

Amendment 80 5-Year Review

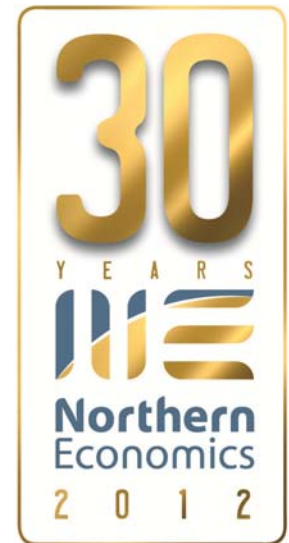
Changes: September Version v. April Version

Presentation to

North Pacific Fishery Management Council

Marcus L. Hartley

October, 2014



Overview of 5-Year Review Process

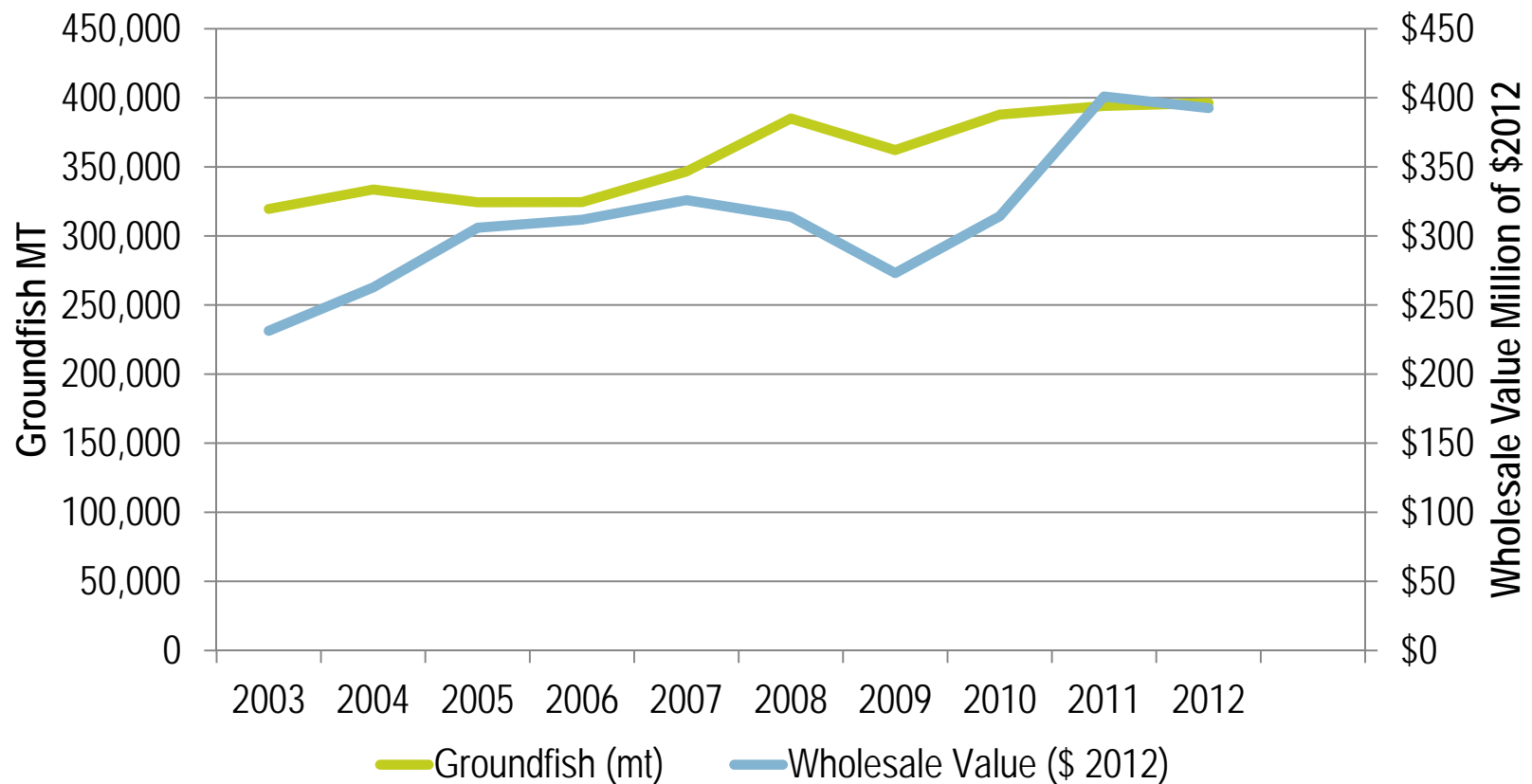
- **Workplan Presented in December 2013**
- **Draft 5-Year Review Provided in April 2014**
 - The April version was considered preliminary because of time constraints.
 - Presented to the Advisory Panel, the Scientific and Statistical Committee and to the Council
 - All three bodies provided suggestions for improvements
- **Revised 5-Year Review Provided in September**
 - Revised version was not been presented to the AP or SSC

Overview of Changes

- **Executive Summary has been completely revised**
 - Now focuses on the Council's Goals and Objectives for AM80
- **Minor editorial changes throughout the document**
- **Additional details on crew and labor**
- **Additional information on the ways AM80 vessels have adjusted to new opportunities and constraints**
- **Additional information on BSAI TLA Yellowfin Sole**
- