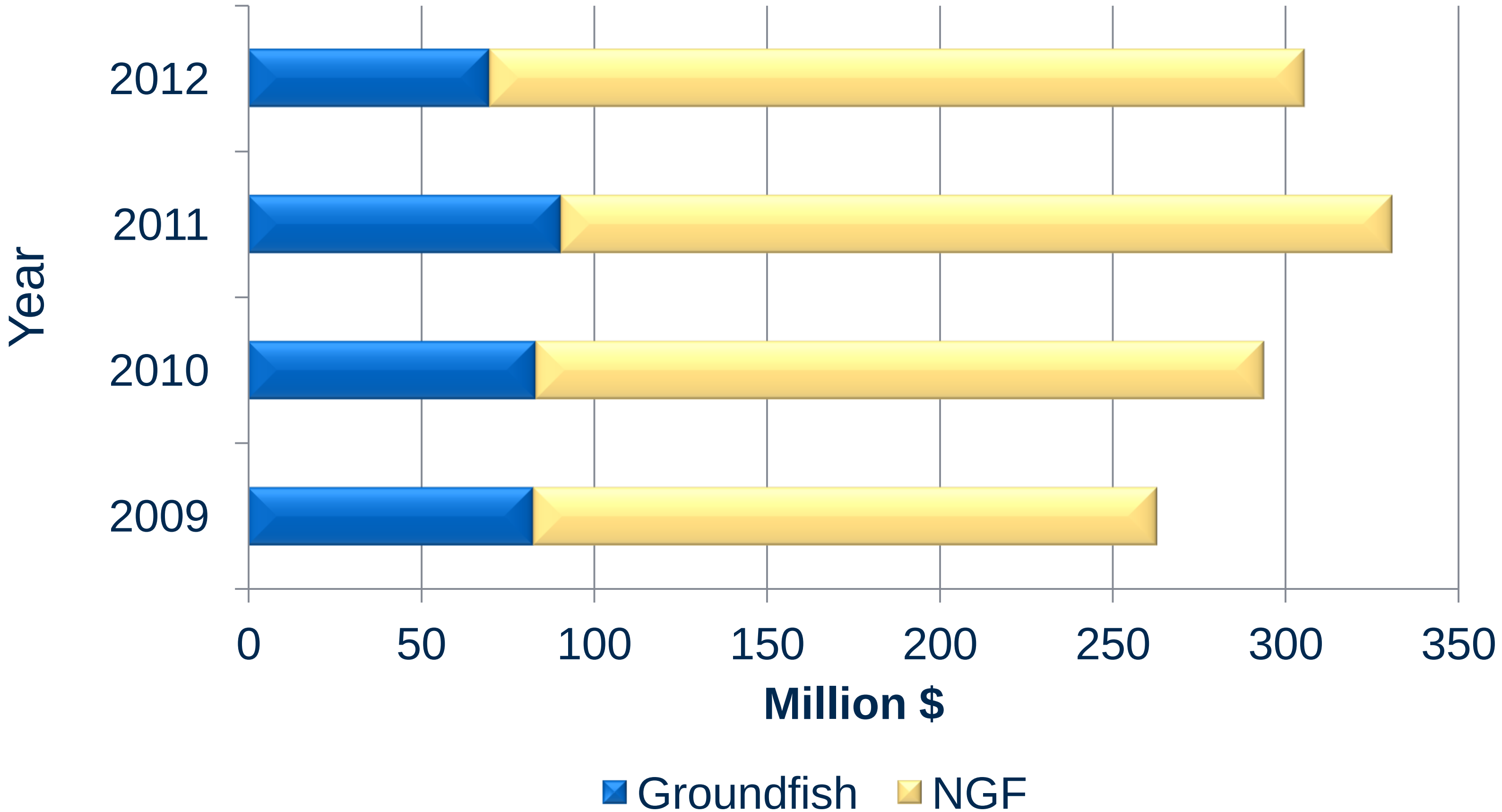


NOAA FISHERIES SERVICE

Lower Gross Total Revenues in 2012, compared to 2011

GF revenues at a 4 year low, NGF revenues down from 2011

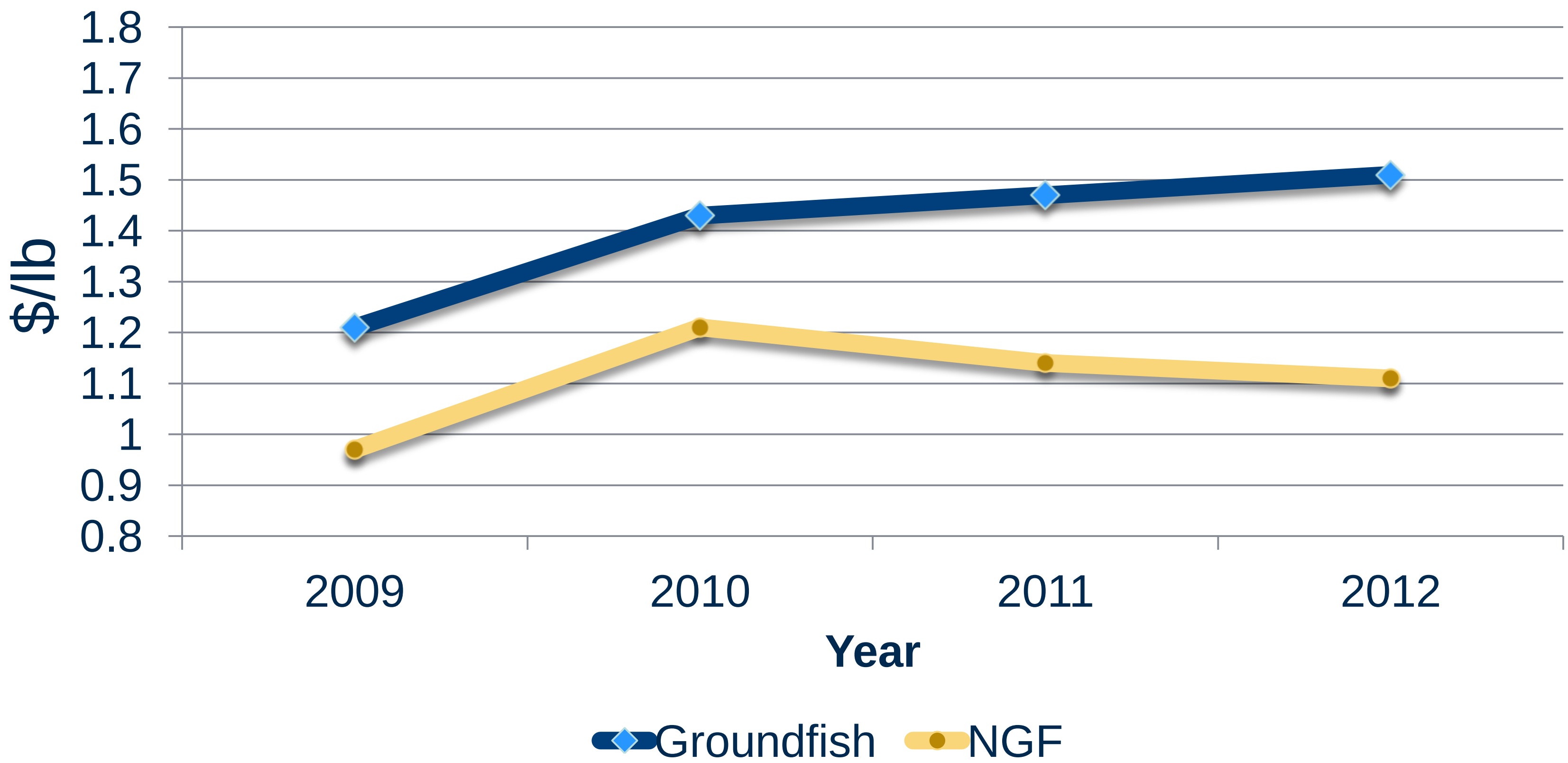
Revenues for all groundfish vessels, May-April all trips, all species, million $



NOAA
FISHERIES
SERVICE

Higher Average GF Price
Lower Average NGF Price

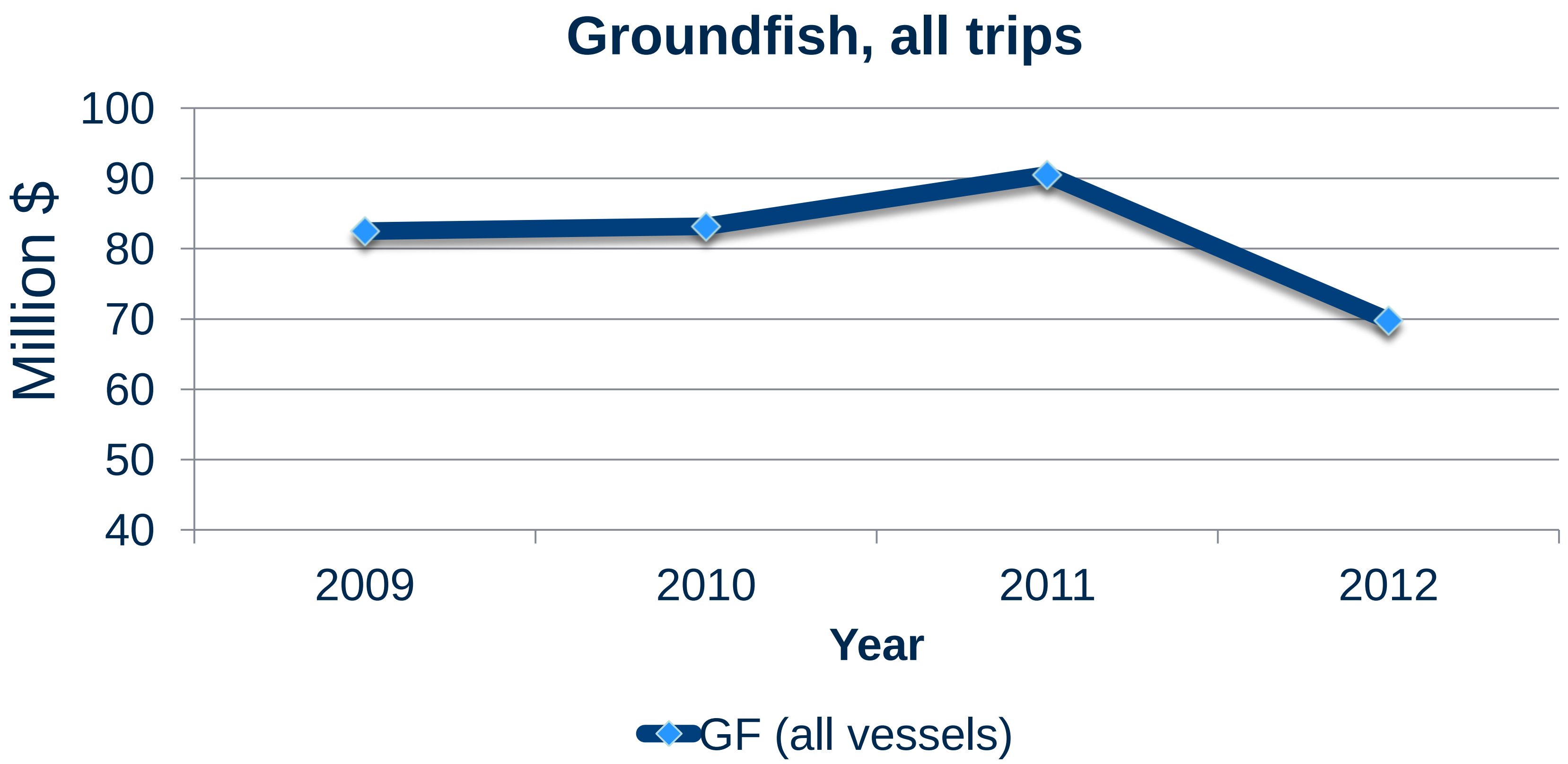
Average price per pound
all groundfish vessel landings, May-April



NOAA FISHERIES SERVICE

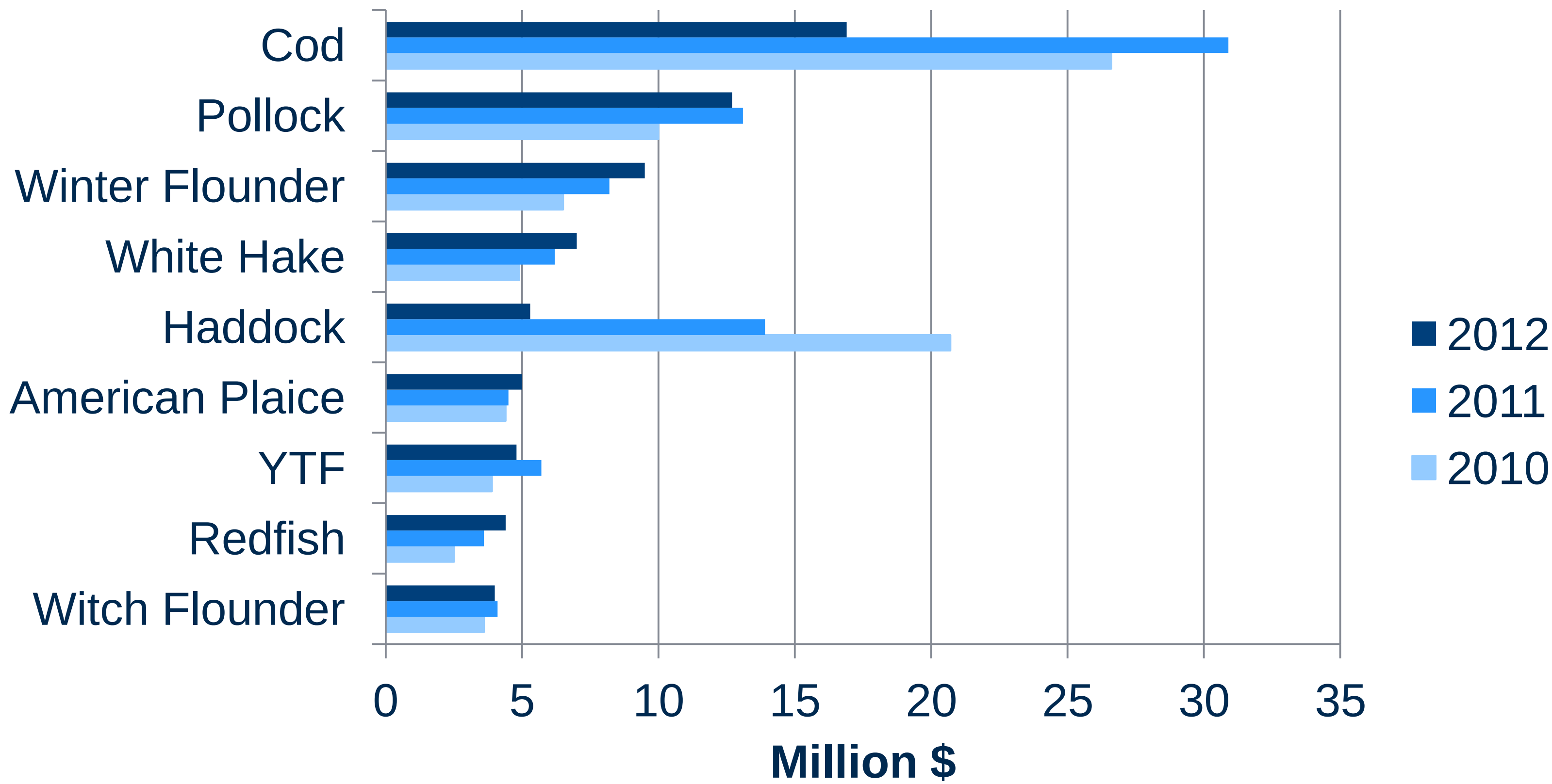
GF Revenues at a 4 year low

Nominal Value of Groundfish Landings
million $, May-April



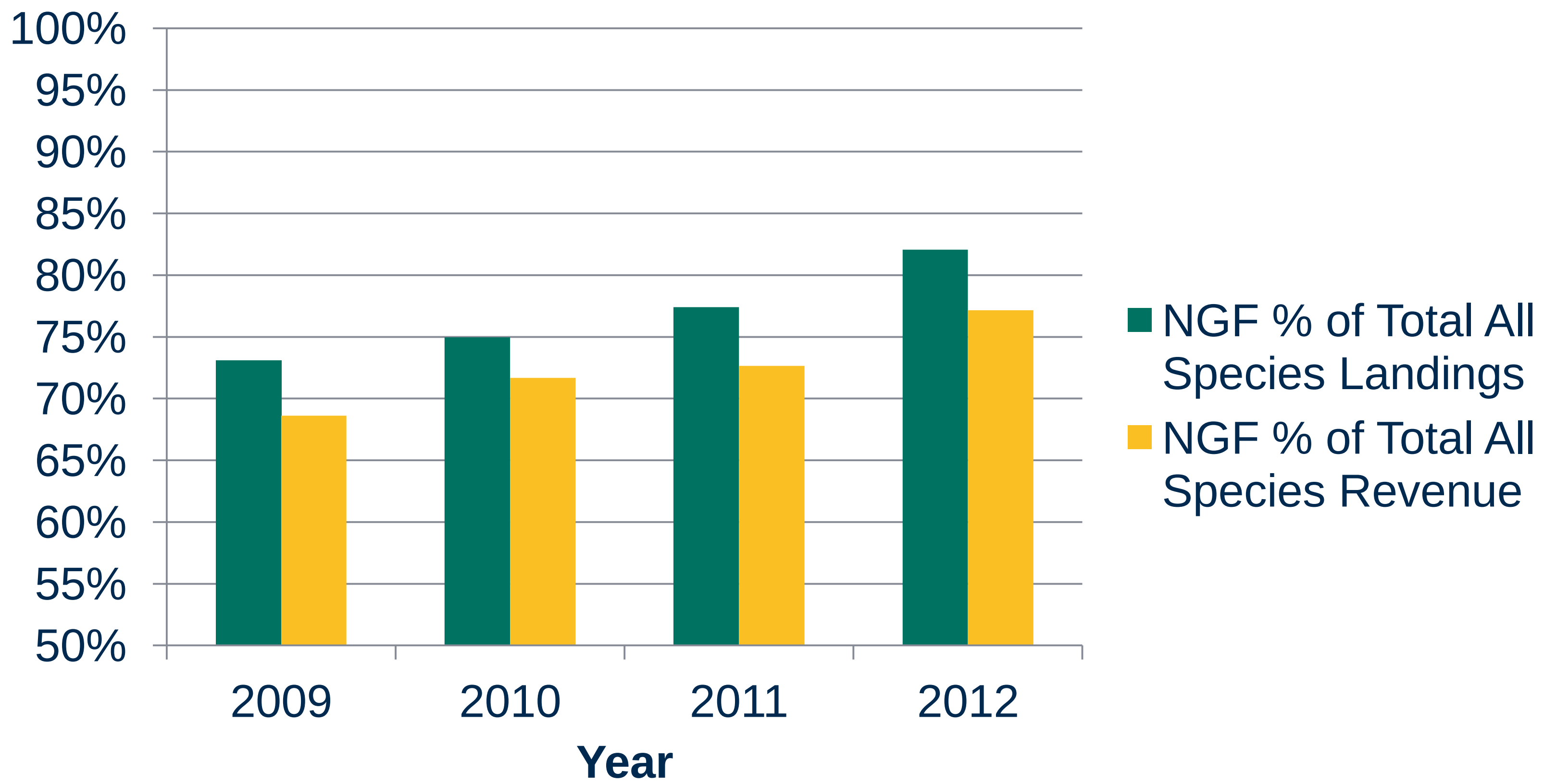
NOAA FISHERIES SERVICE

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



NOAA
FISHERIES
SERVICE

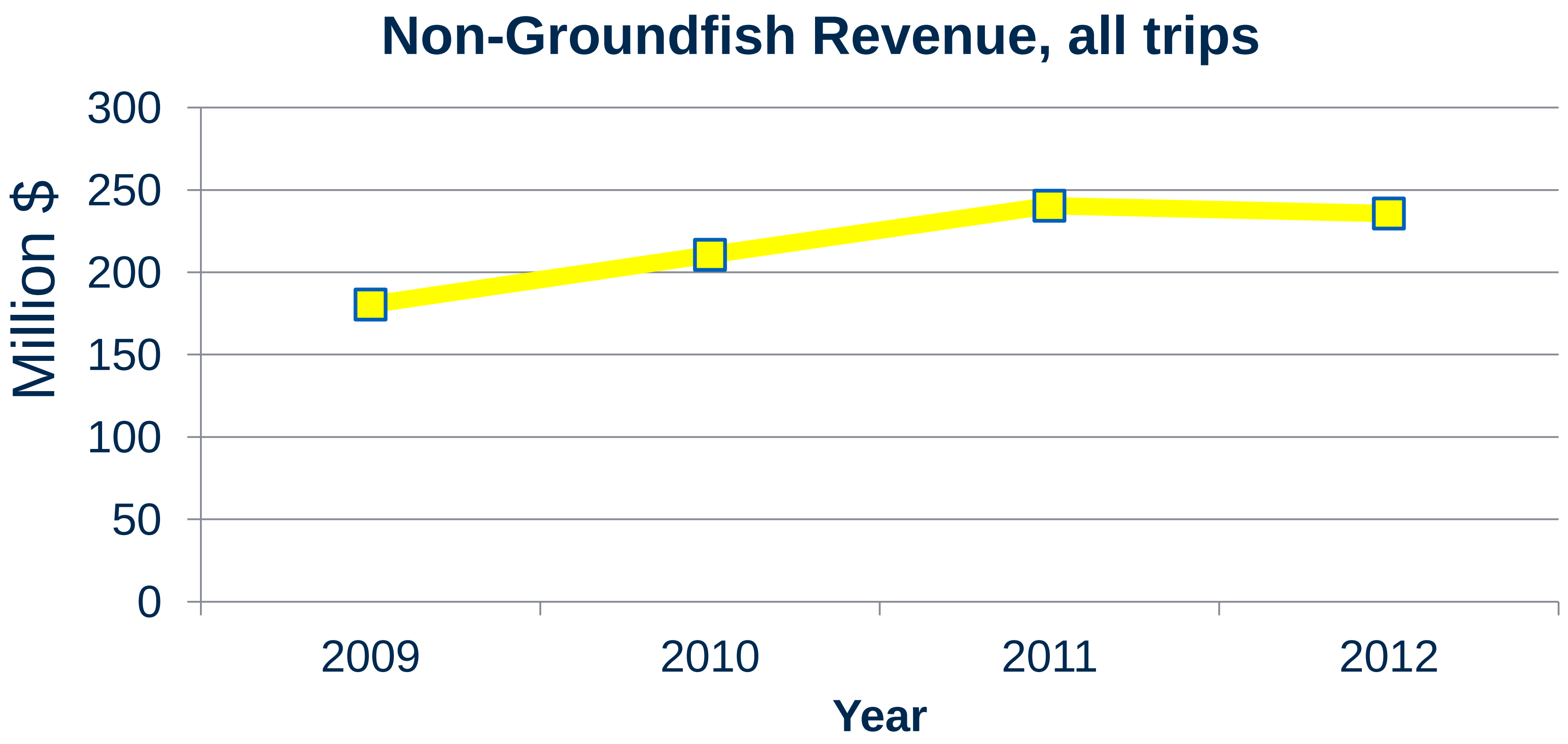
Non-Groundfish Portions of All Species Landings and Revenues Earned by Active GF Fleet, All Trips, May-April



NOAA FISHERIES SERVICE

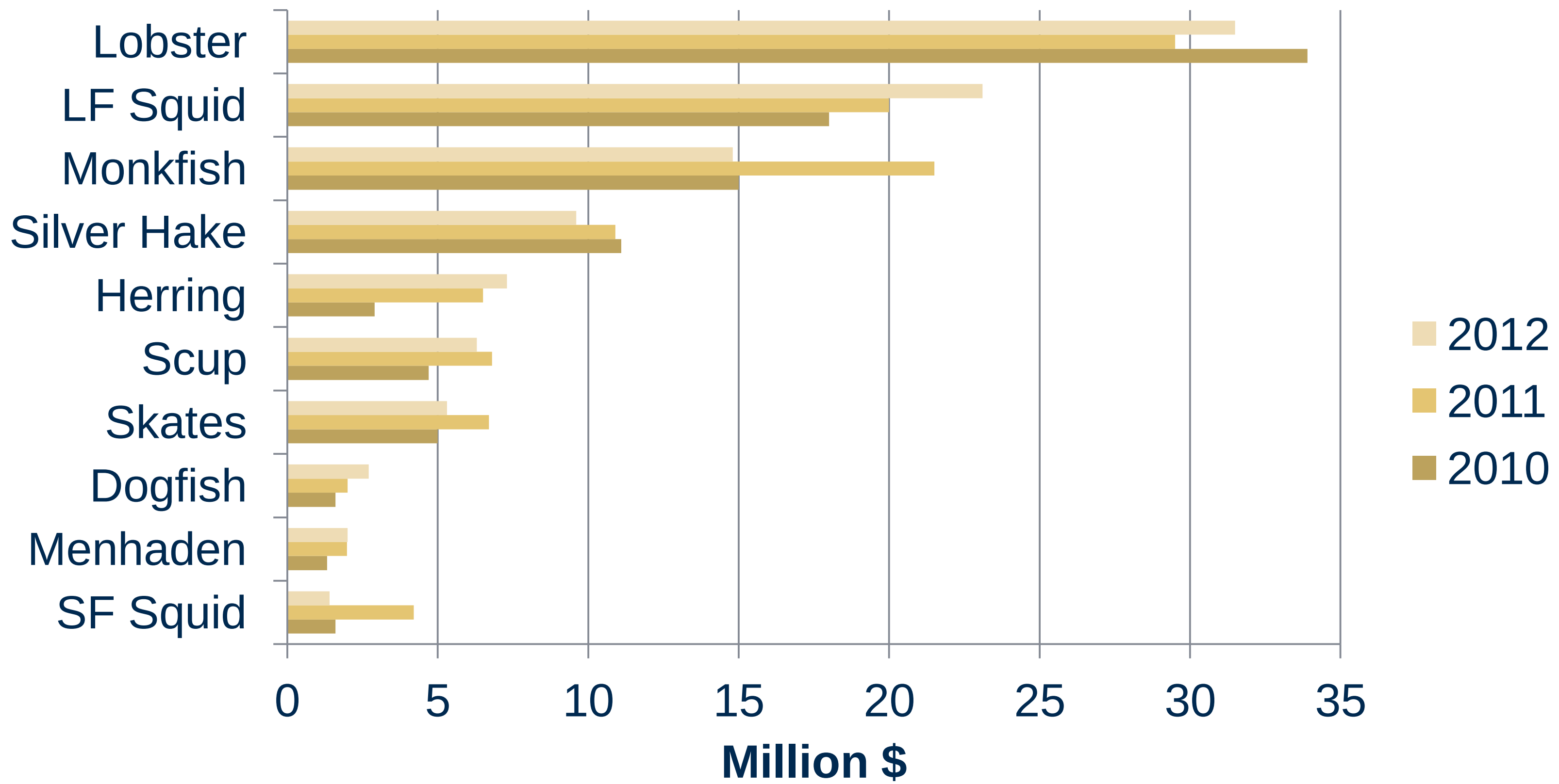
NGF Revenues declined slightly in 2012

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



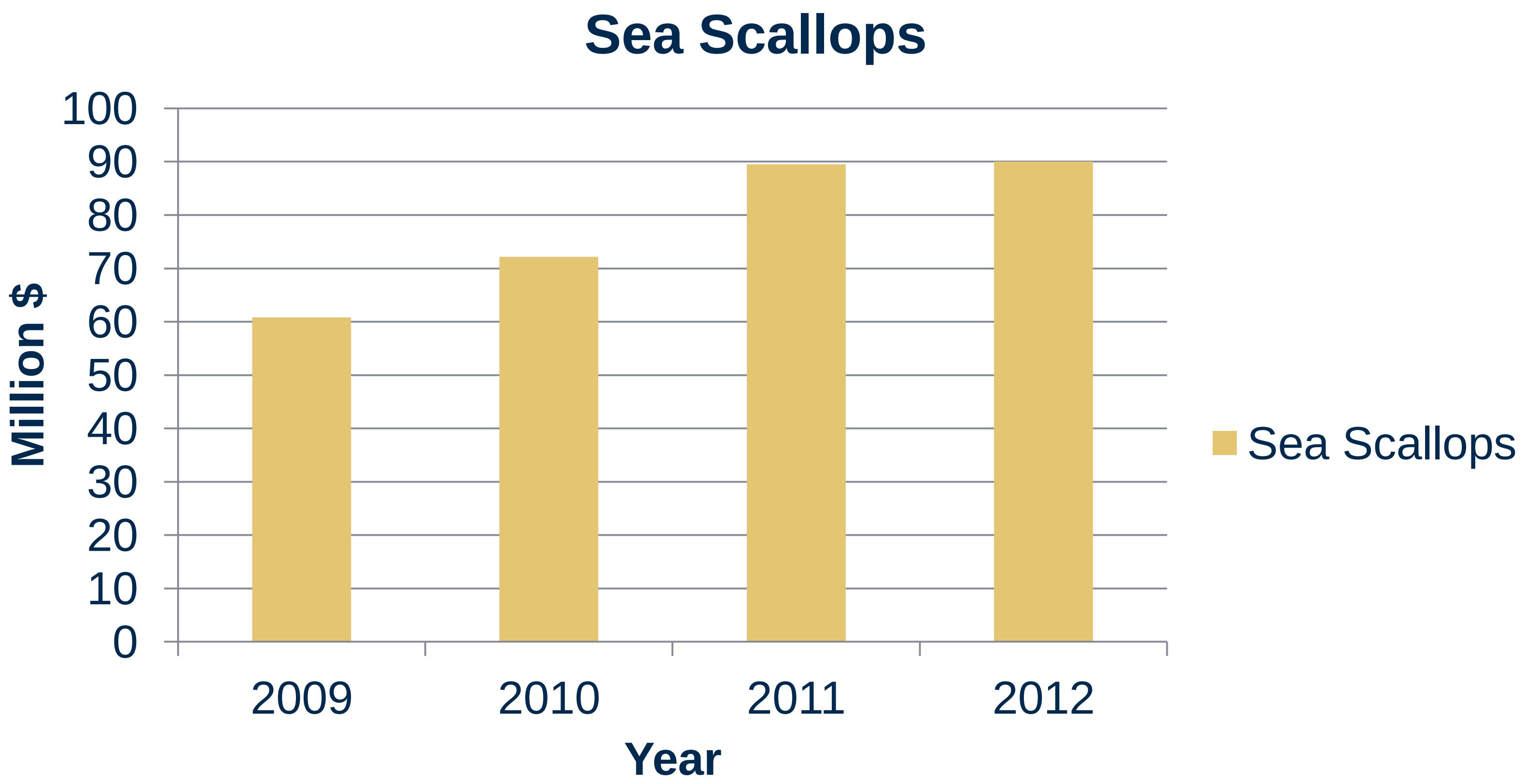
NOAA FISHERIES SERVICE

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



NOAA FISHERIES SERVICE

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



NOAA FISHERIES SERVICE

Section II
Gross Nominal Revenues
by Landed Port State

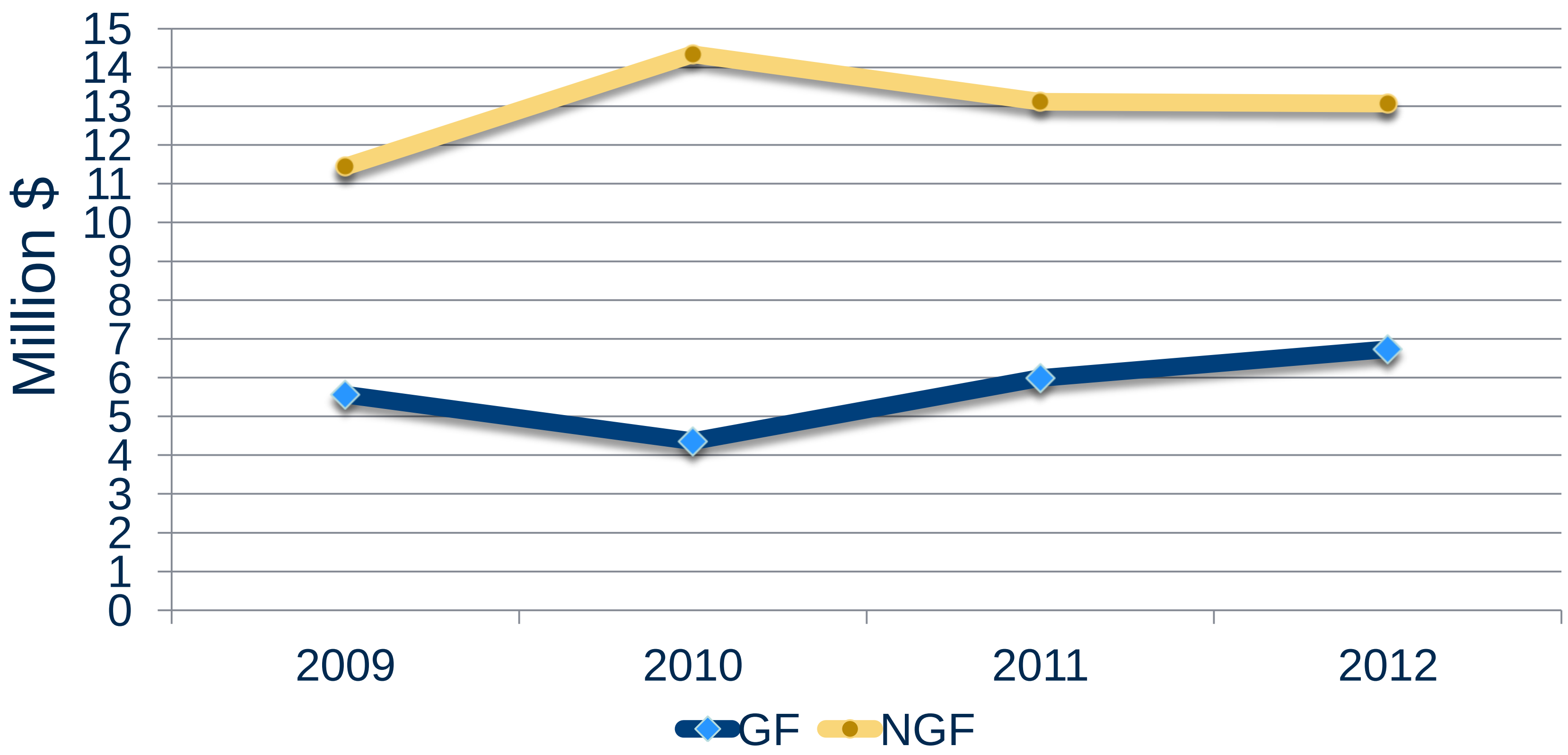
NOAA
FISHERIES
SERVICE

Maine

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



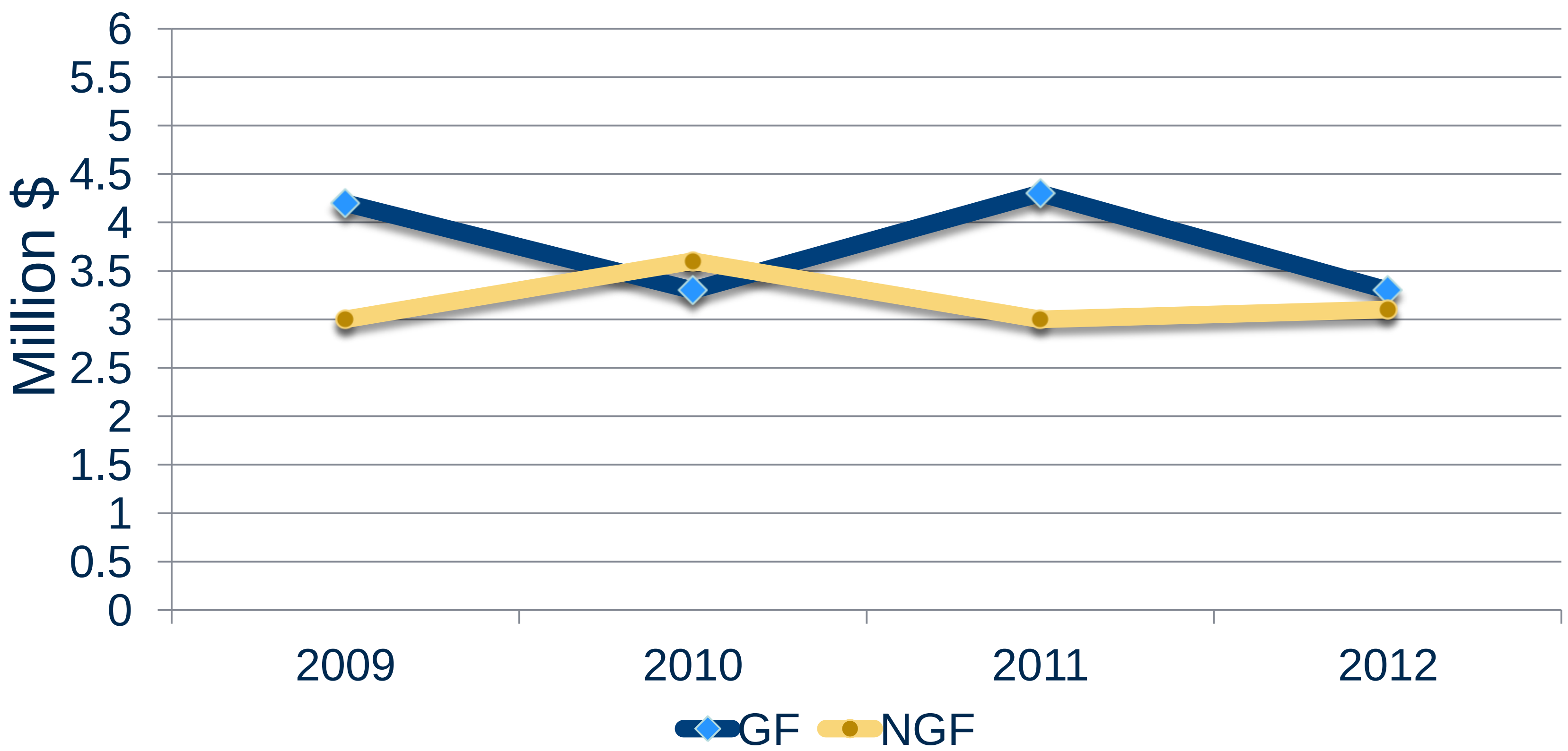
NOAA FISHERIES SERVICE

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



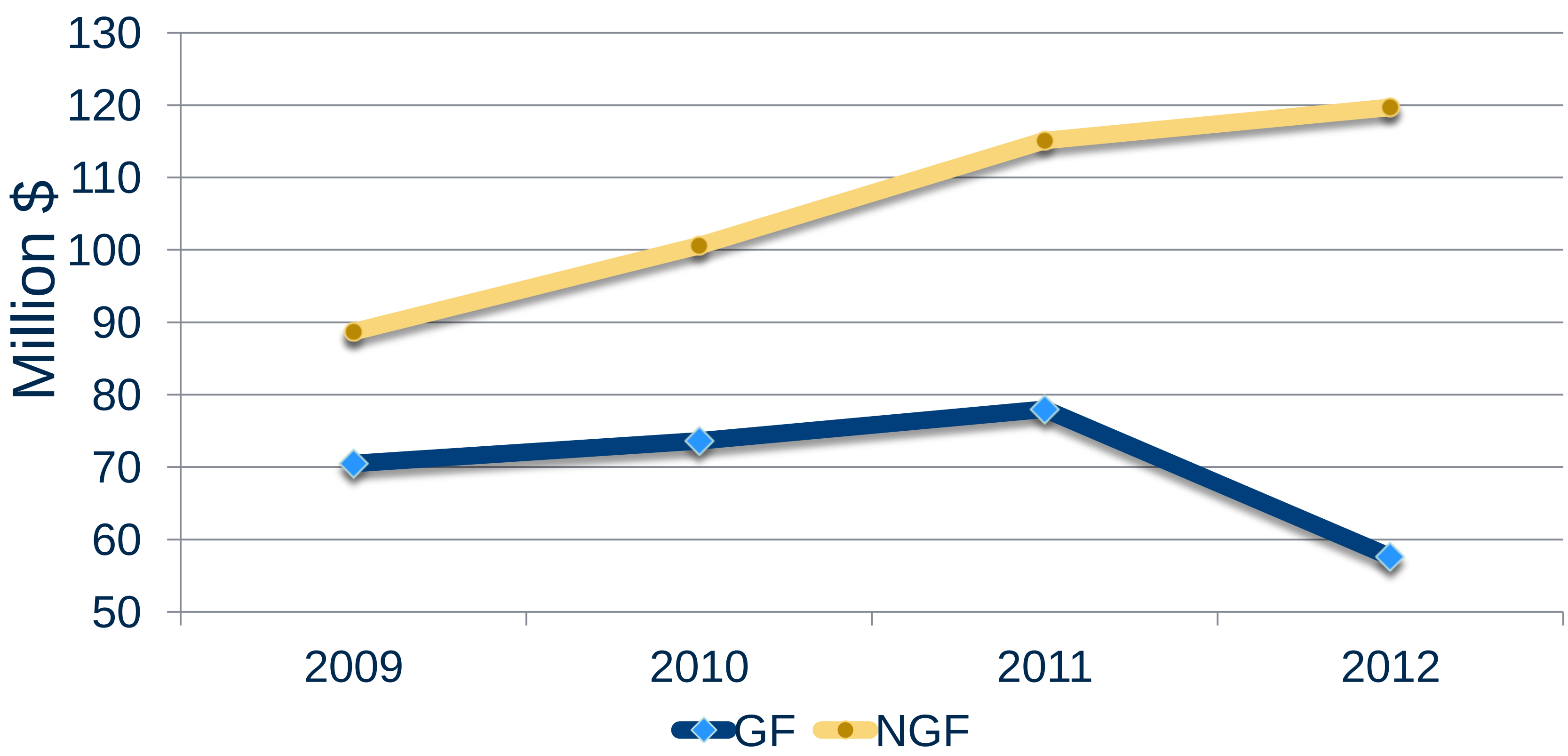
NOAA FISHERIES SERVICE

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

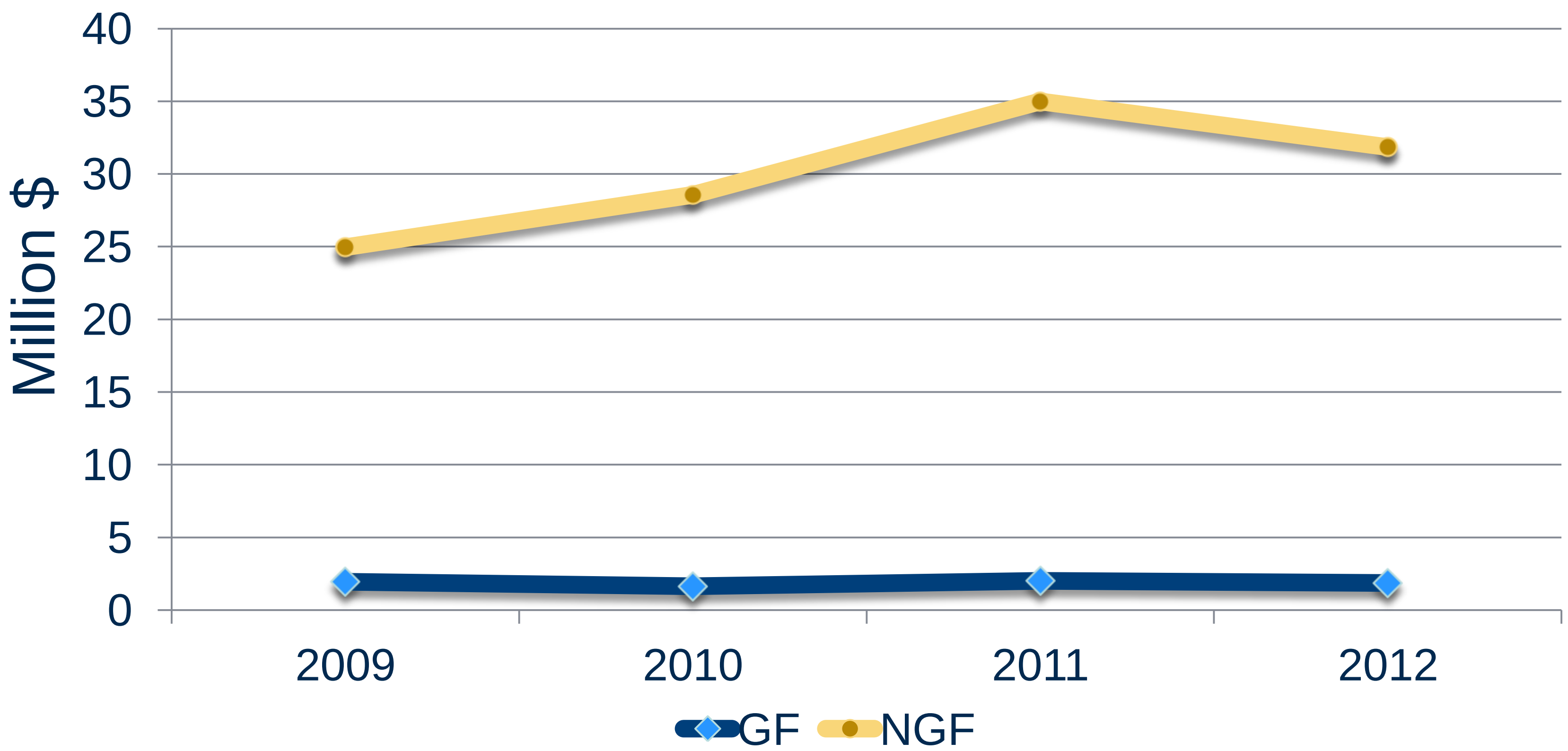


NOAA
FISHERIES
SERVICE

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



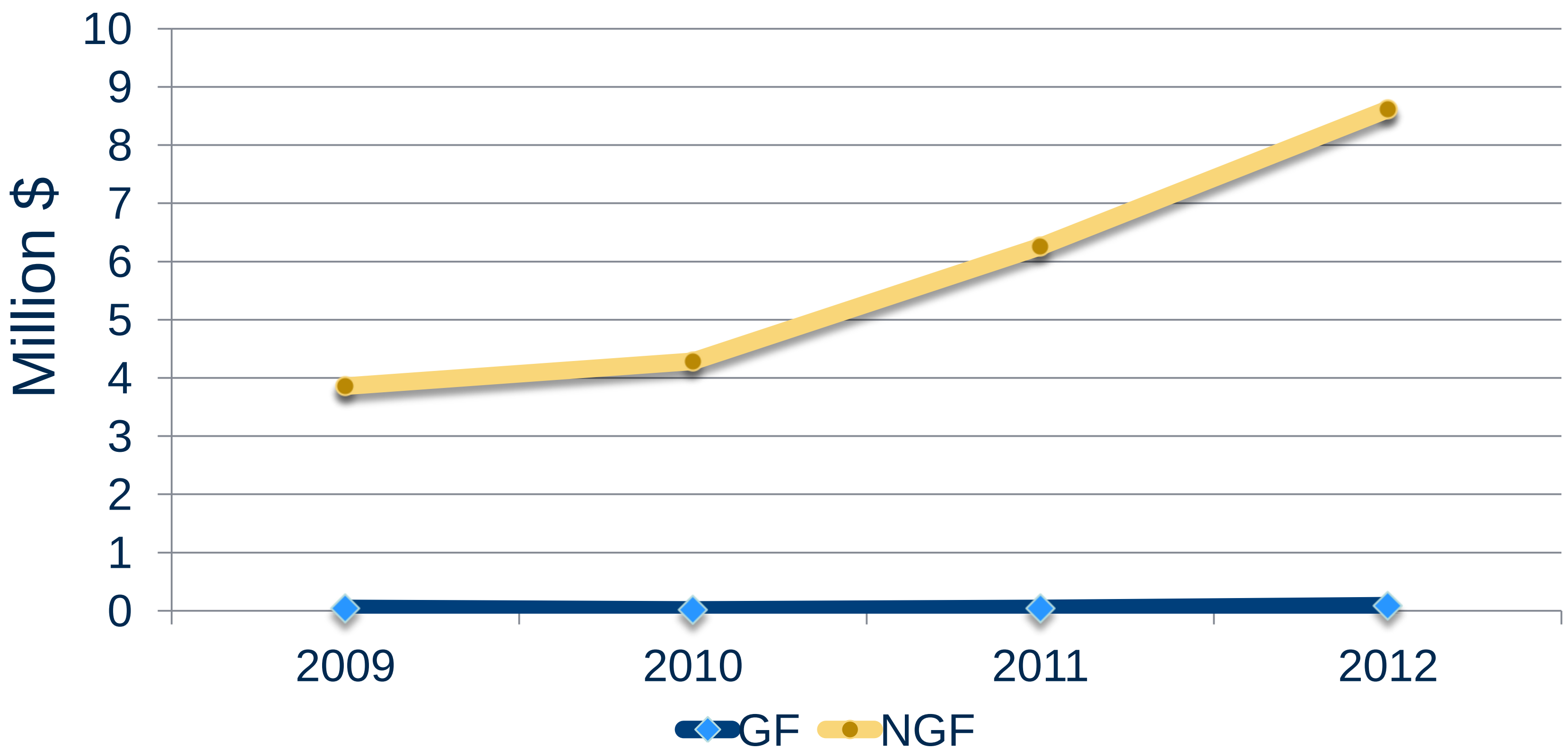
NOAA FISHERIES SERVICE

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



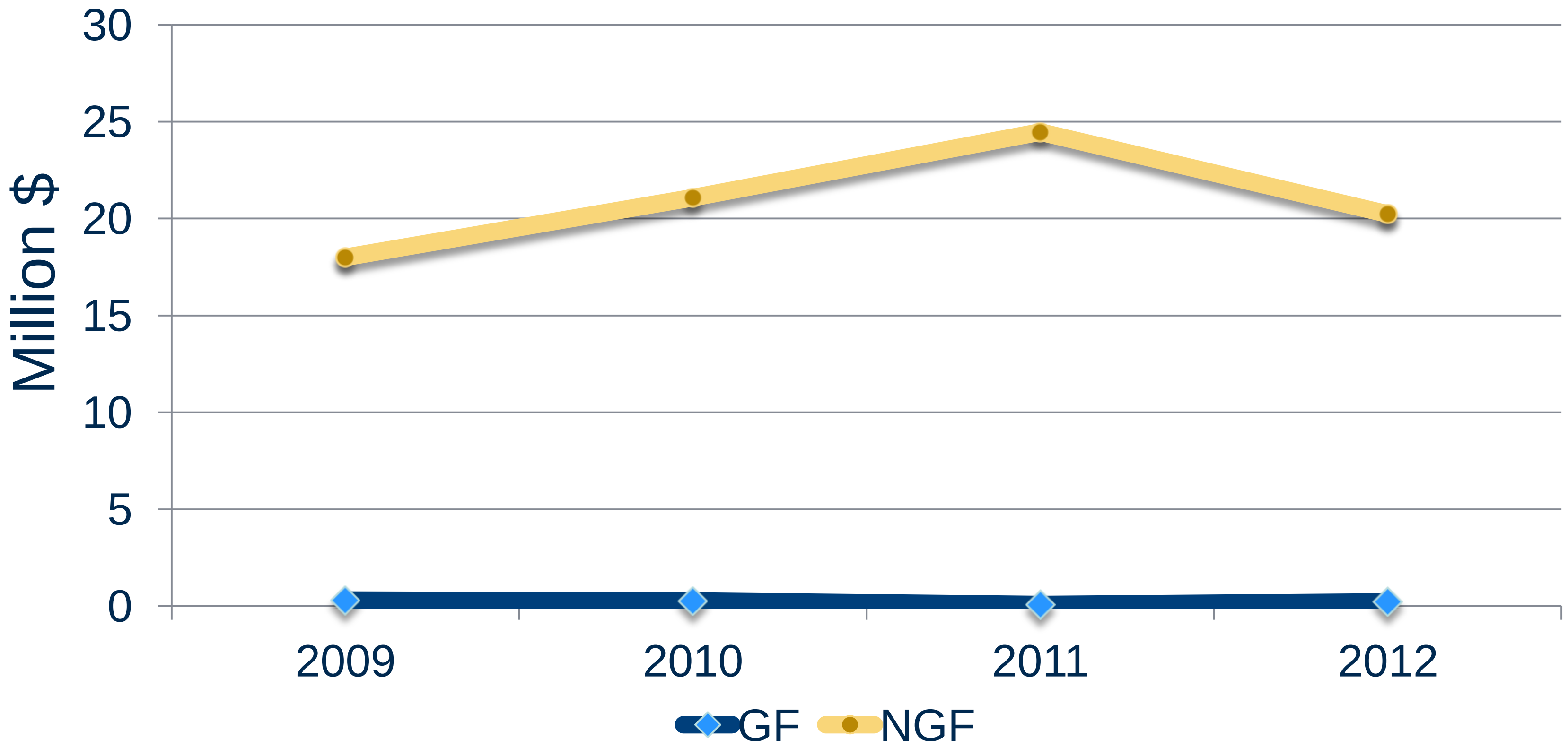
NOAA FISHERIES SERVICE

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

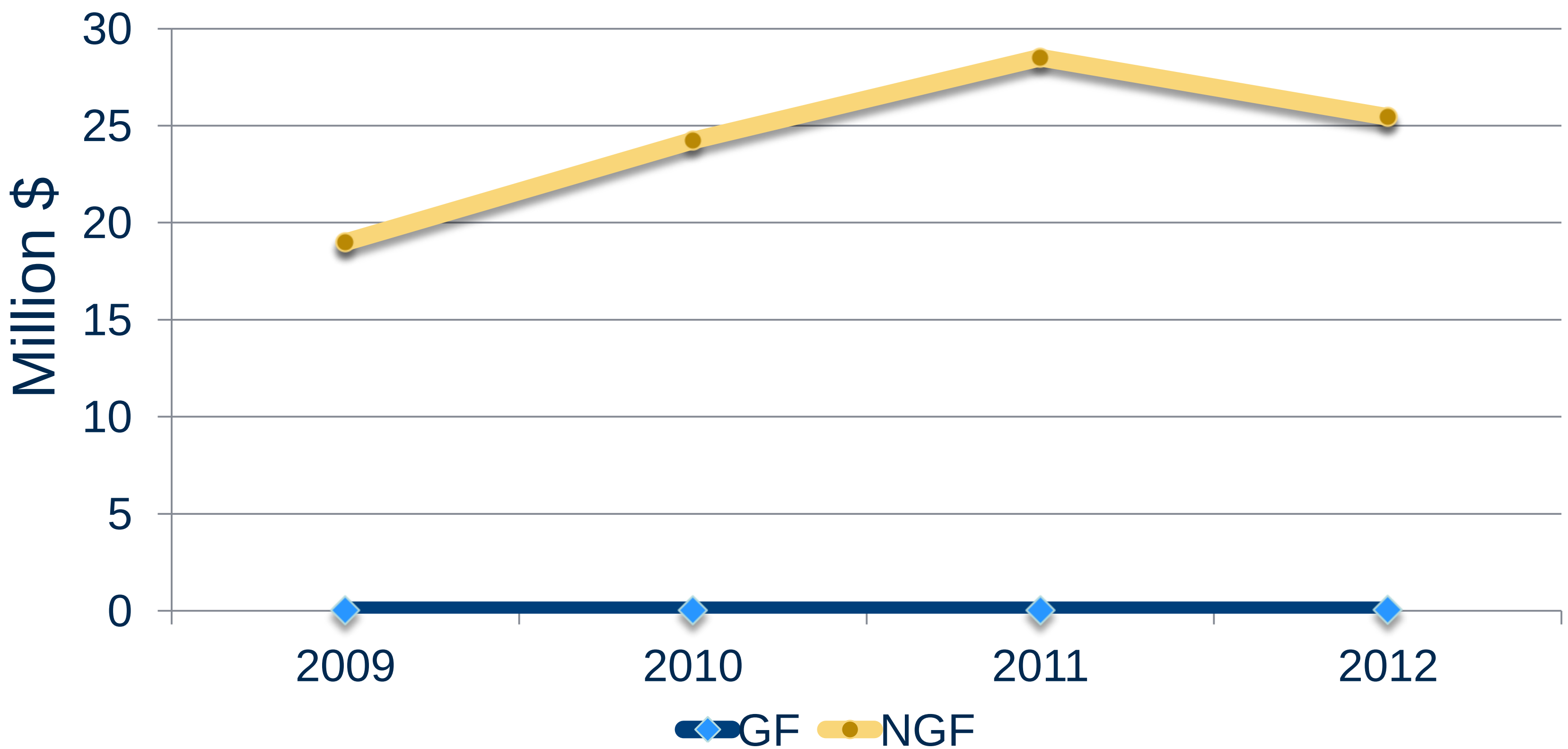


New Jersey

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

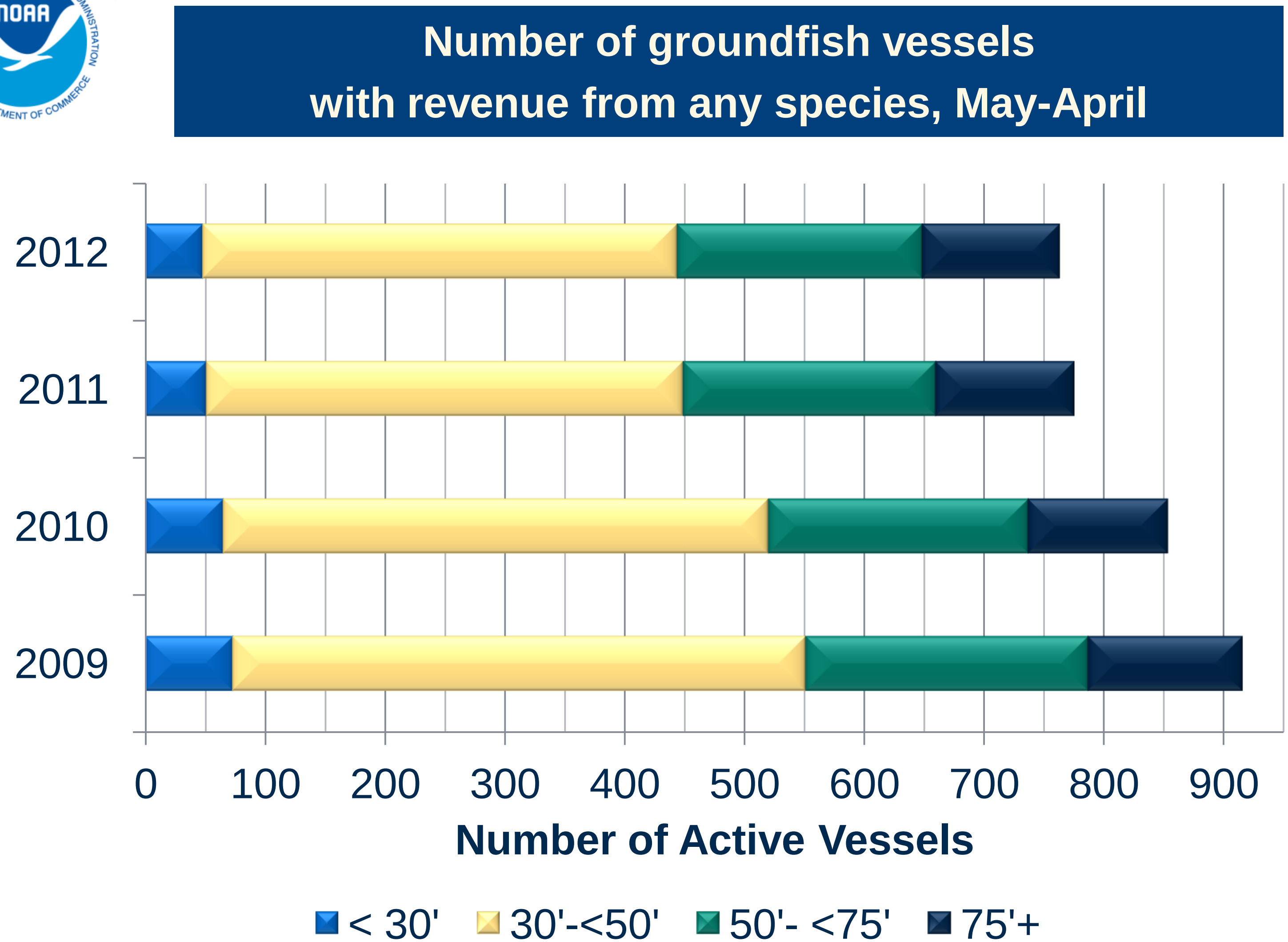


Section III

Number of Vessels and Vessel Affiliations

NOAA FISHERIES SERVICE

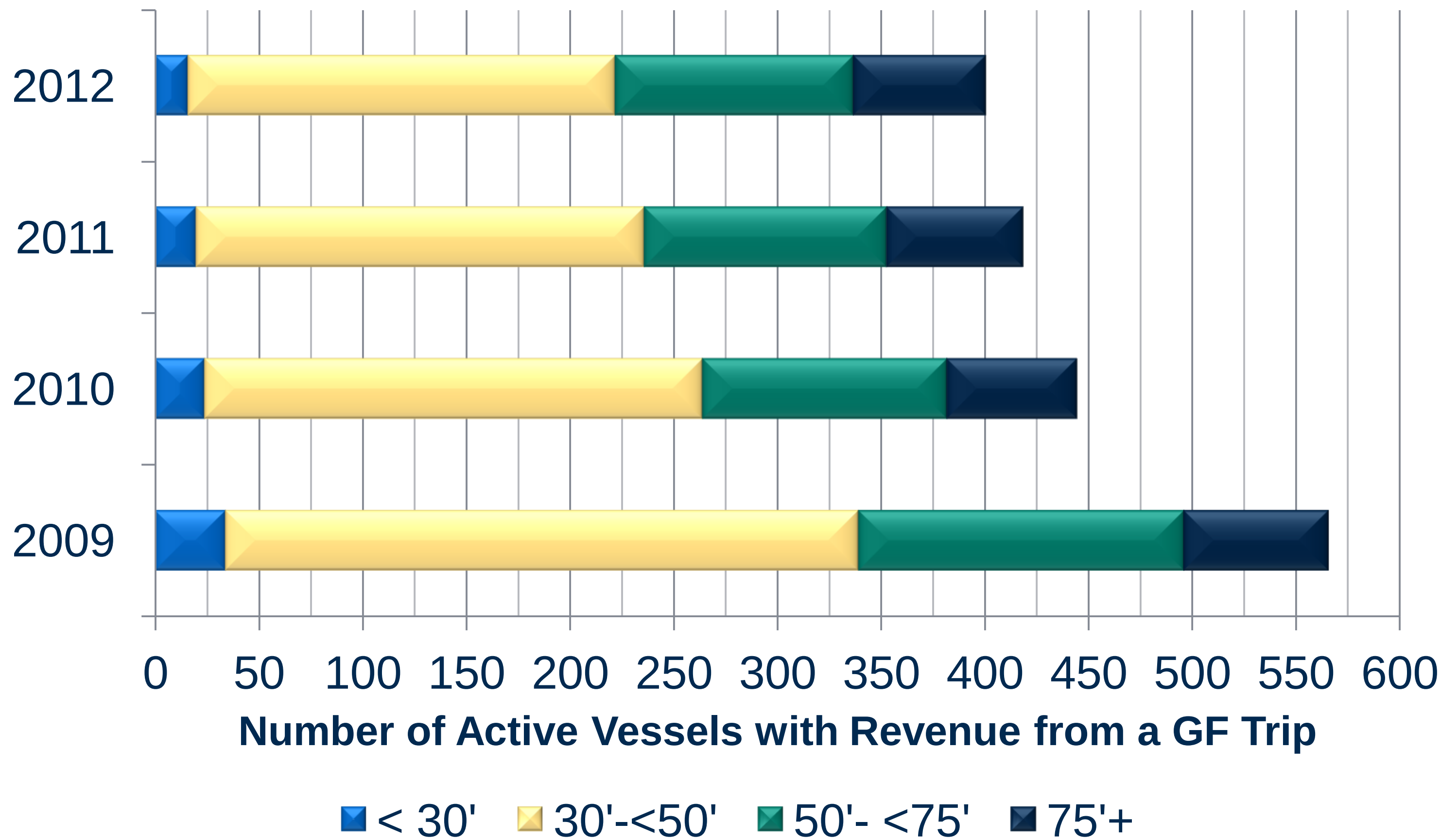
Fewer Active Vessels
across all vessel length classes



NOAA FISHERIES SERVICE

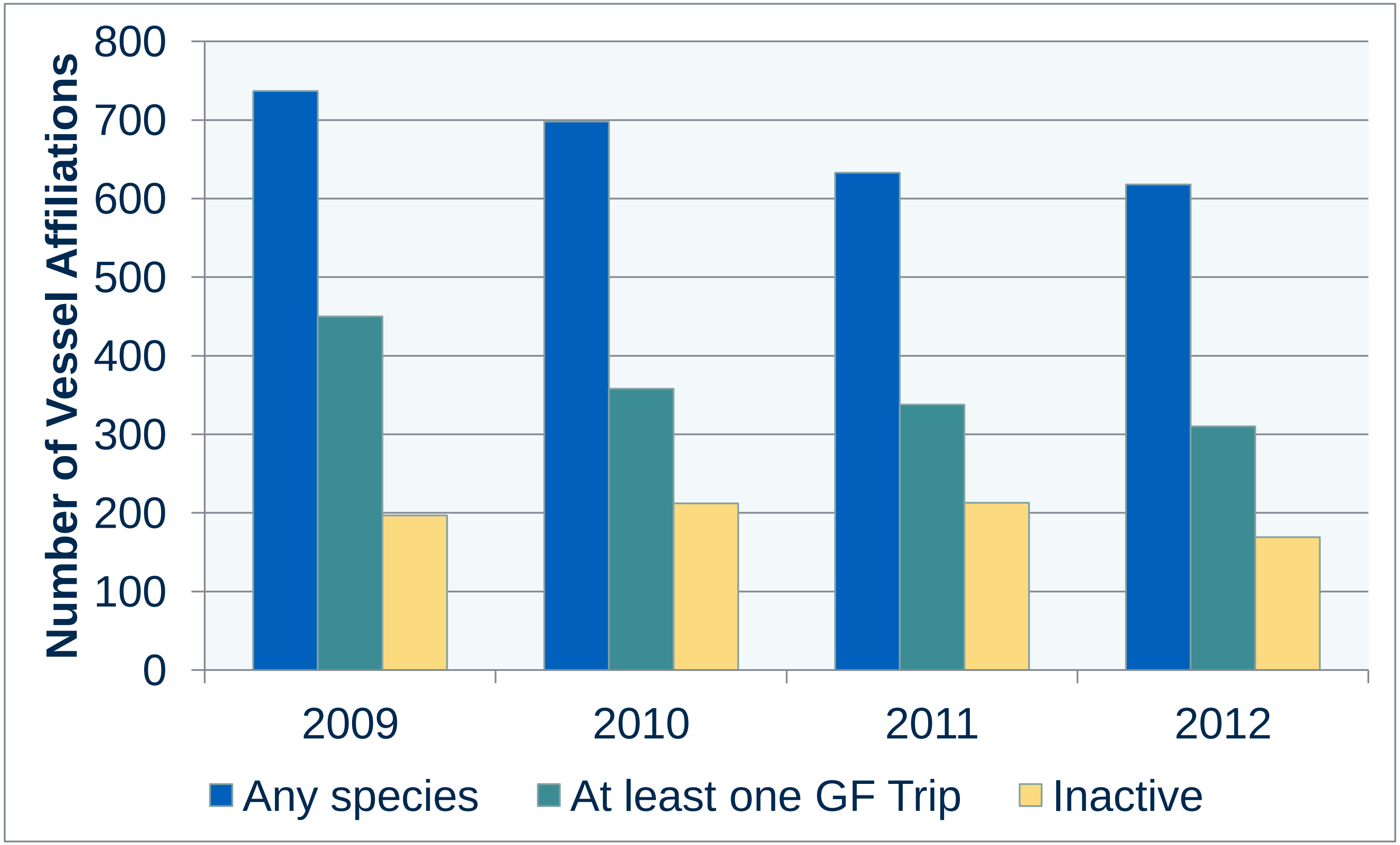
Fewer Active Vessels Targeting GF across all vessel length classes

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)



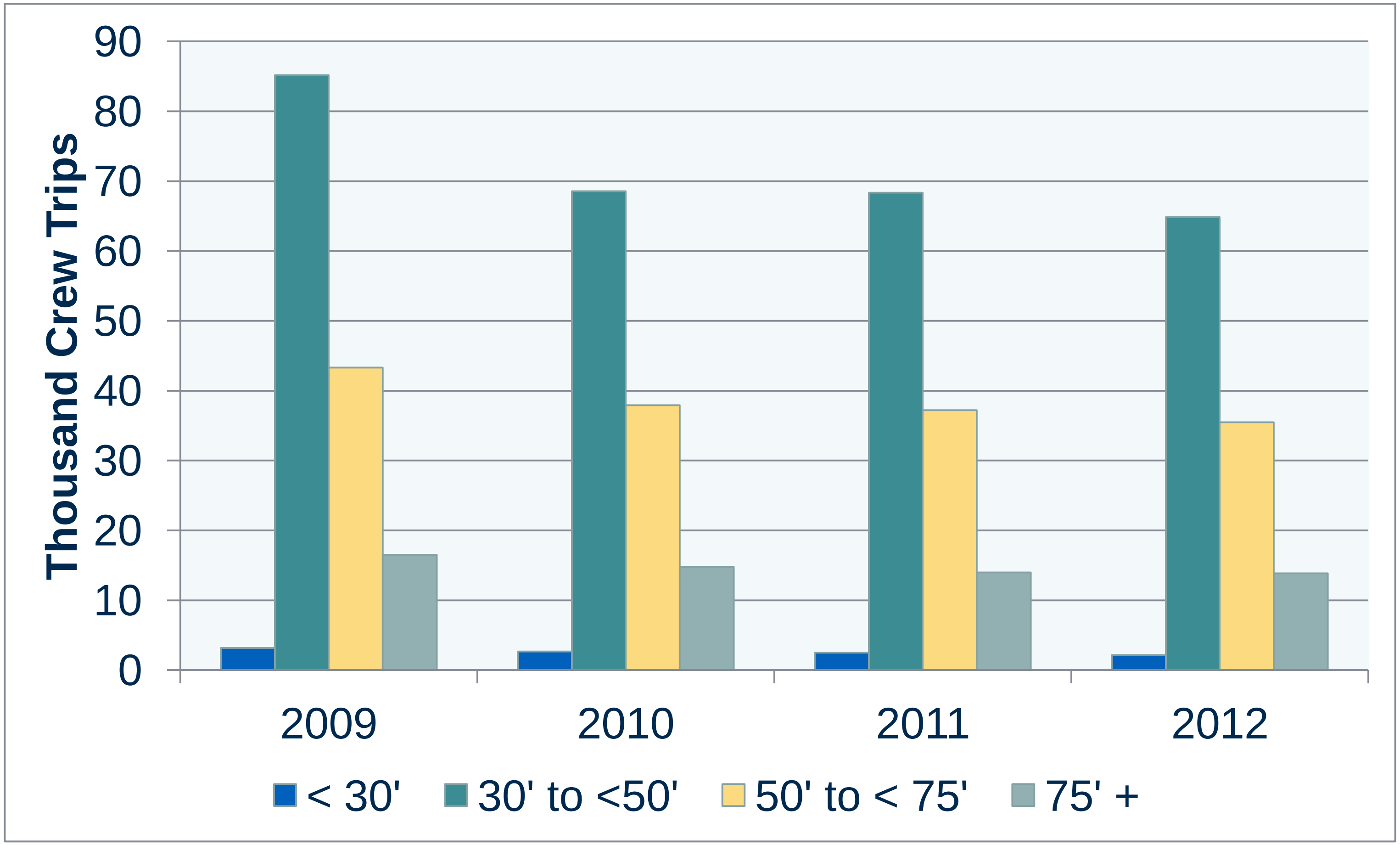
NOAA FISHERIES SERVICE

Section IV
Crew Employment

NOAA FISHERIES SERVICE

4 year low in 2012 across vessel length classes

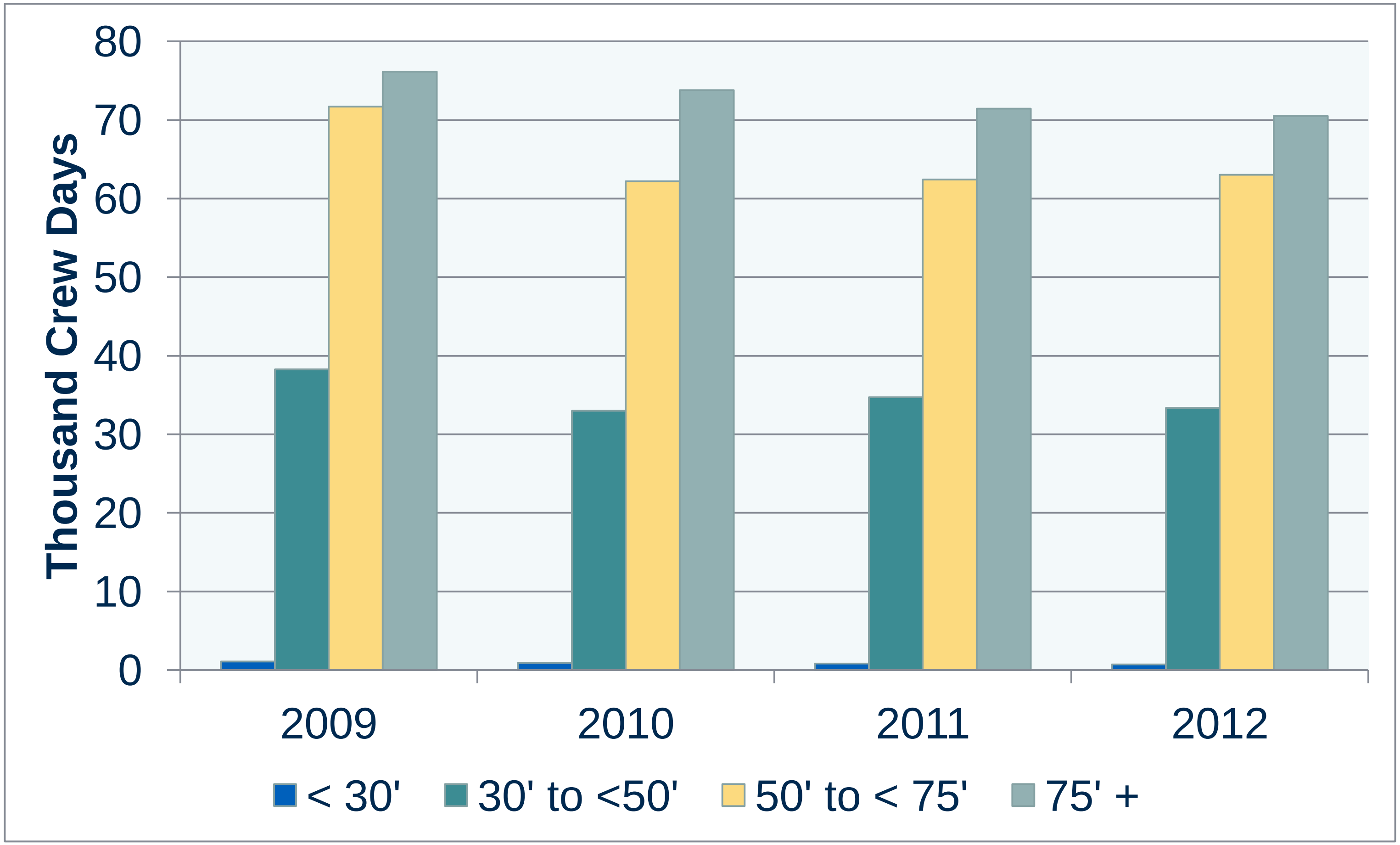
Number of Crew Trips by Vessel Size Category (thousand trips, all trips, May-April)



NOAA FISHERIES SERVICE

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)



NOAA
FISHERIES
SERVICE

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.

NOAA FISHERIES SERVICE

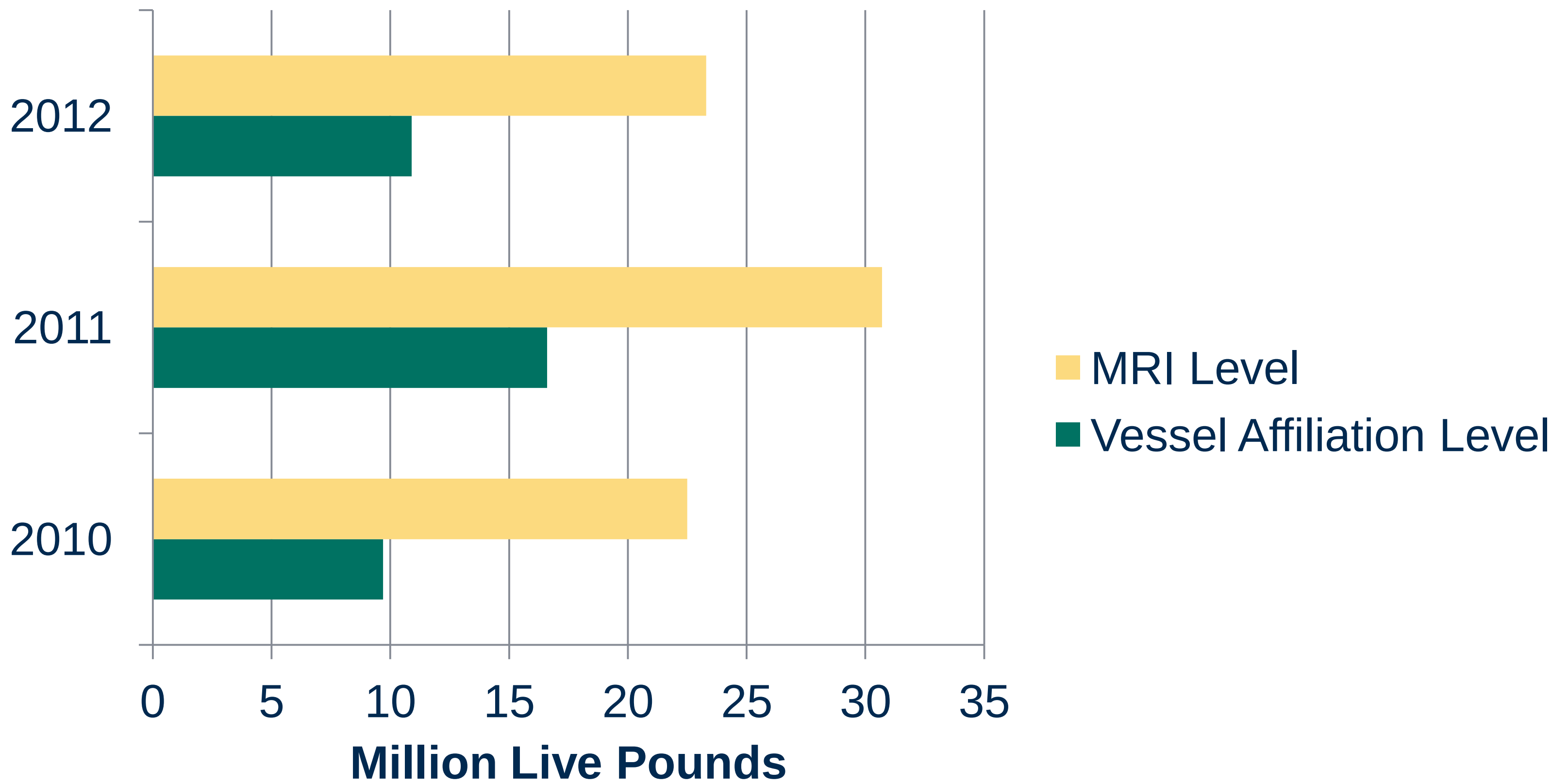
Summary of Crew Employment (continued)

- 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.

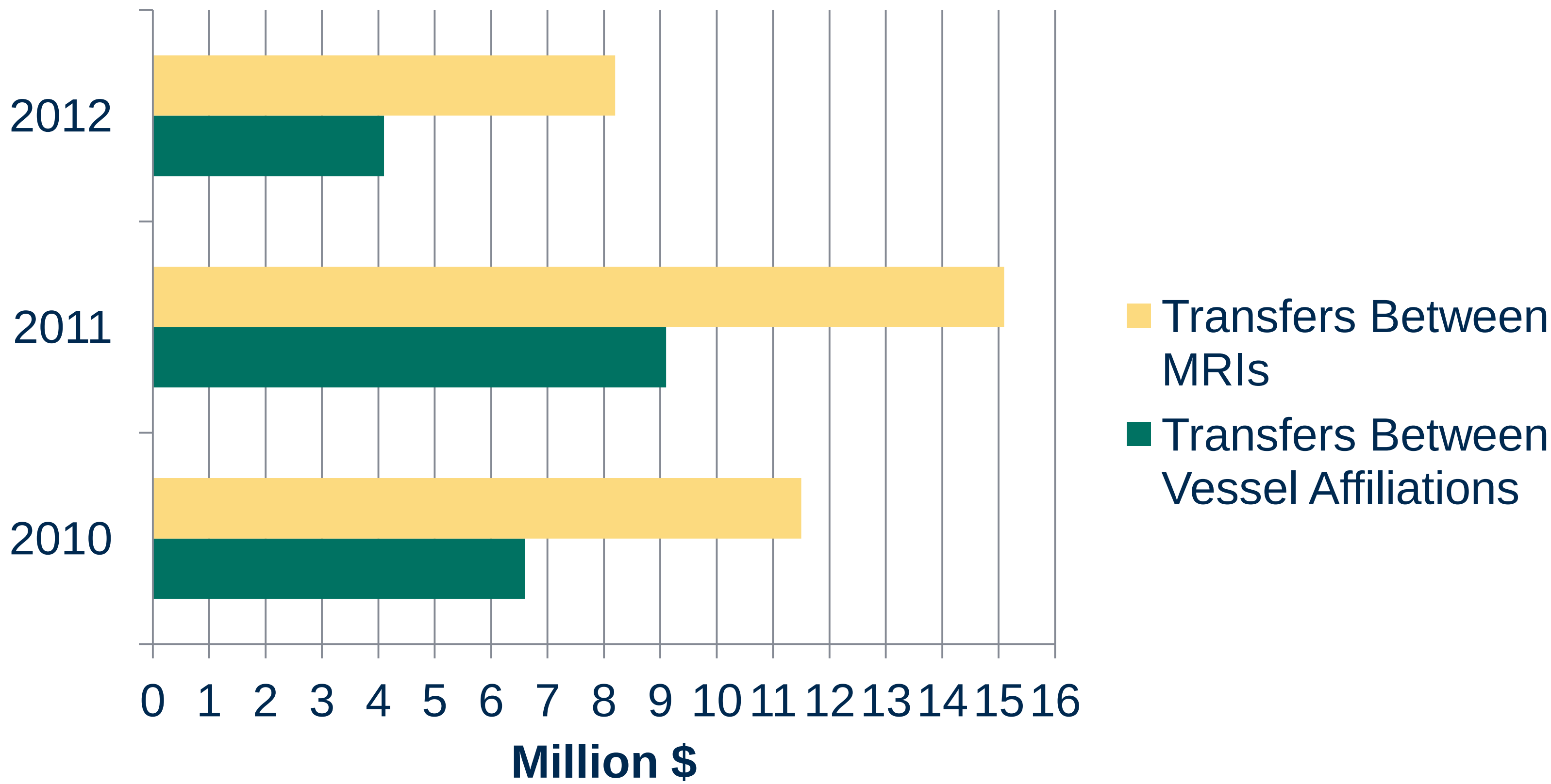
NOAA
FISHERIES
SERVICE

Section V
Leasing Activity

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



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



NOAA FISHERIES SERVICE

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.

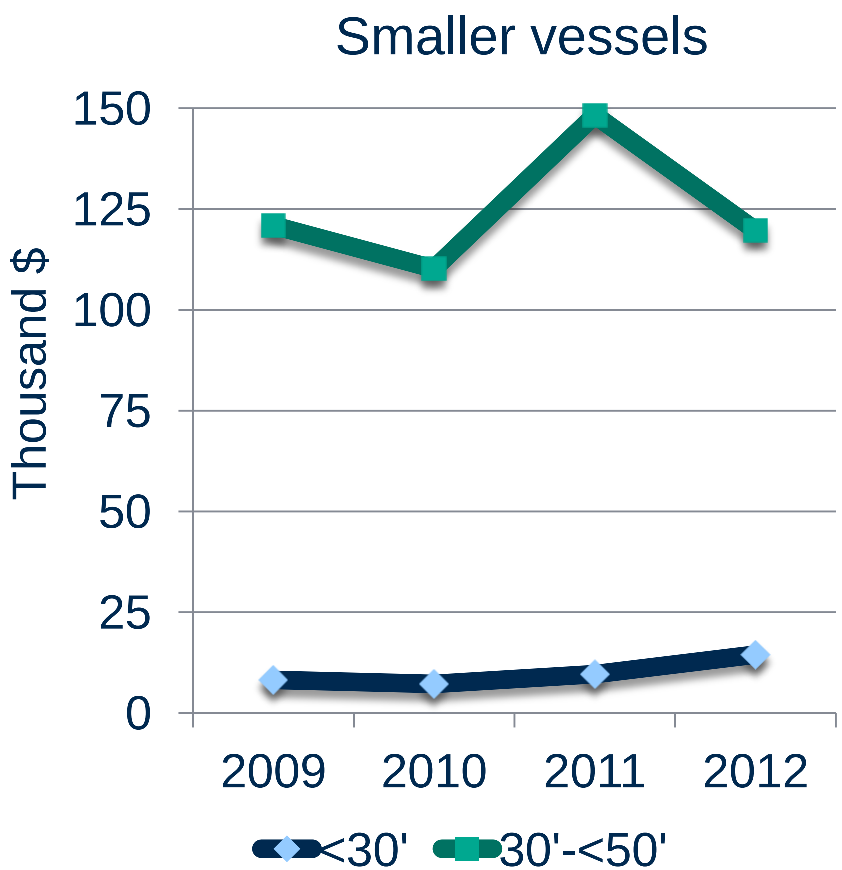
NOAA FISHERIES SERVICE

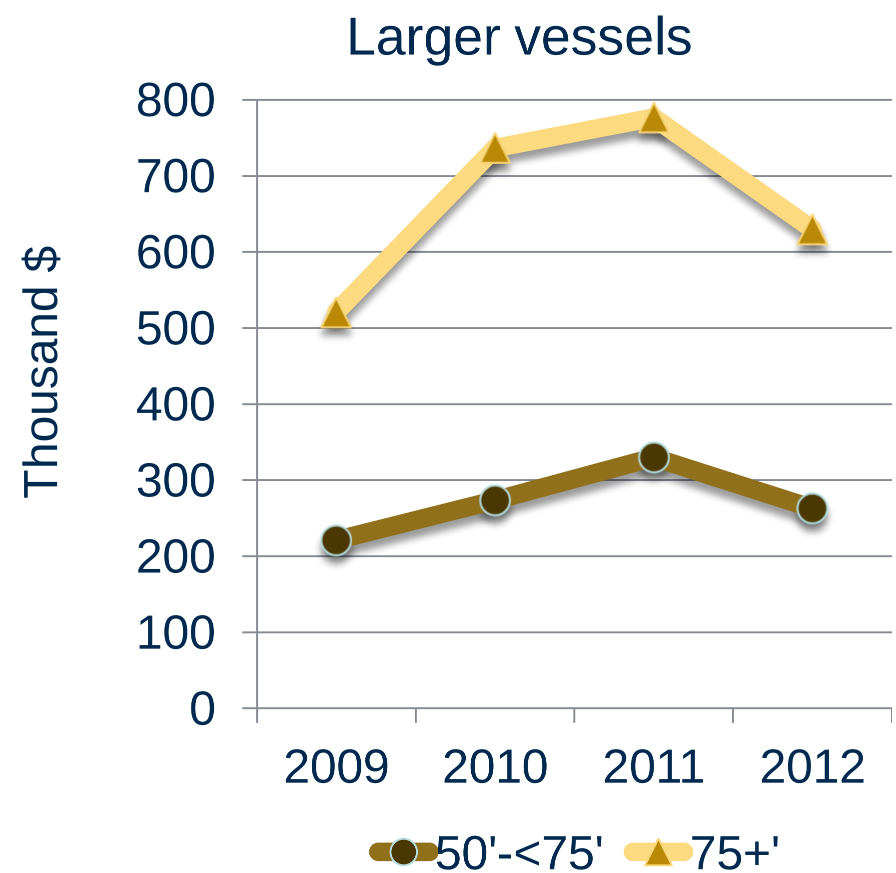
Section VI
Economic Performance of the Active GF Fleet
(unadjusted for leasing activity)

NOAA FISHERIES SERVICE

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

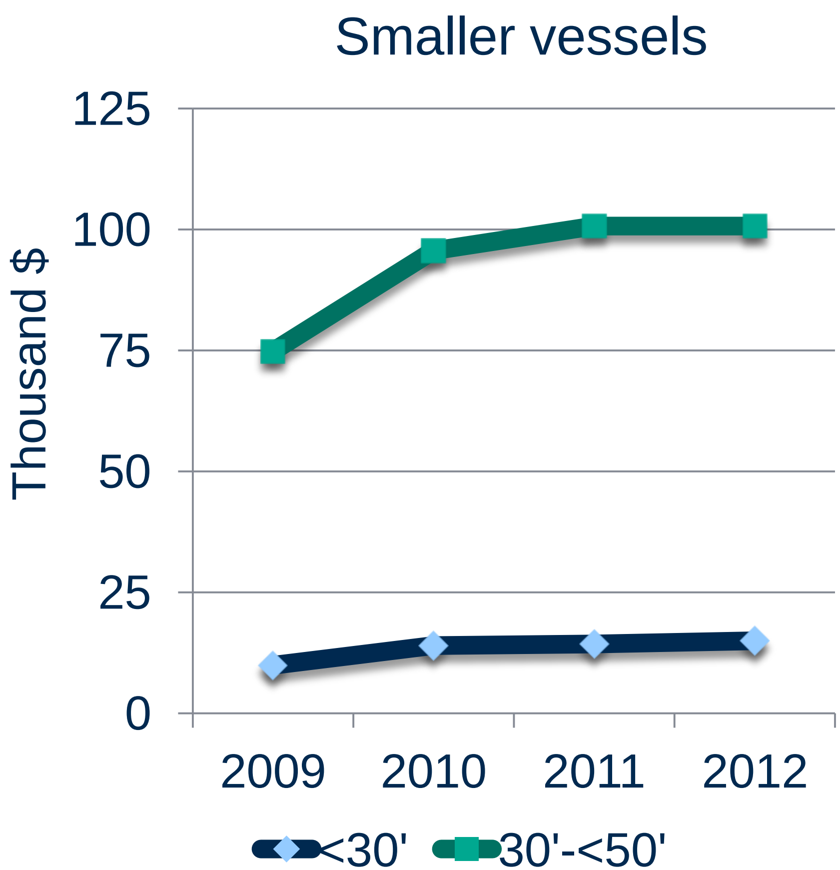
All species, GF trips, thousand $, May-April

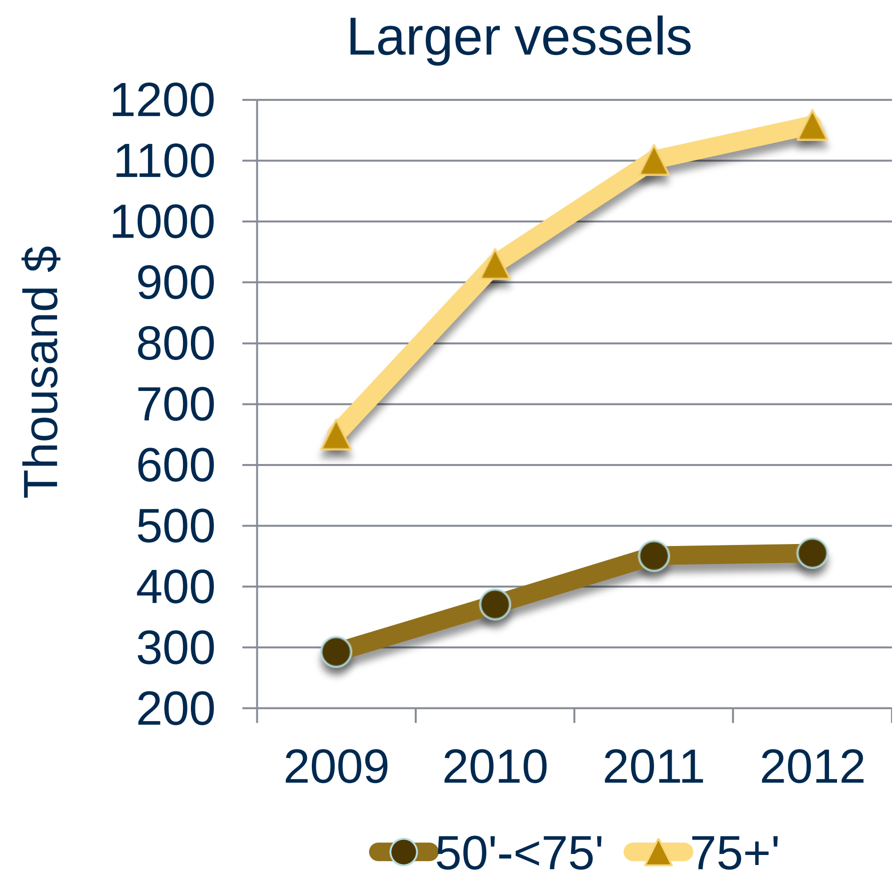




Constant or Higher Average All Species Revenue Per Vessel on Non-GF Trips in 2012

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





NOAA
FISHERIES
SERVICE

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.

NOAA FISHERIES SERVICE

Estimation of Net Revenue (unadjusted for leasing)

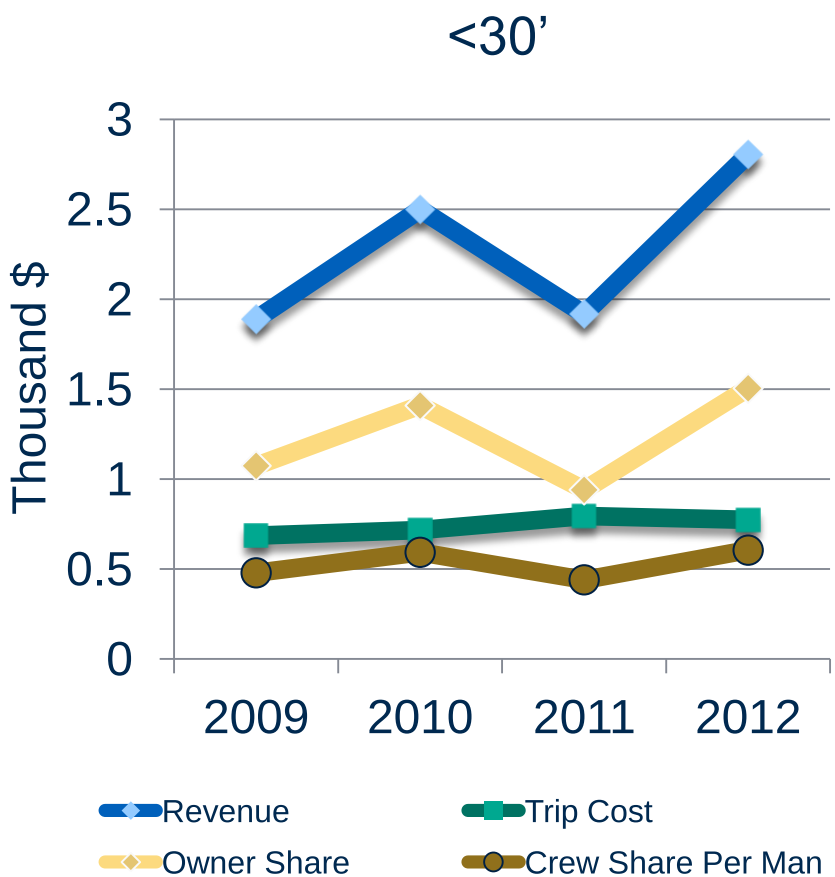
- Methodology & Assumptions
  - Trip costs for all trips are estimated using cost information from sampled trips. Average trip costs per day absent were estimated for 80 vessels types.

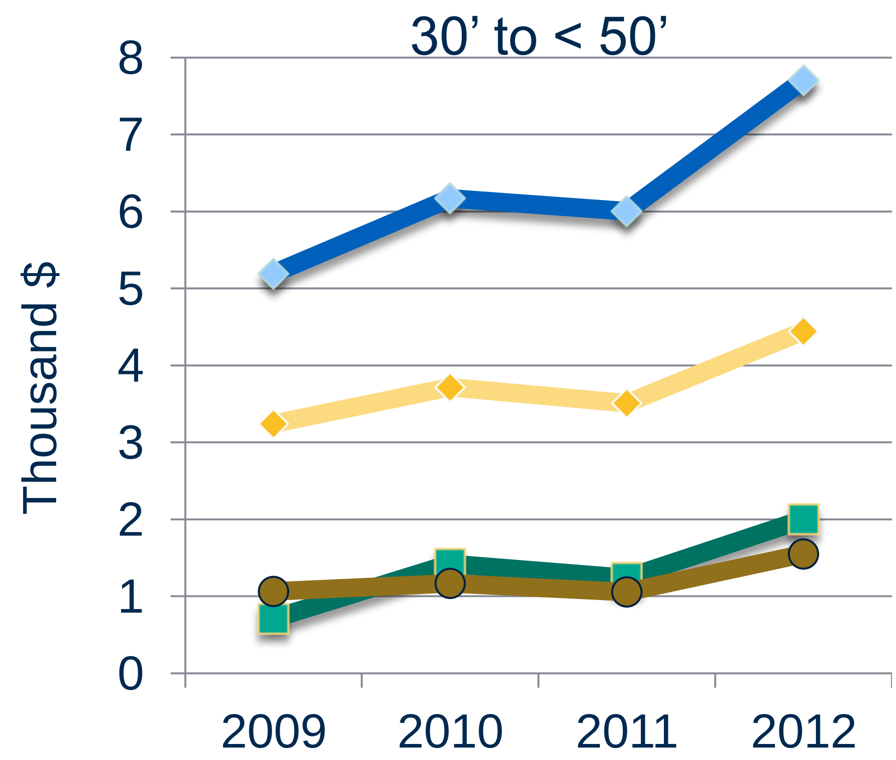
    - Vessel type was based on gear, vessel length, trip duration & fishing year.
  - Assumptions about whether the vessel is operated by the owner or by a hired captain.

    - 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



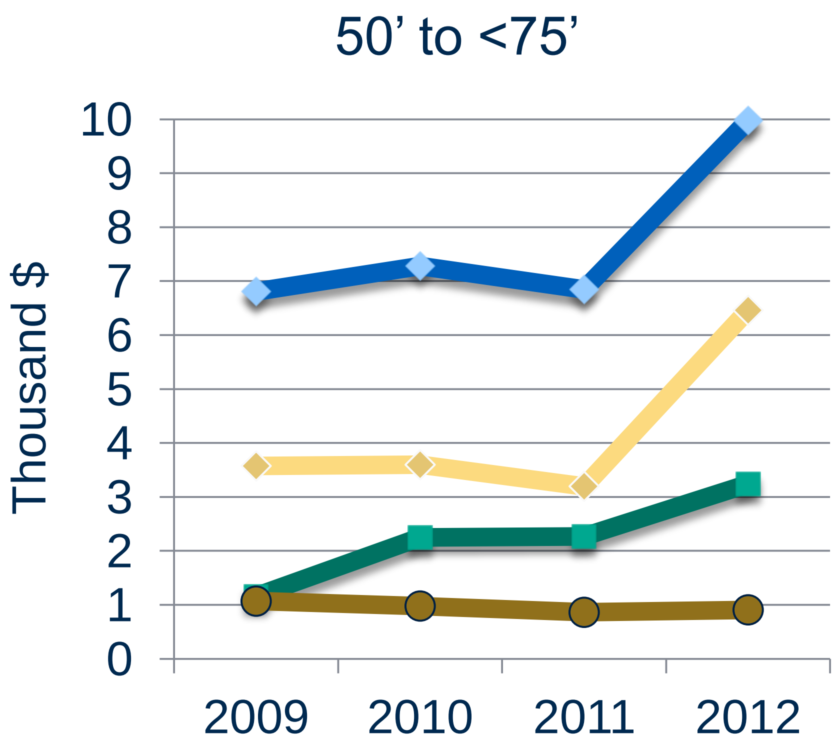


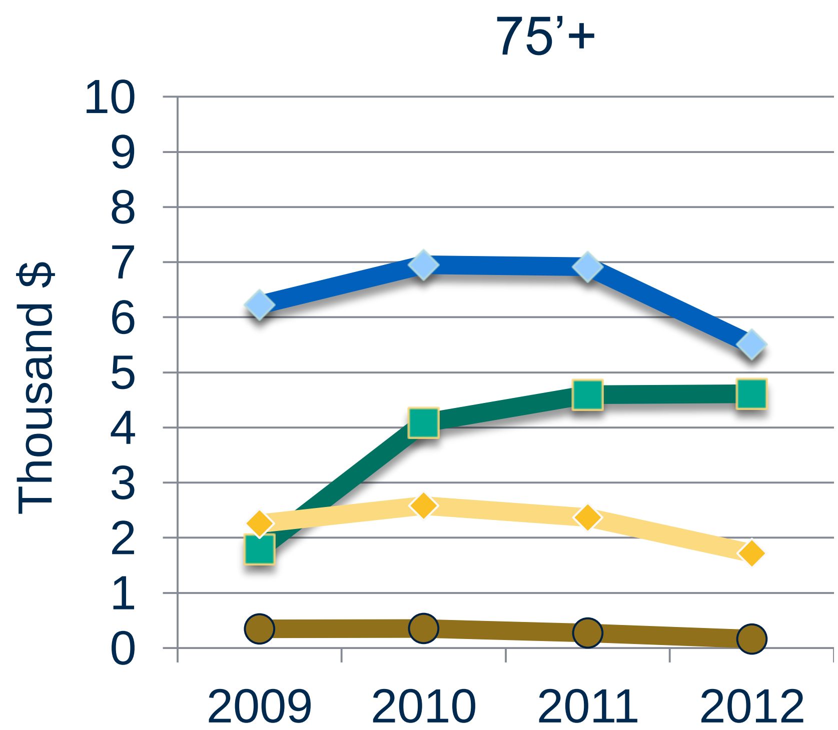
NOAA FISHERIES SERVICE

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



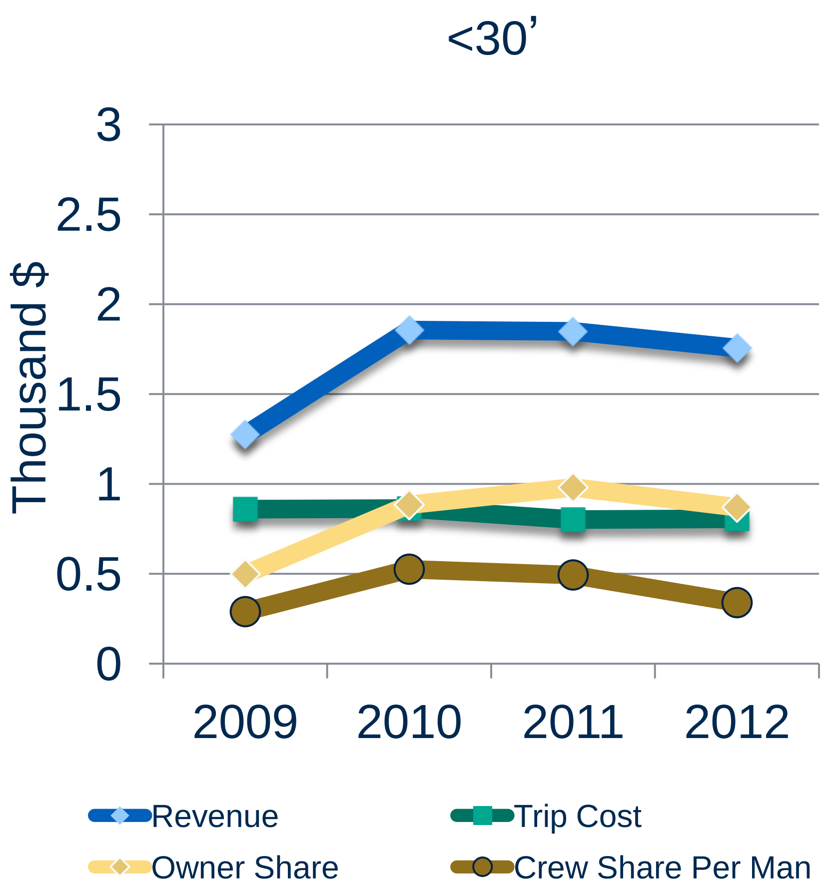


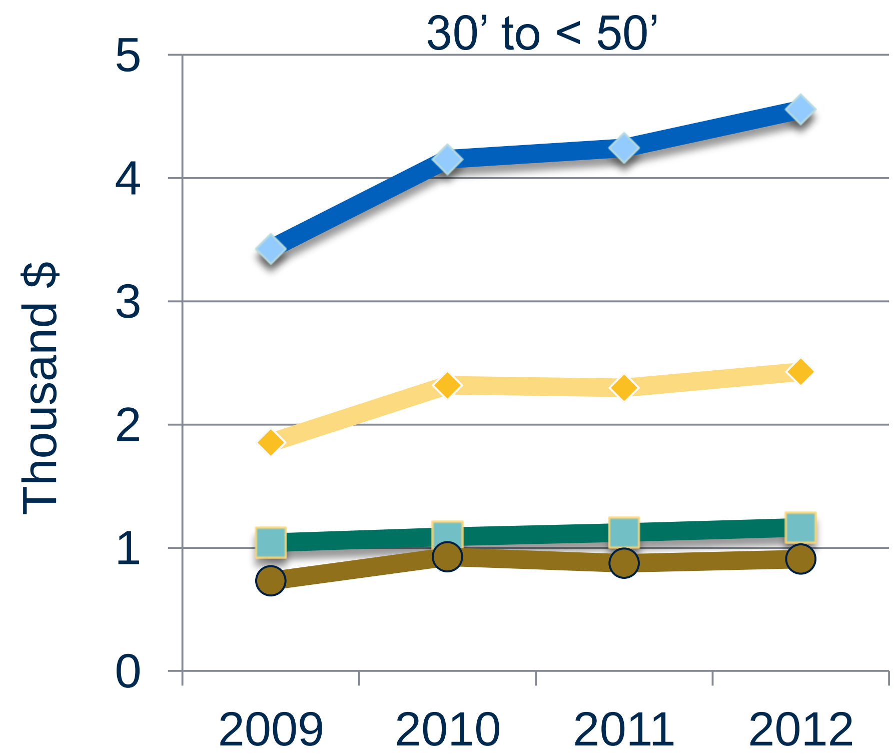
NOAA FISHERIES SERVICE

Average Per Day Values on NGF Trips

Revenues and Shares down for <30', slightly up for 30' to <50'

Non-Groundfish trips, May-April

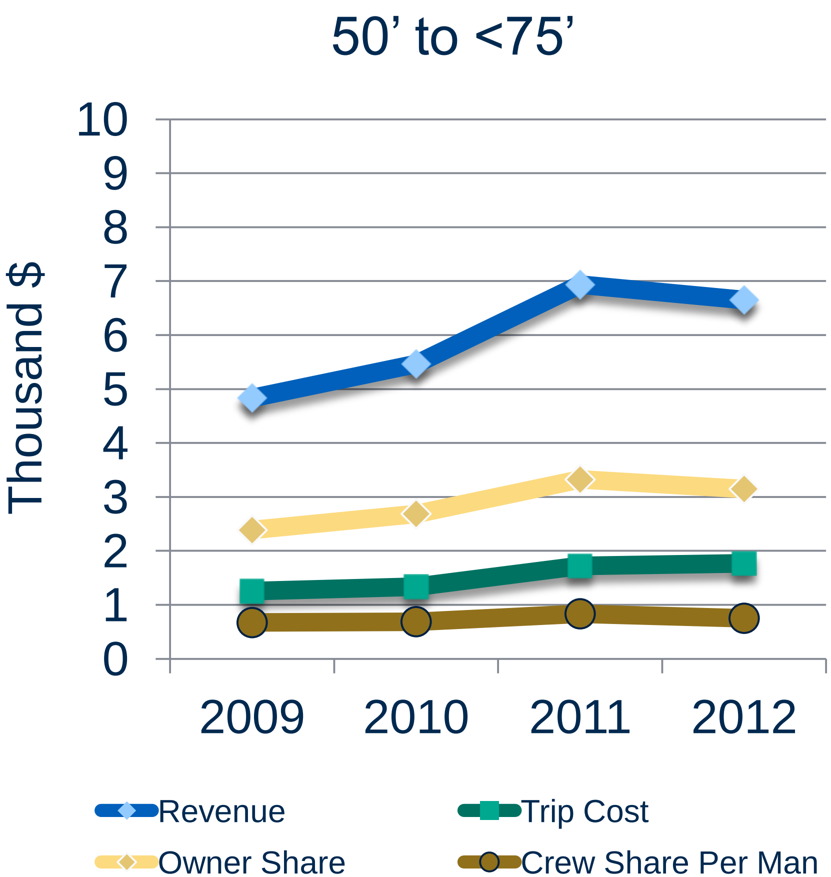


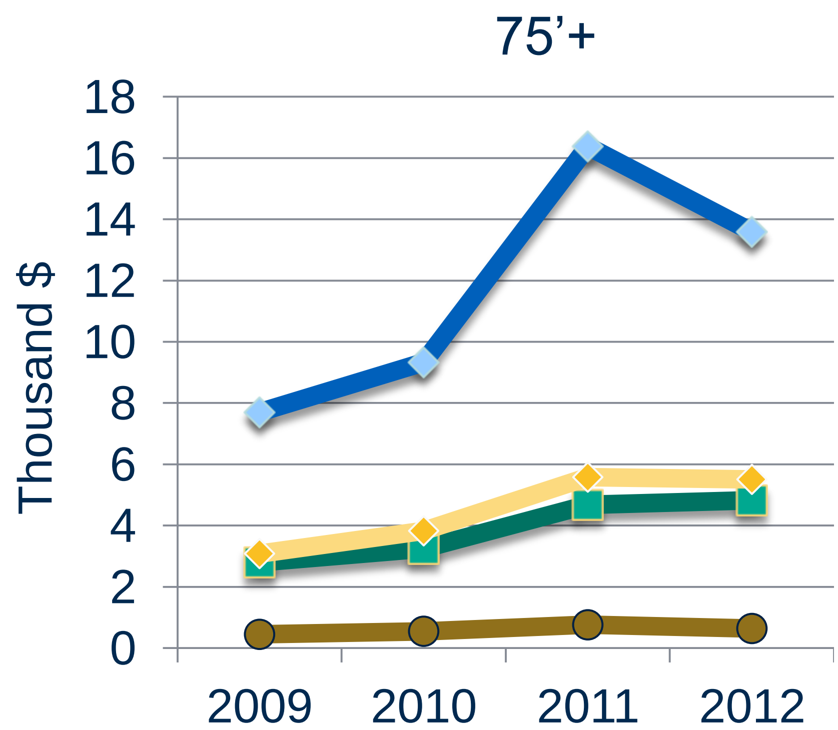


NOAA FISHERIES SERVICE

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

Non-Groundfish trips, May-April





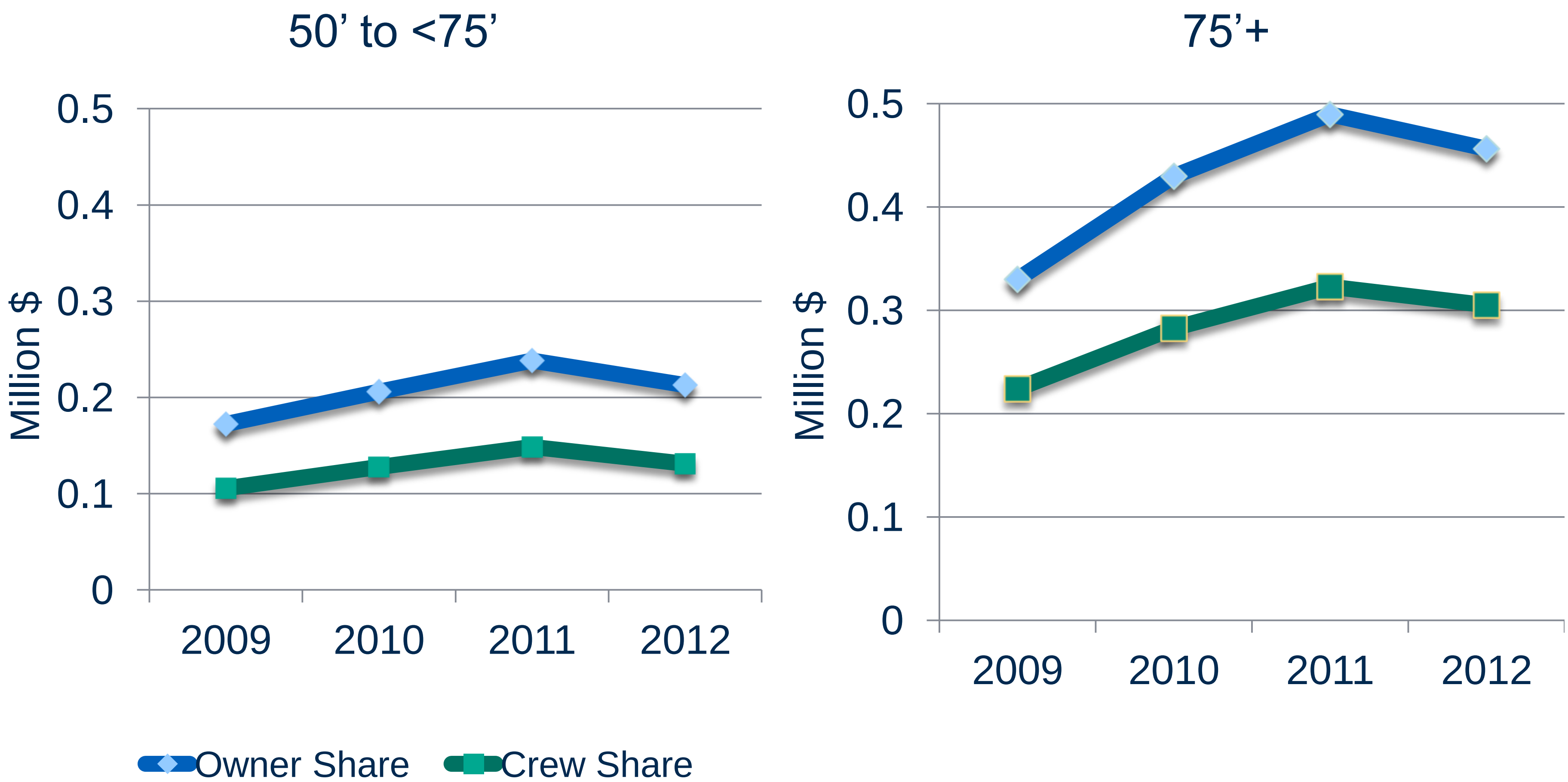
Lower Average Per Vessel Shares in 2012 compared to 2011 for <30' and 30' to <50' (unadjusted for leasing)

All trips, May-April

NOAA FISHERIES SERVICE

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

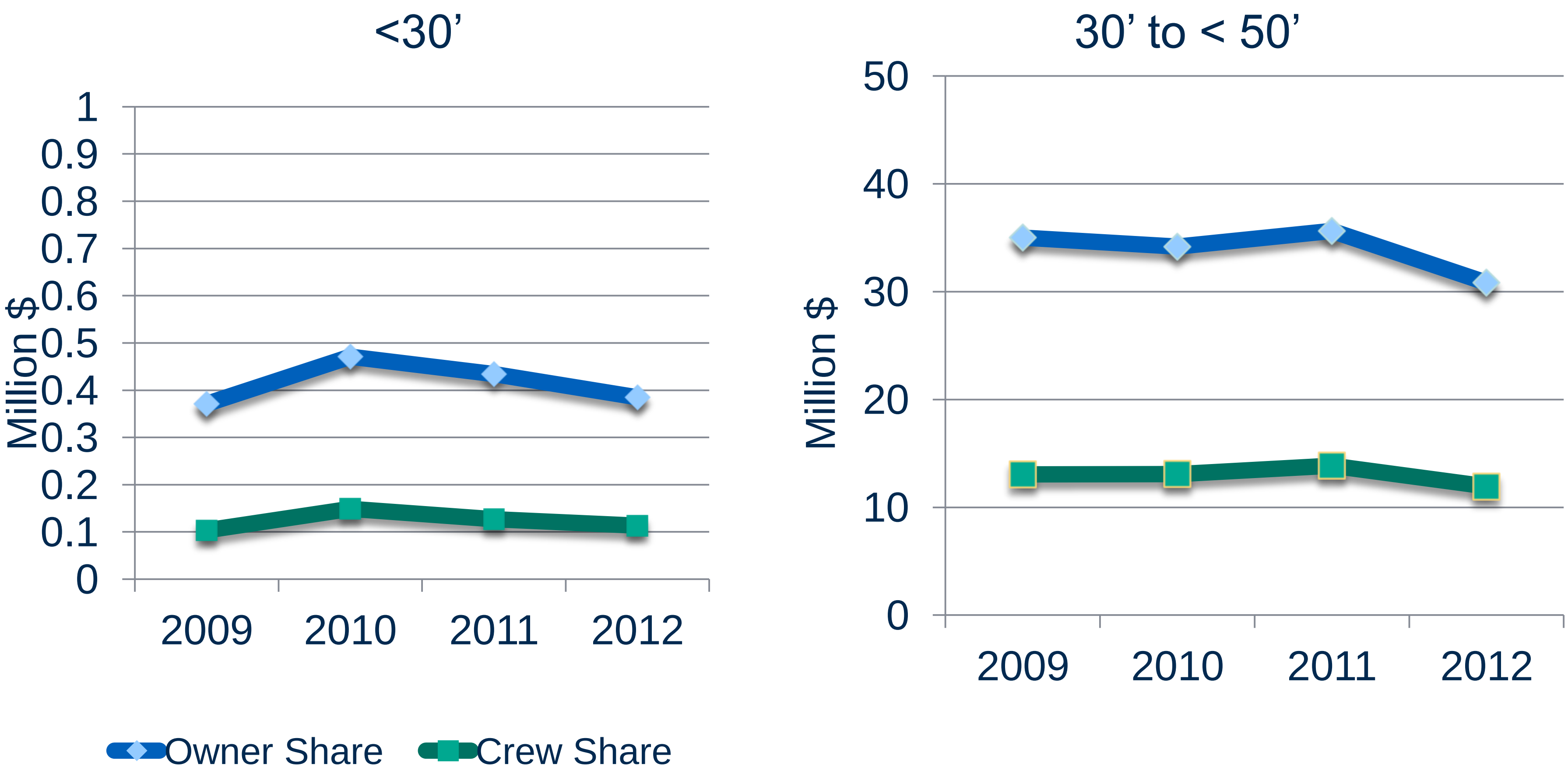
All trips, May-April



NOAA FISHERIES SERVICE

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

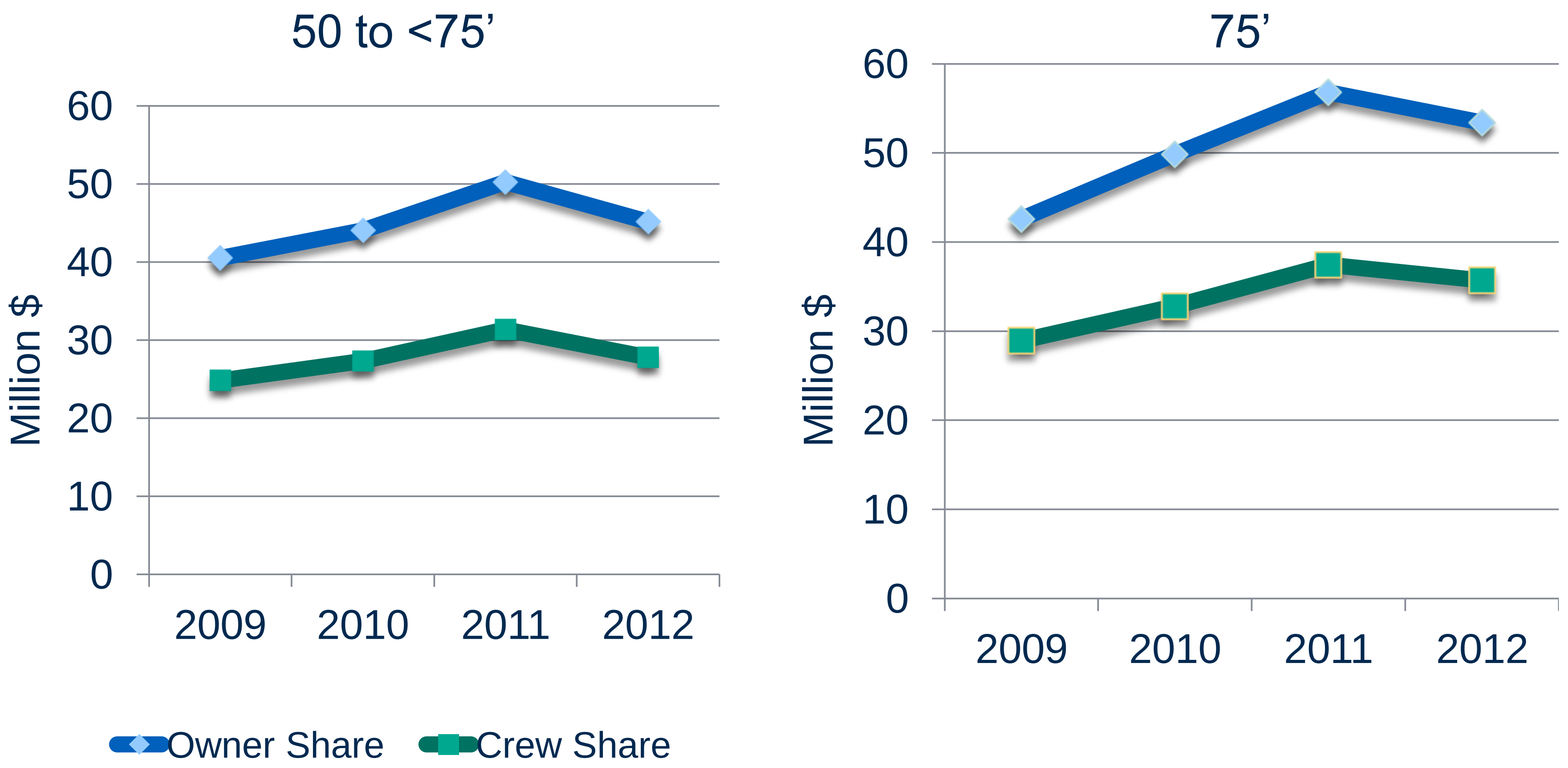
All trips, May-April



NOAA FISHERIES SERVICE

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

All trips, May-April



NOAA FISHERIES SERVICE

Section VII

Consolidation and Distribution of Revenues

among active vessels and vessel affiliations

NOAA
FISHERIES
SERVICE

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

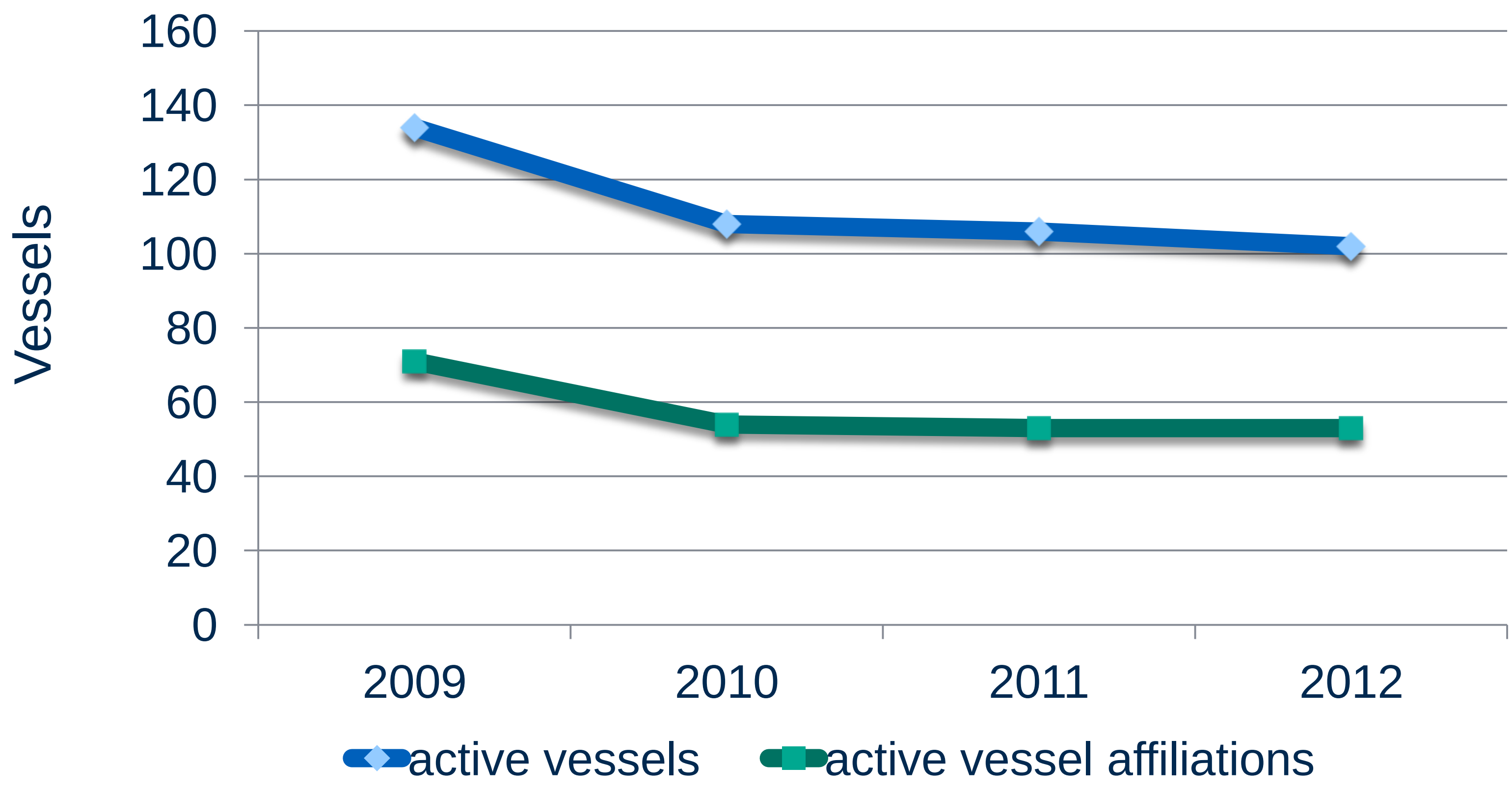
- Consolidation of revenues:
  - A shift in the GF fishery towards fewer active vessels or active vessel affiliations earning GF and all species revenues.

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

NOAA FISHERIES SERVICE

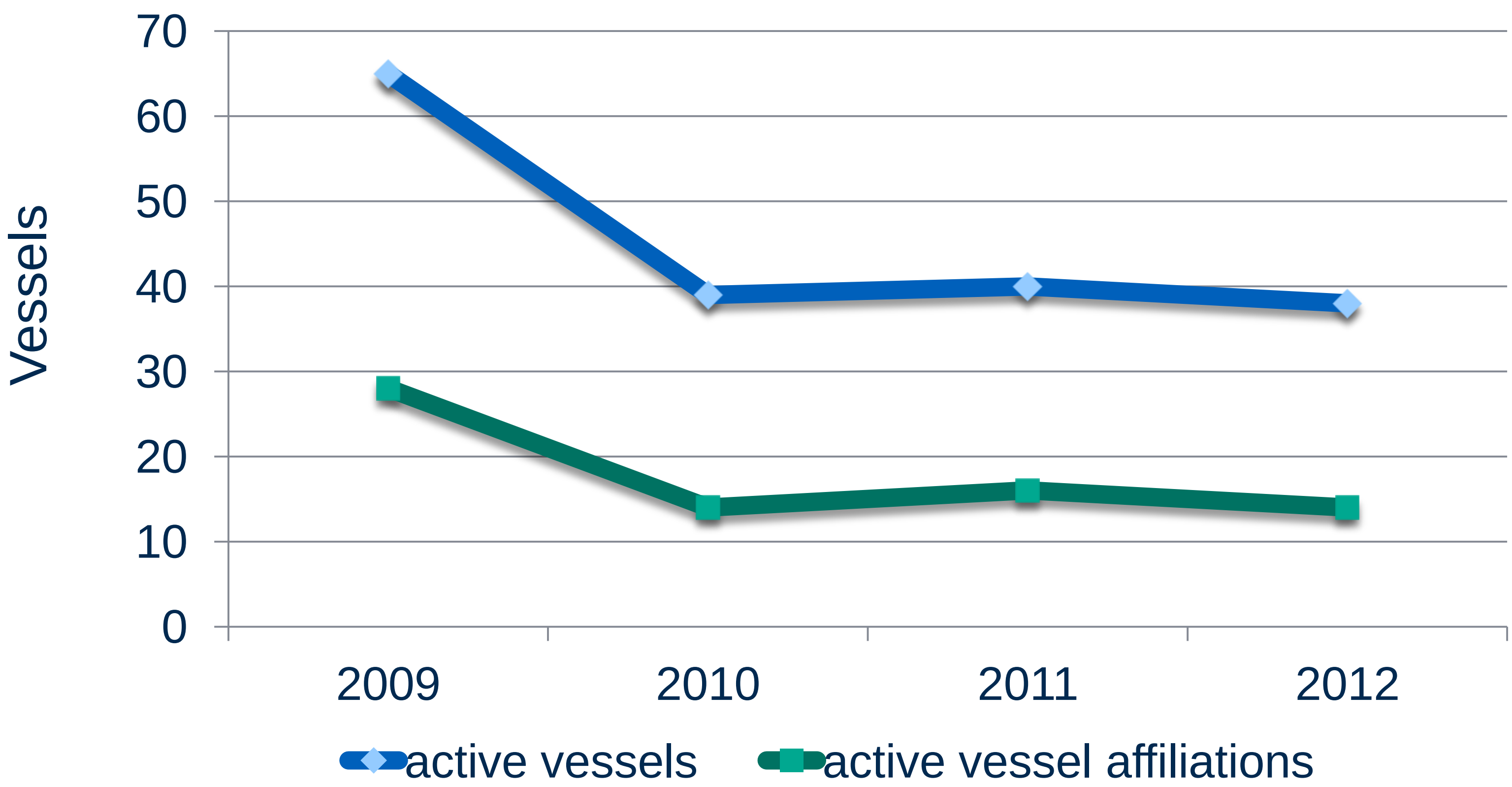
Revenue Consolidation

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



Revenue Consolidation

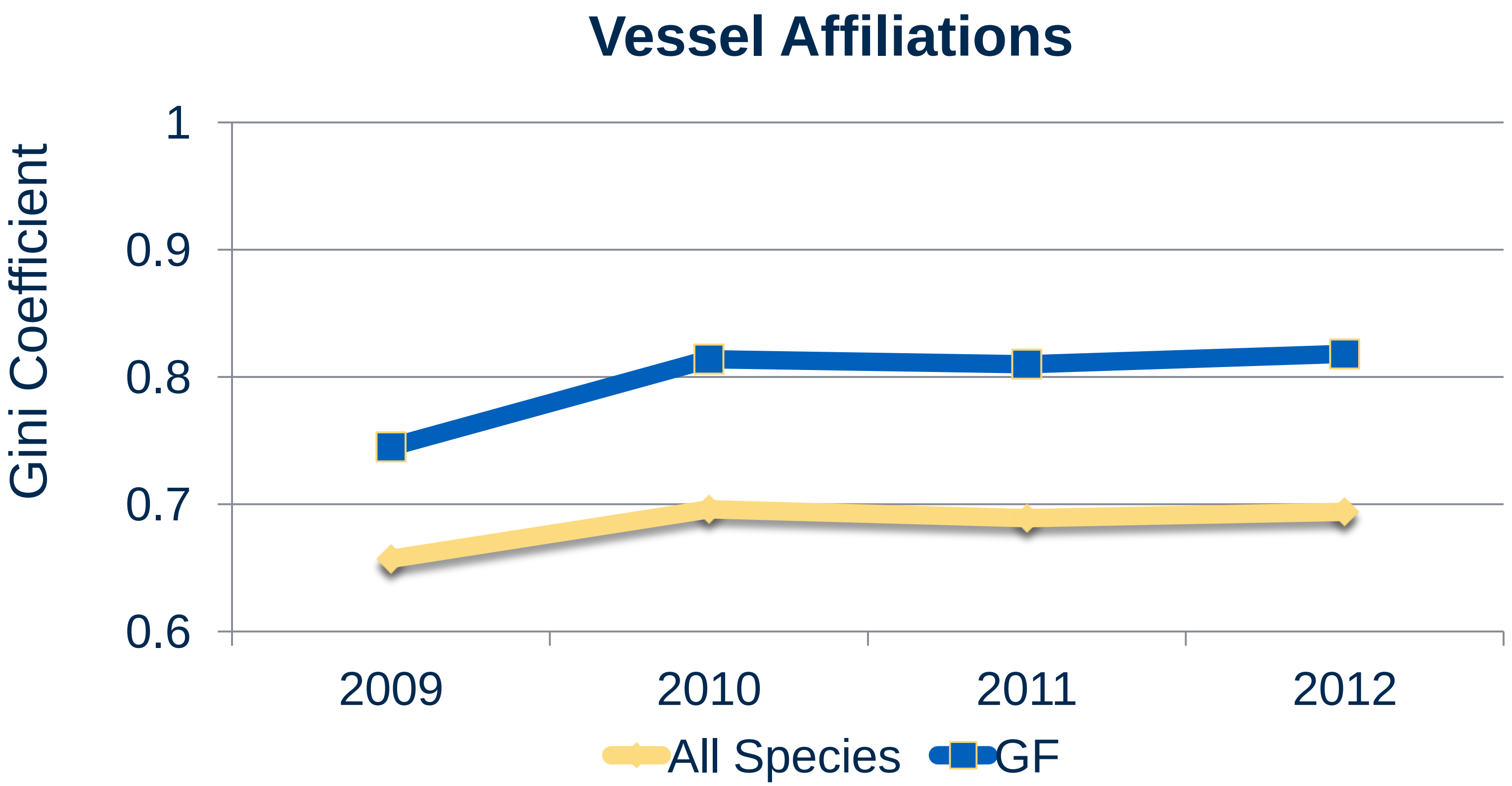
Number of vessels and vessel affiliations landing top 50% of groundfish revenue



NOAA FISHERIES SERVICE

Revenue Distribution

All Species Revenue and Groundfish Revenue



NOAA FISHERIES SERVICE

Section VIII

Adjusting Net Revenue for Leasing Activity

NOAA
FISHERIES
SERVICE

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.

NOAA
FISHERIES
SERVICE

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.

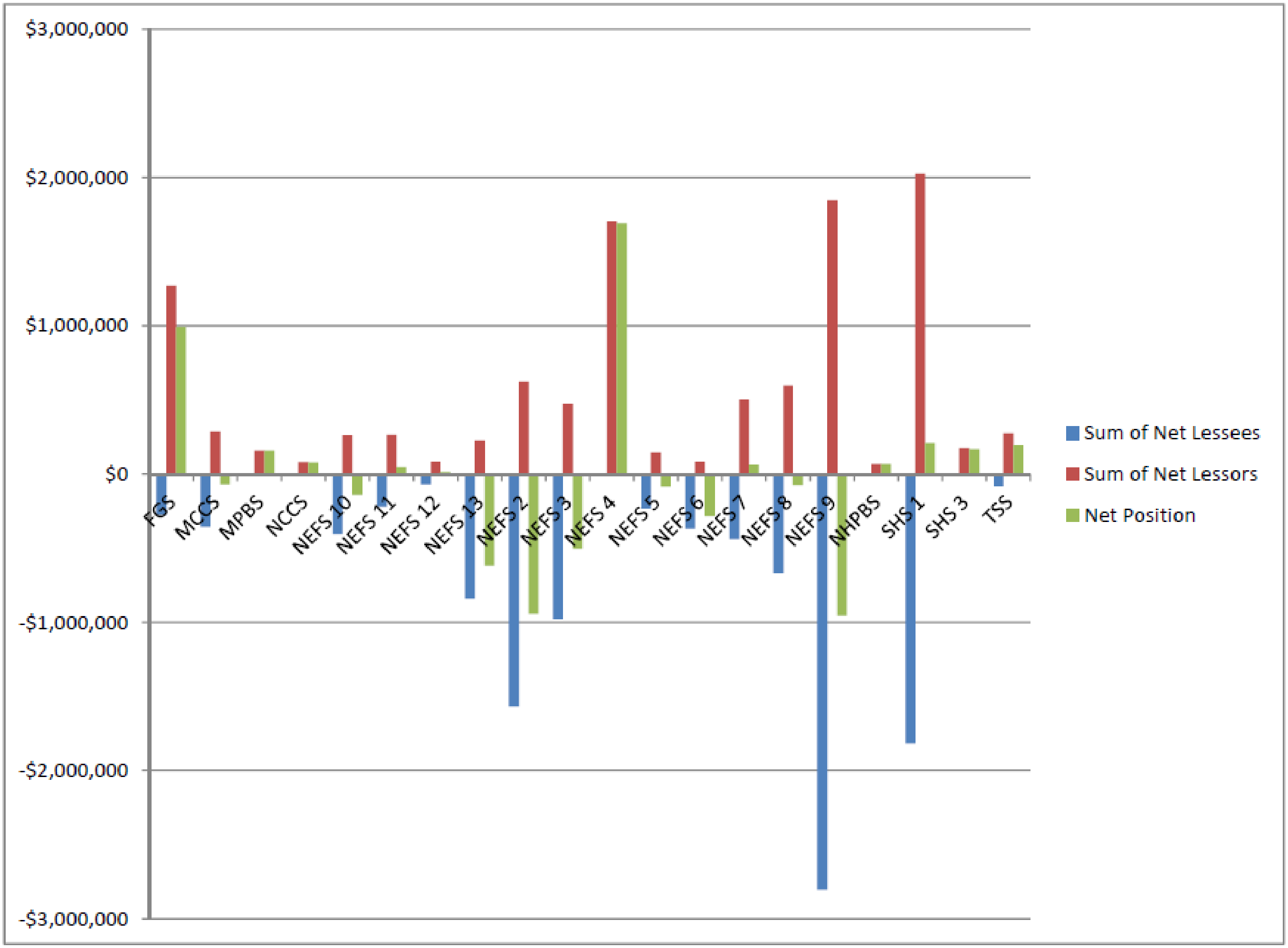
NOAA FISHERIES SERVICE

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)

NOAA FISHERIES SERVICE

Final Net Quota Positions by Sector



NOAA
FISHERIES
SERVICE

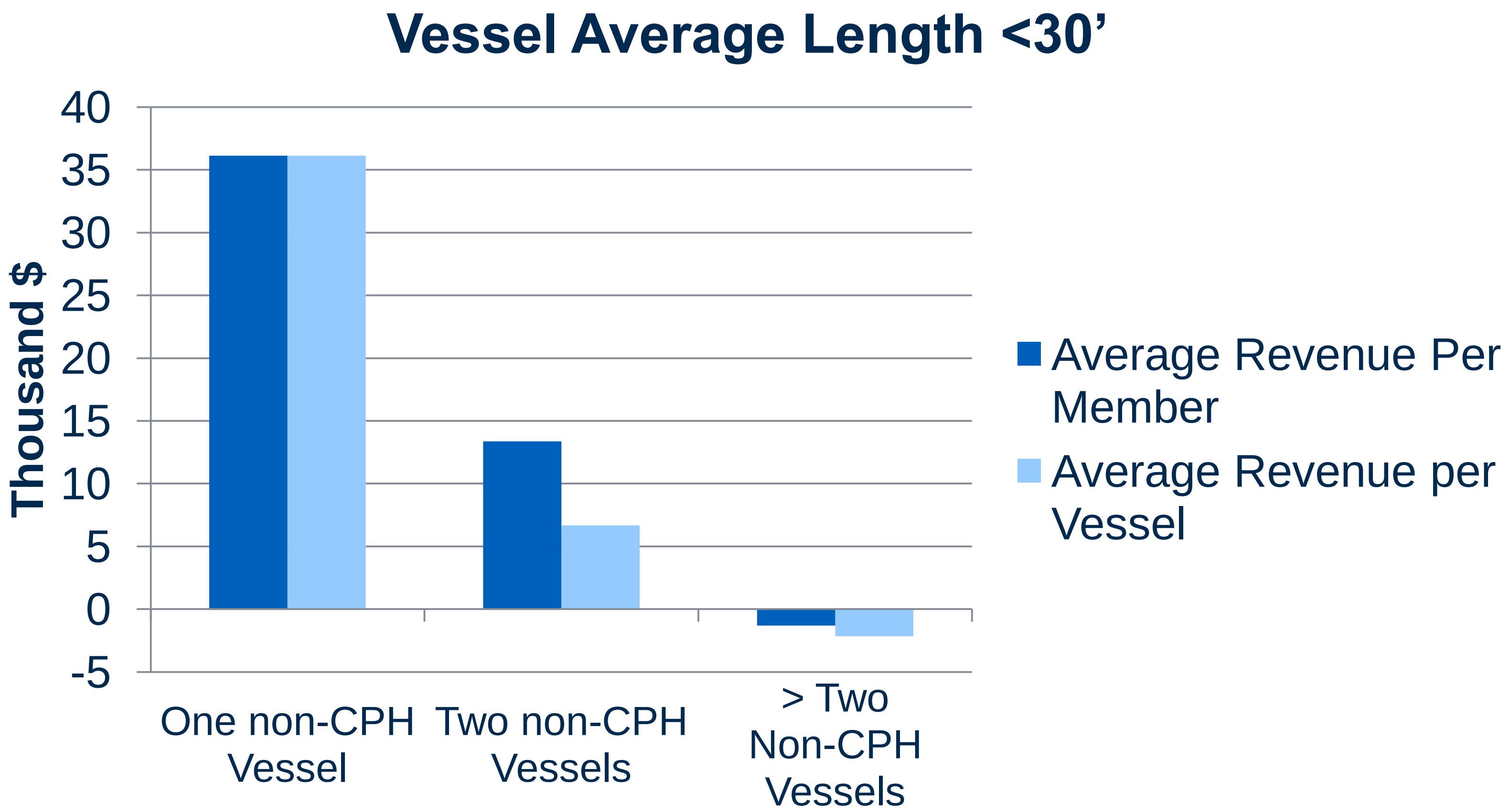
Adjusting Net Revenue for Leasing Activity

- 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.

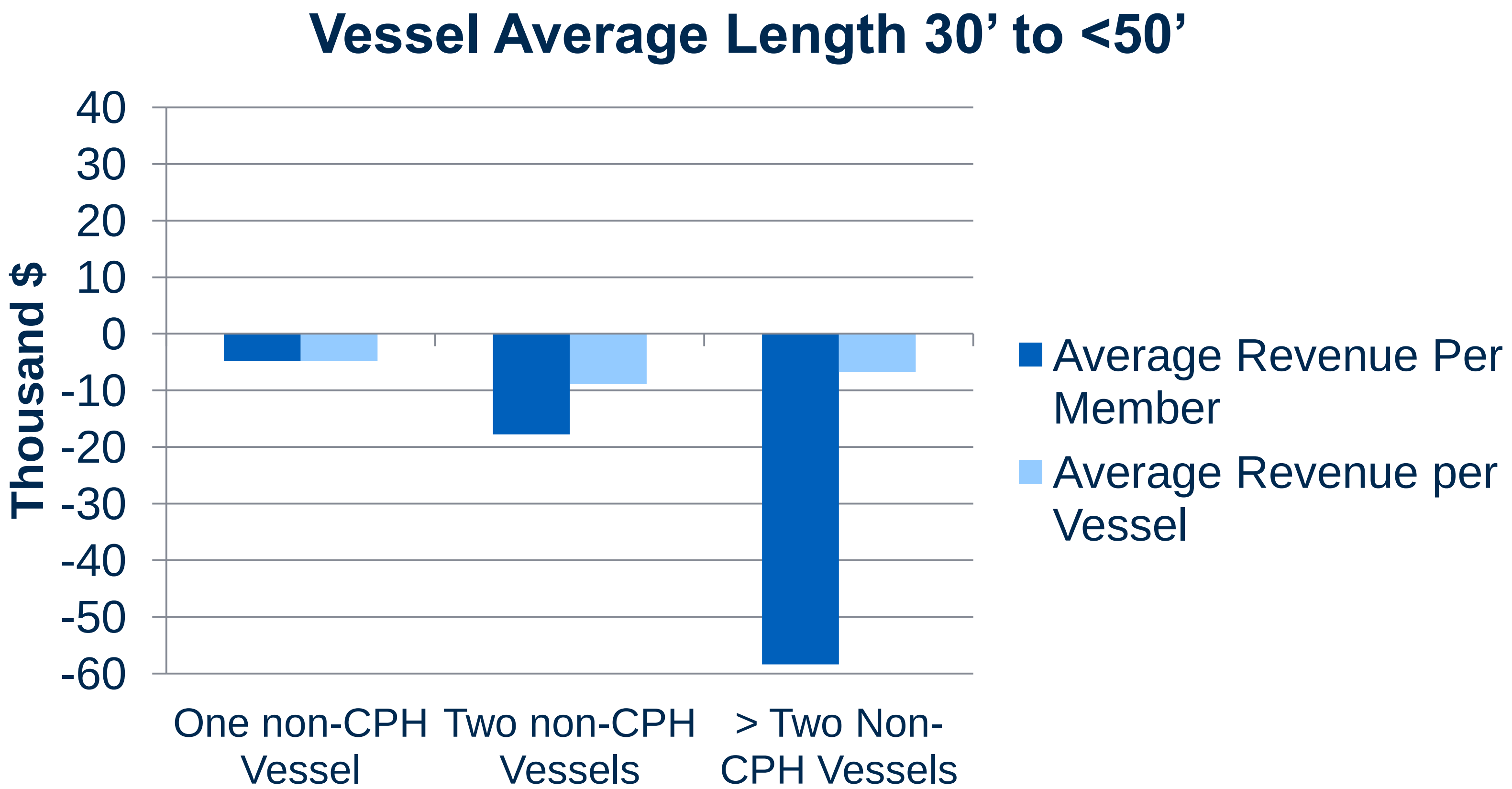
- Assumption that the vessel owner pays leasing costs - therefore adjustments are made to owner’s share only – and not crew share.

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

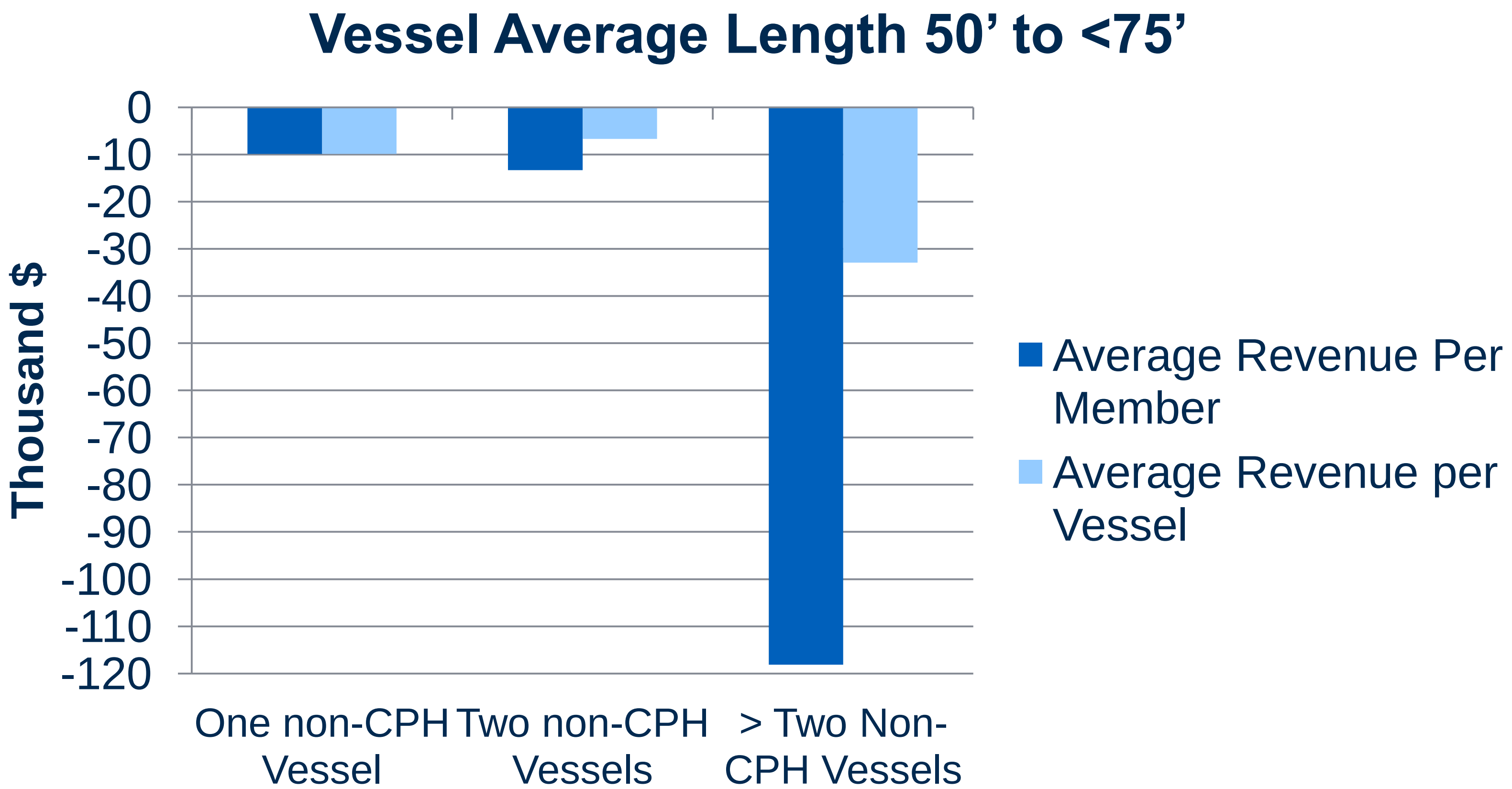


NOAA FISHERIES SERVICE

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

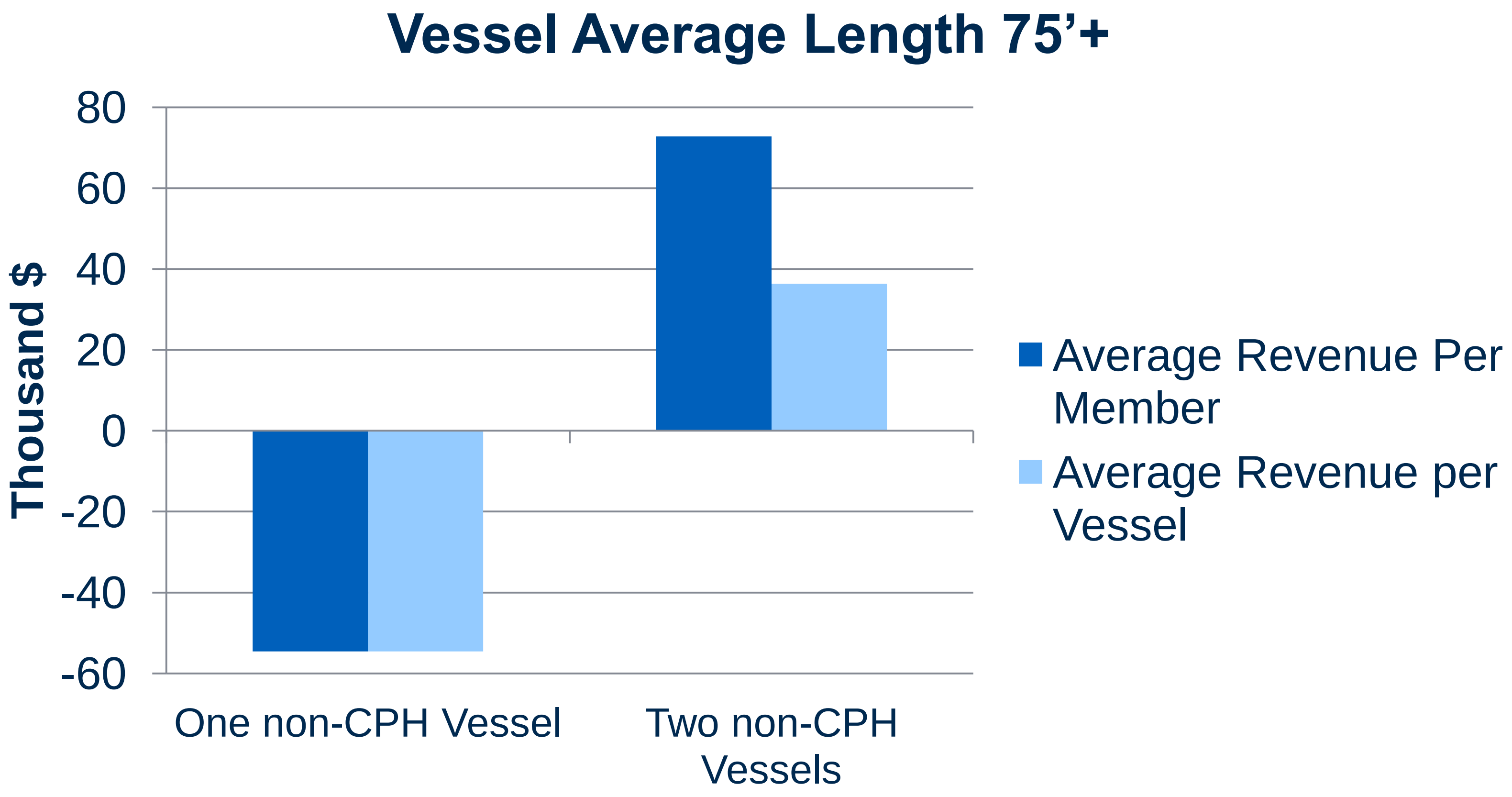


Average Revenue from Quota Trades per sector member and per vessel (active and inactive sector members, no CP)



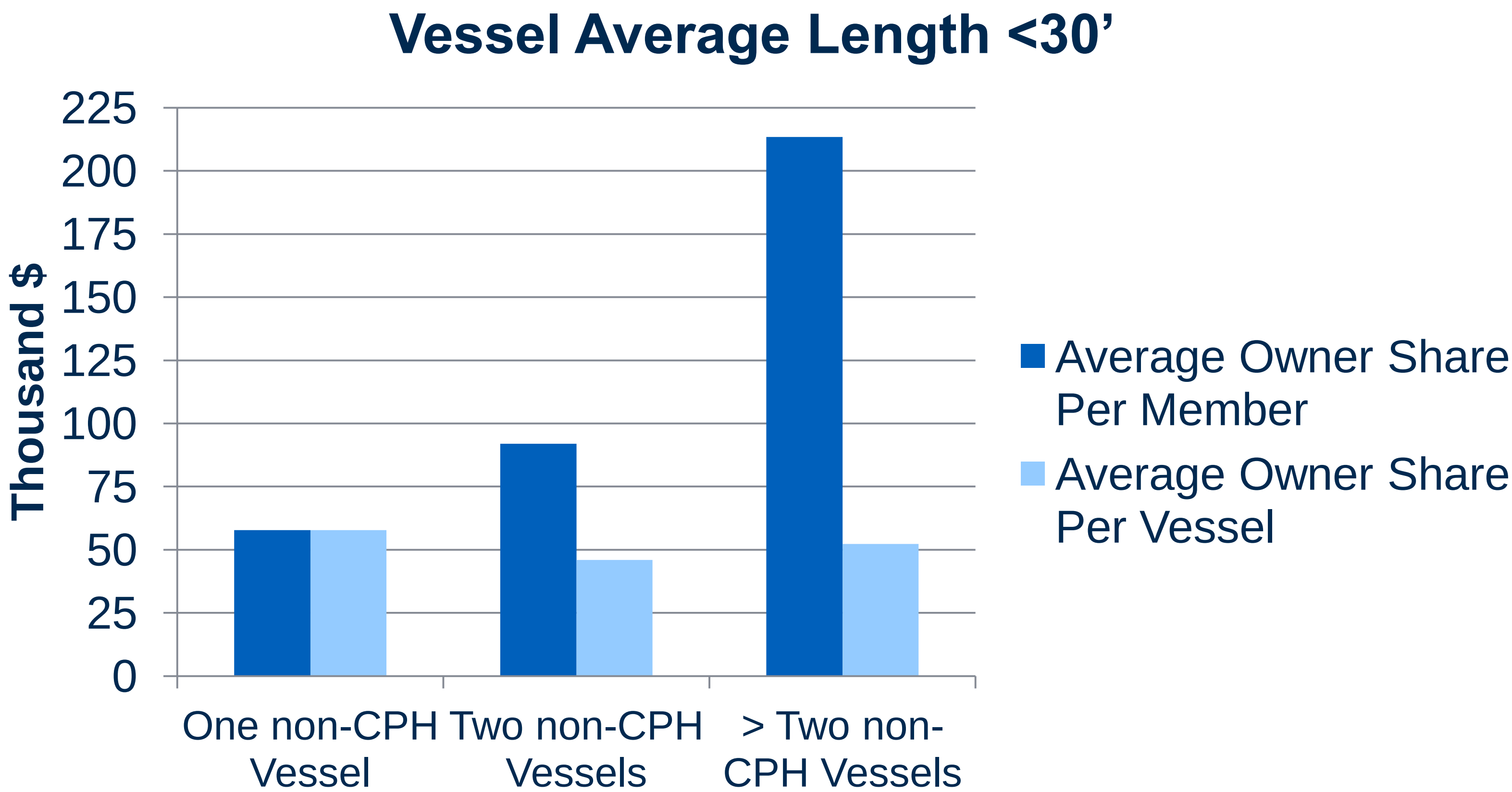
NOAA FISHERIES SERVICE

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

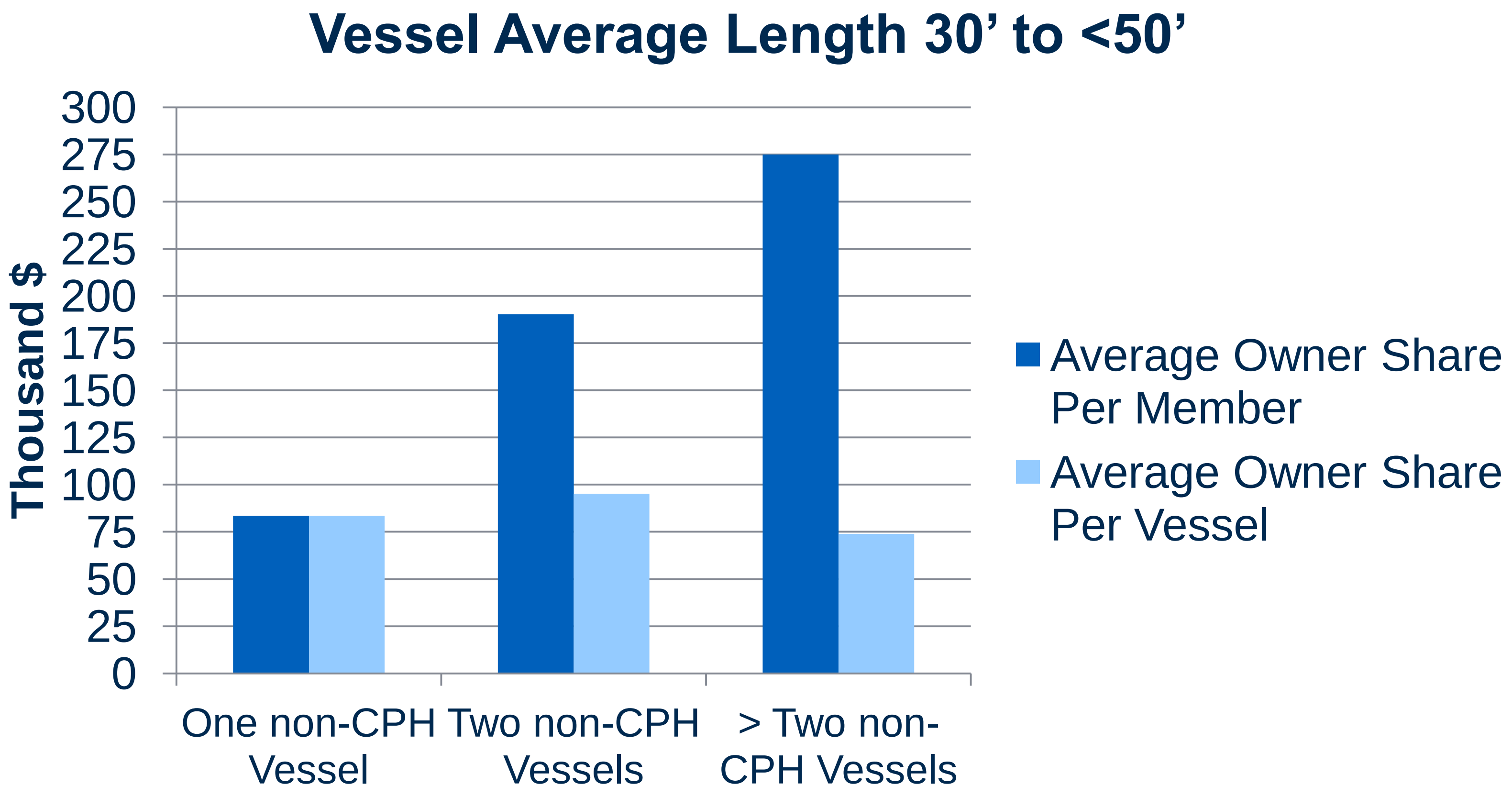


NOAA FISHERIES SERVICE

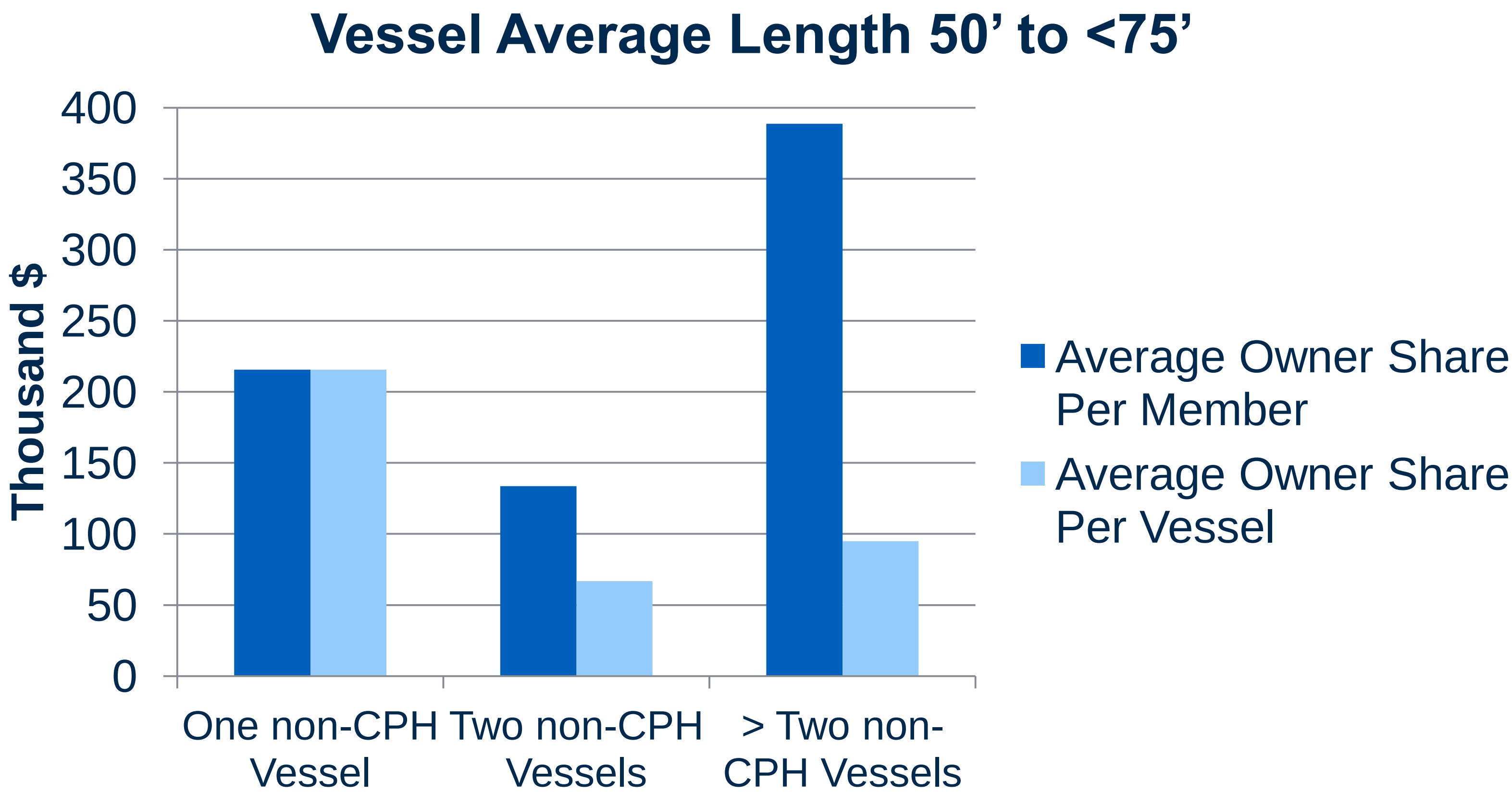
Average Post-Quota Trading Owner Share per sector member and per vessel
(assuming owner pays all quota costs)



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

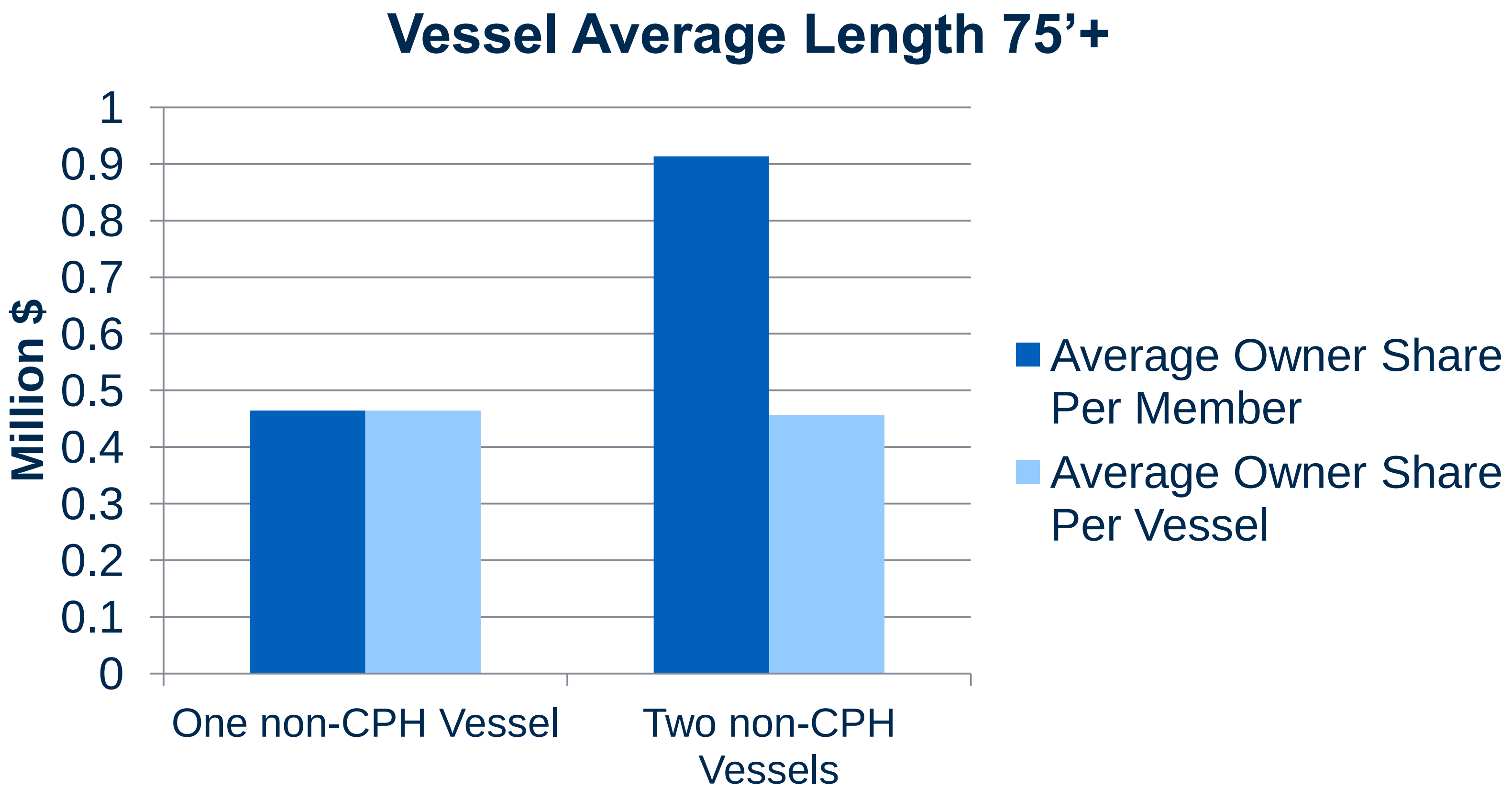


Average Post-Quota Trading Owner Share per sector member and per vessel (assuming owner pays all quota costs)



NOAA FISHERIES SERVICE

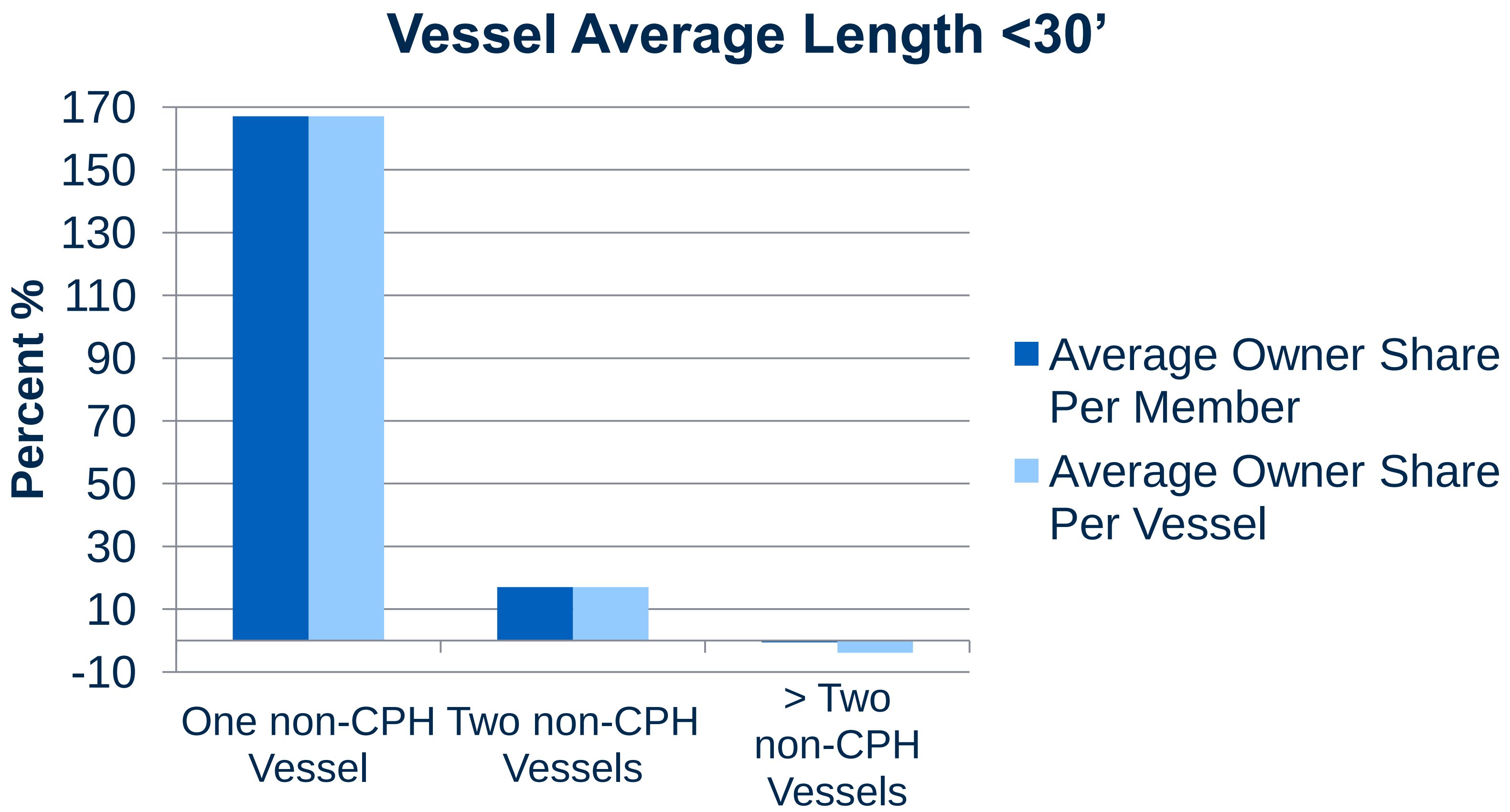
Average Post-Quota Trading Owner Share per sector member and per vessel
(assuming owner pays all quota costs)



NOAA FISHERIES SERVICE

Percent Change in Average Owner Share After Adjusting for Leasing Activity

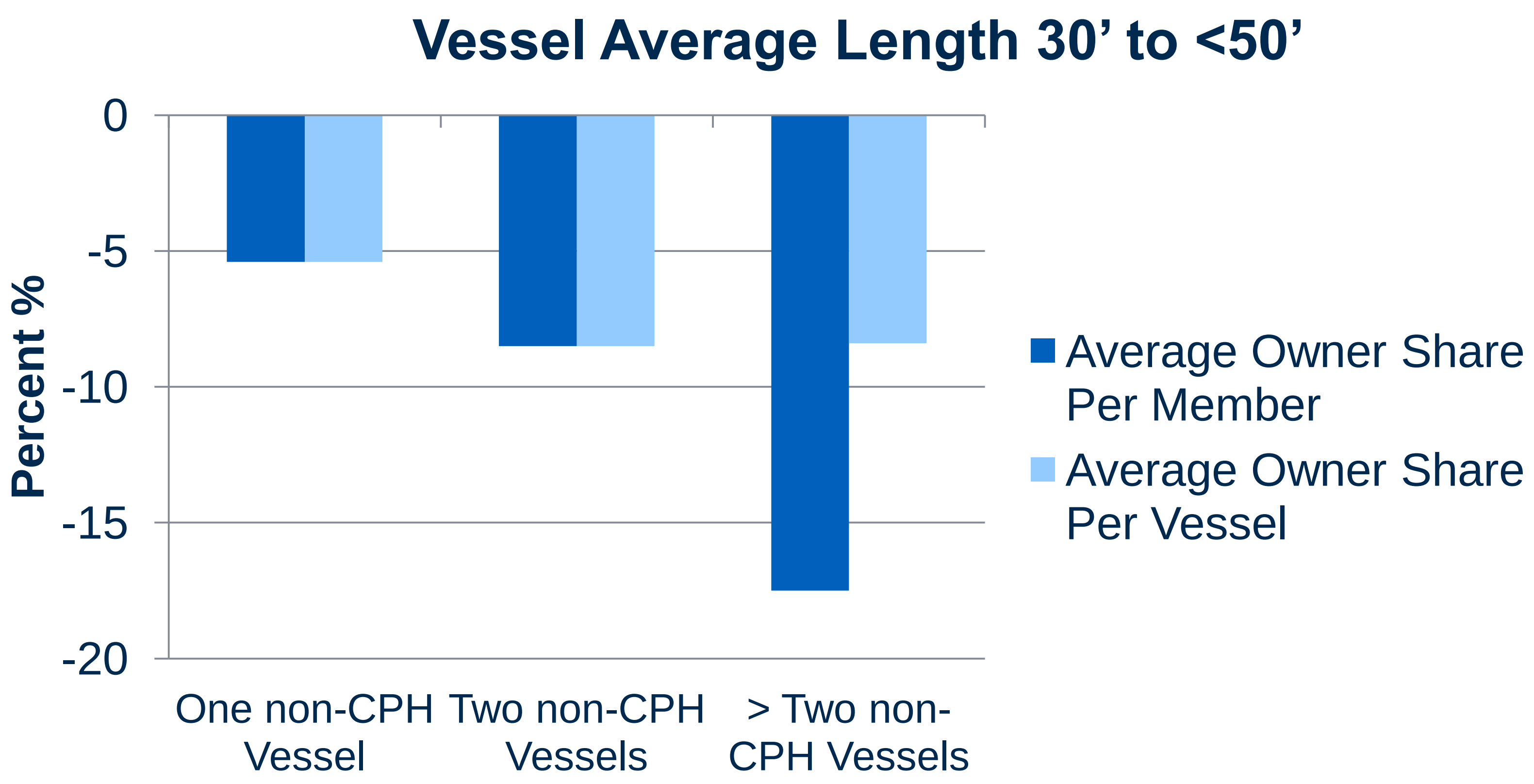
per sector member and per vessel (assuming owner pays all quota costs)



NOAA
FISHERIES
SERVICE

Percent Change in Average Owner Share After Adjusting for Leasing Activity

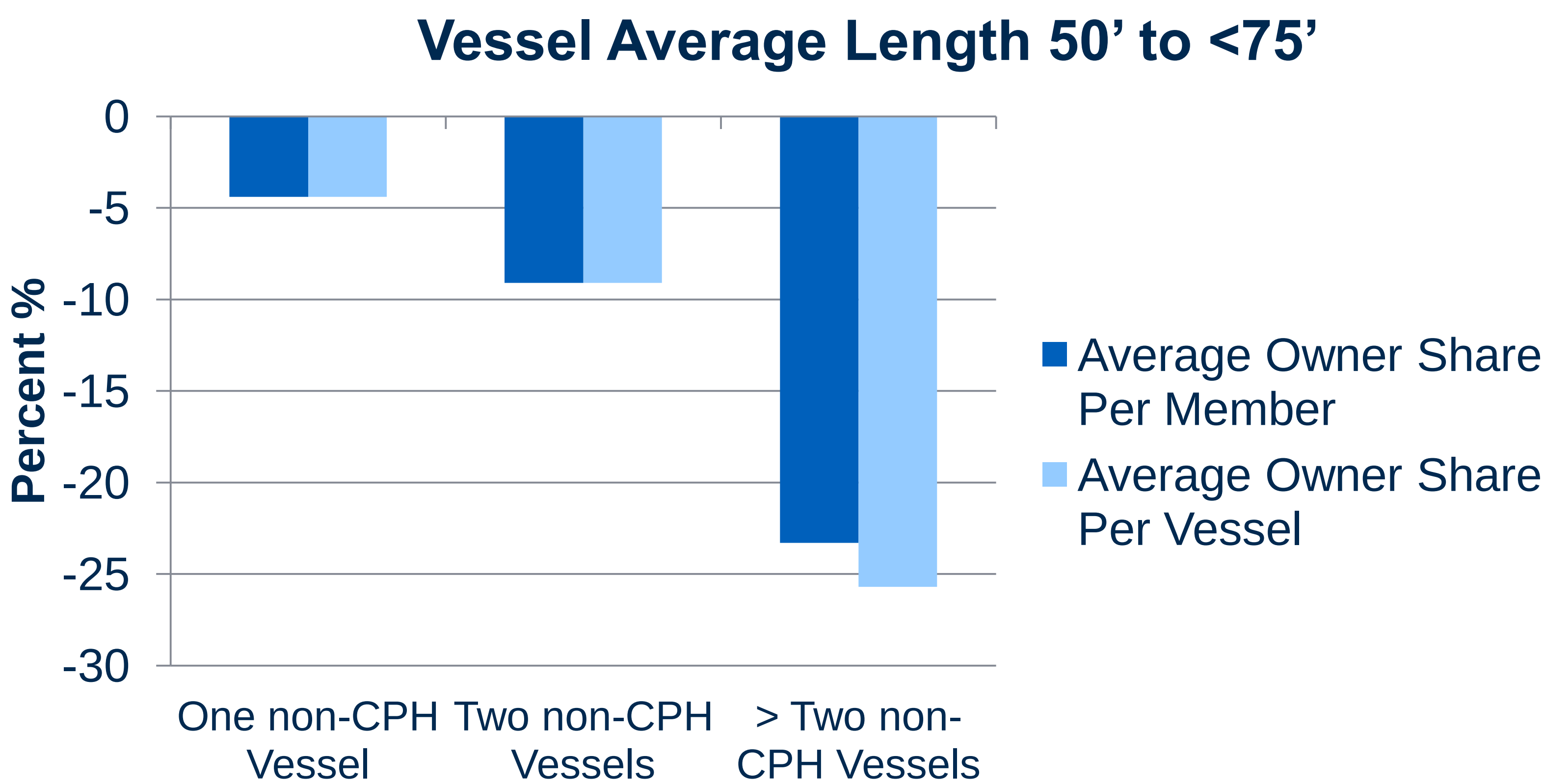
per sector member and per vessel (assuming owner pays all quota costs)



NOAA
FISHERIES
SERVICE

Percent Change in Average Owner Share After Adjusting for Leasing Activity

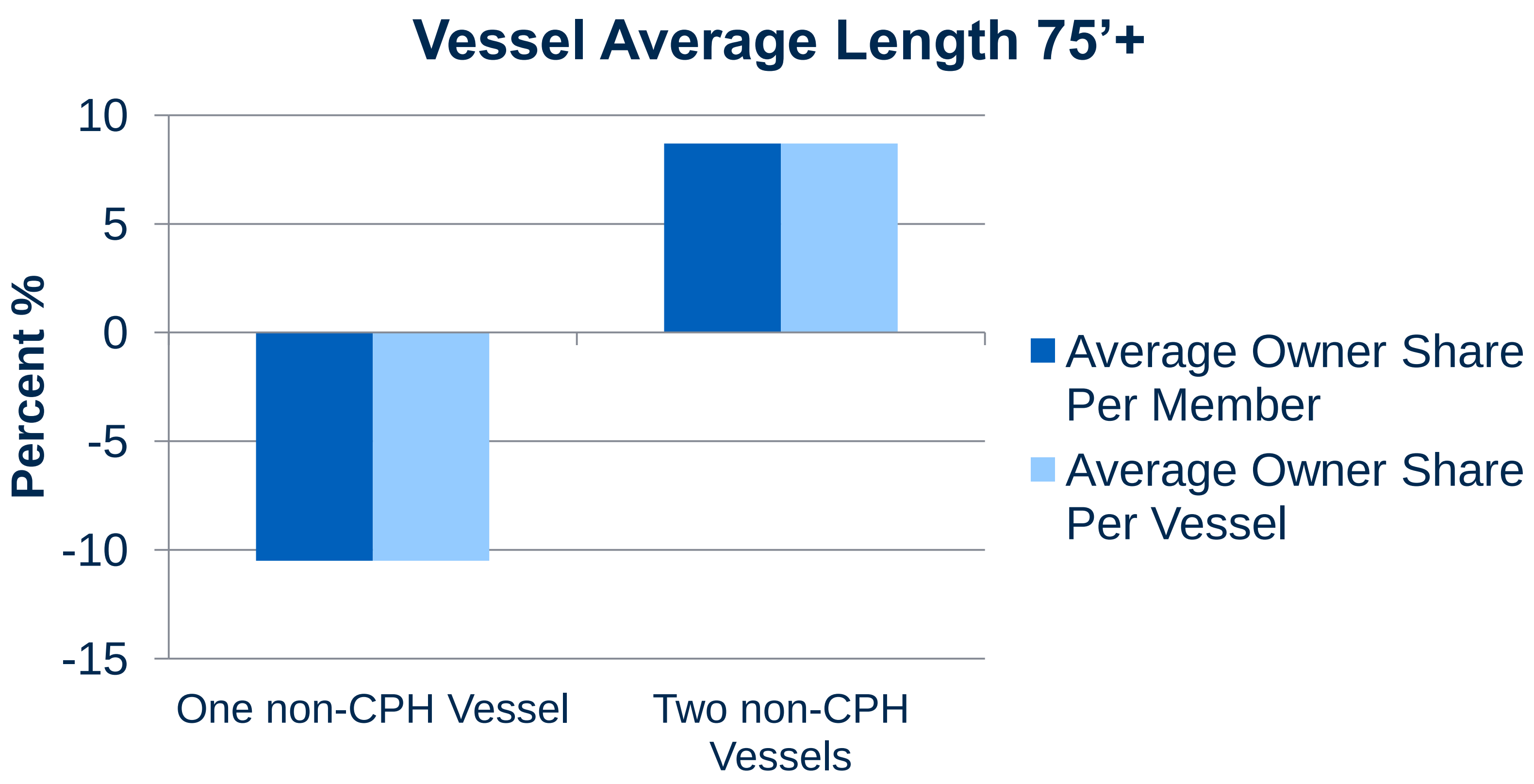
per sector member and per vessel (assuming owner pays all quota costs)



NOAA FISHERIES SERVICE

Percent Change in Average Owner Share After Adjusting for Leasing Activity

per sector member and per vessel (assuming owner pays all quota costs)



NOAA
FISHERIES
SERVICE

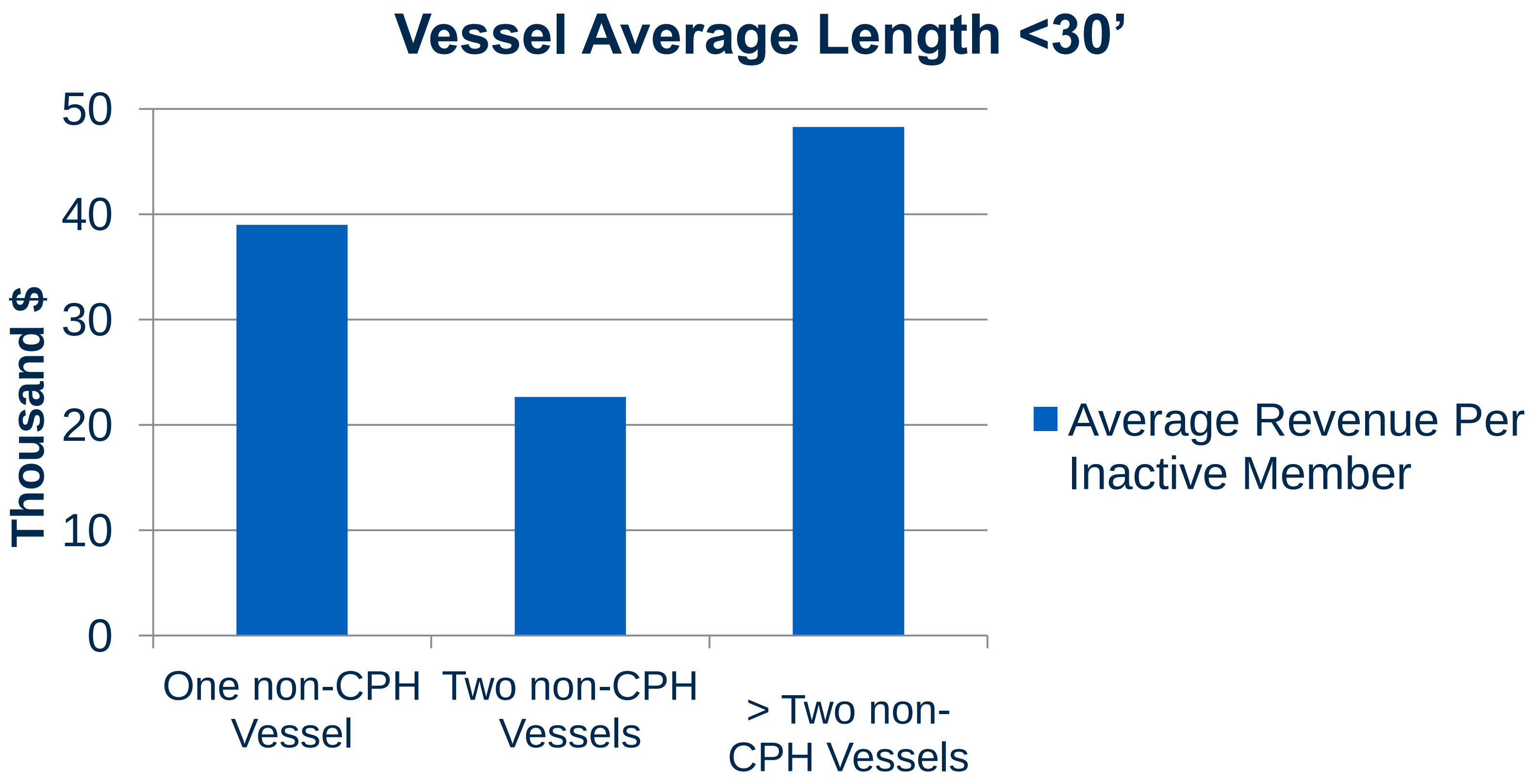
Summary of Quota Trading Impacts on Net Revenue for those that fished for allocated groundfish

- 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%.

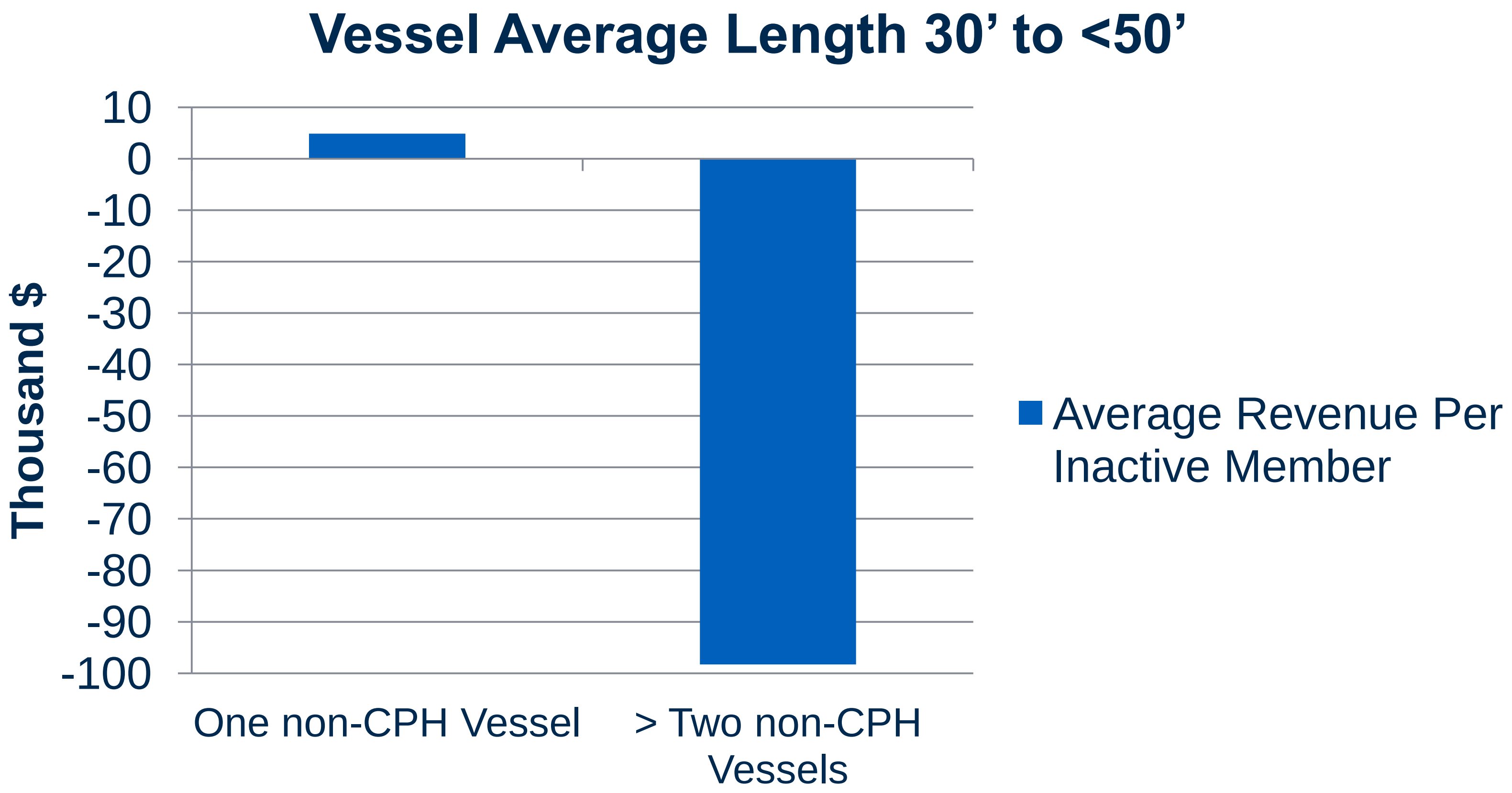
    -with the average length of vessels > 75', average net revenues increased by 8.7%.

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



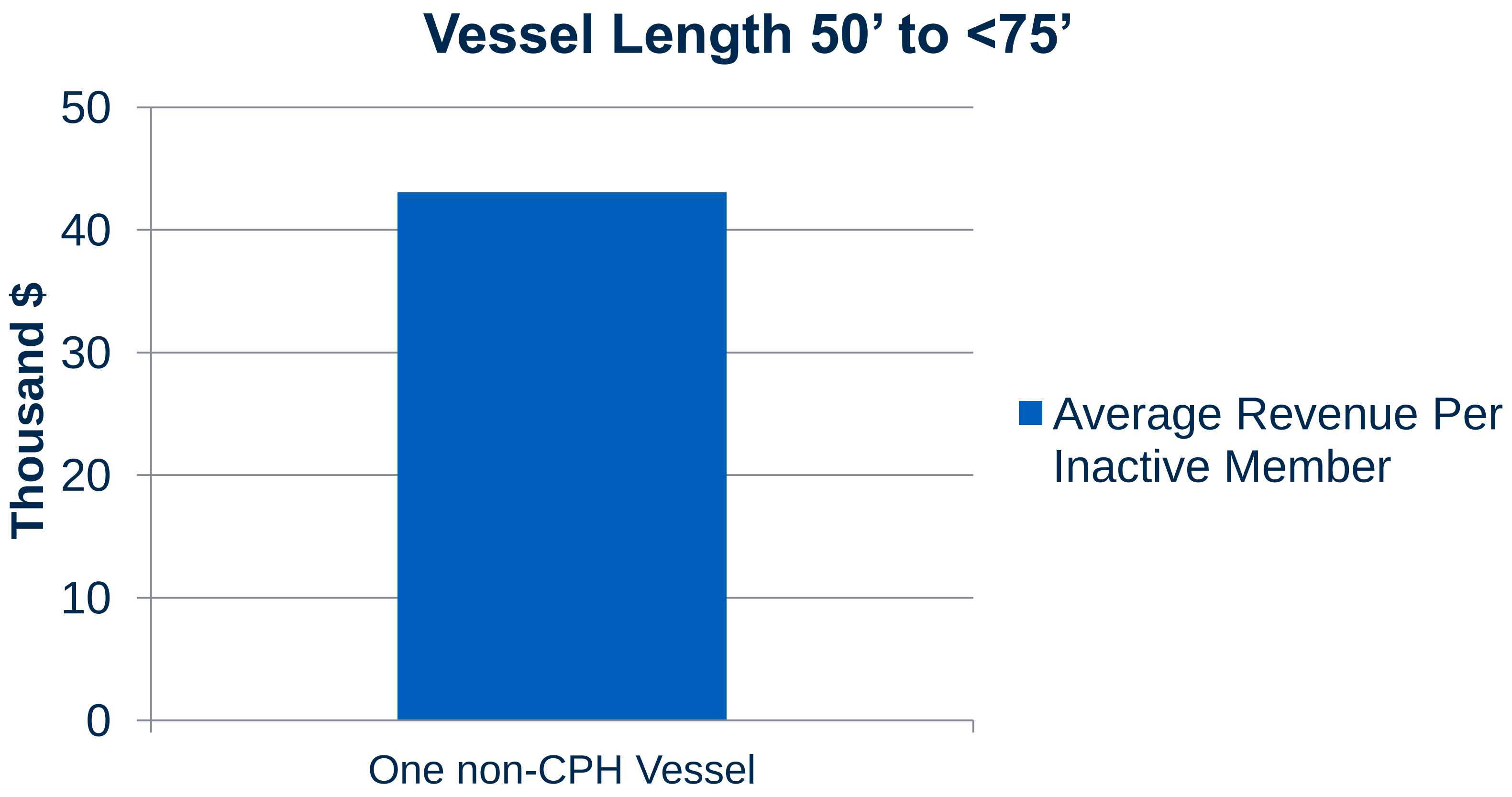
NOAA FISHERIES SERVICE

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



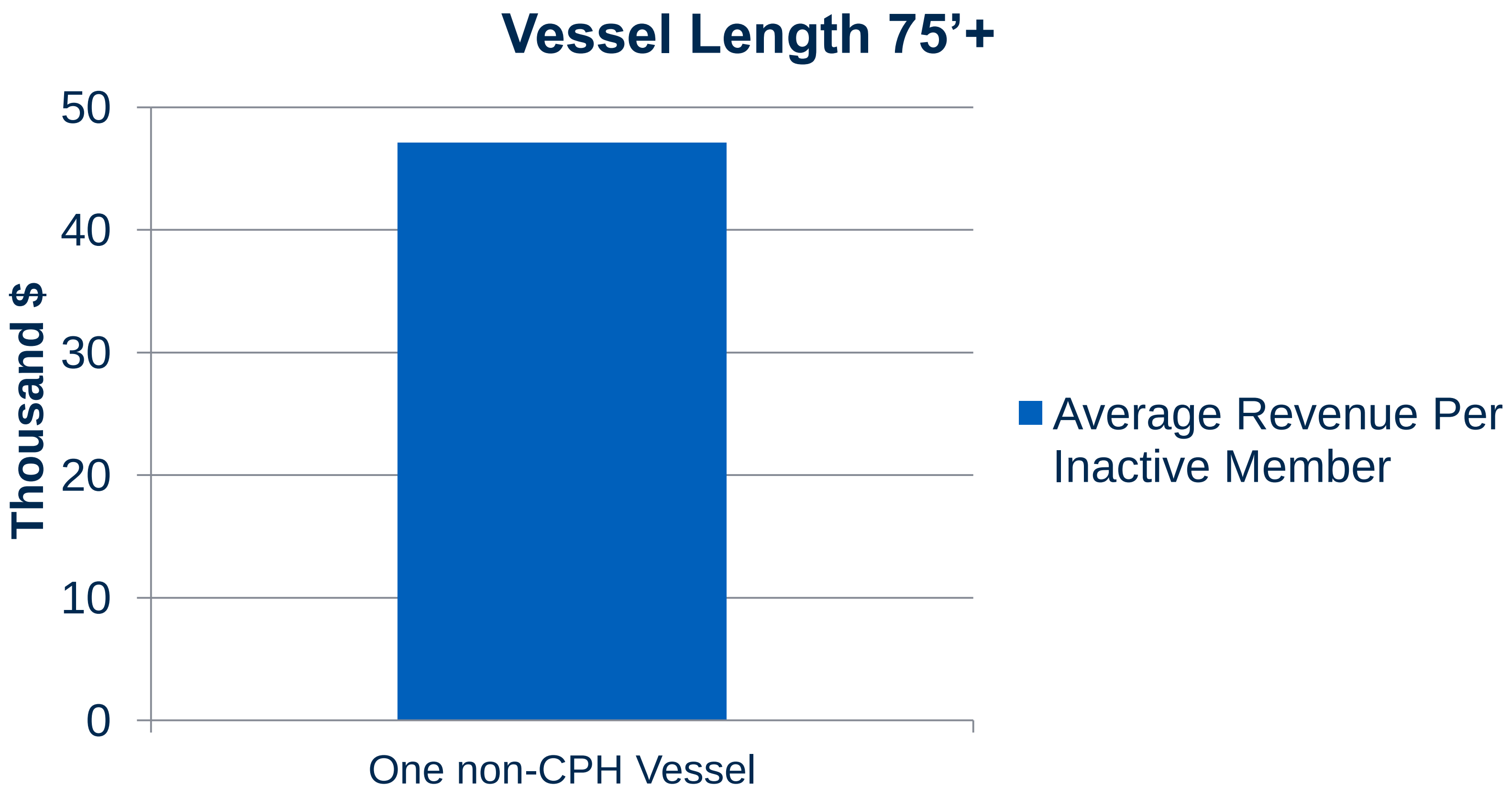
NOAA FISHERIES SERVICE

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



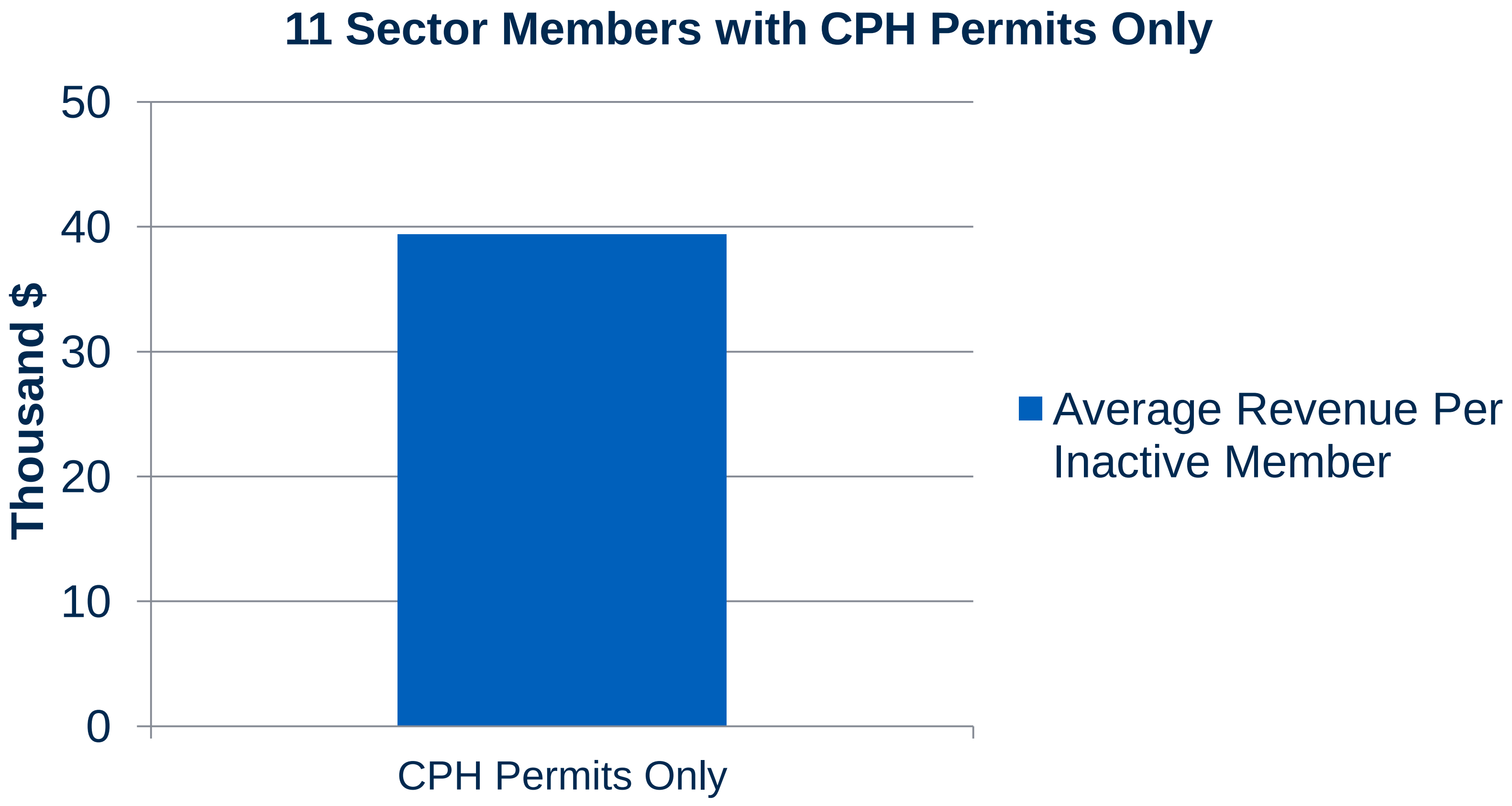
NOAA
FISHERIES
SERVICE

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



NOAA FISHERIES SERVICE

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



NOAA FISHERIES SERVICE

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

NOAA
FISHERIES
SERVICE

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.

NOAA
FISHERIES
SERVICE

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/

NOAA
FISHERIES
SERVICE

More Information

For general questions about the Performance Measures Program, (including the GF Report) or economic and social data collection, please contact:

Tammy Murphy, Economist

Northeast Fisheries Science Center

Voice: 508.495.2137

Email: Tammy.Murphy@noaa.gov

For questions about net revenue estimation (including adjustments for leasing activity) , please contact:

Drew Kitts, Economist

Northeast Fisheries Science Center

Voice: 508.495.2231

Email: Andrew.Kitts@noaa.gov

More Information

For questions about ACE Leasing, please contact:

Chad Demarest, Economist
Northeast Fisheries Science Center
Voice: 508.495.2237
Email: Chad.Demarest@noaa.gov

For questions about Social Science Branch activities, please contact:

John Walden, Acting SSB Chief
Northeast Fisheries Science Center
Voice: 508.495.2355
Email: John.Walden@noaa.gov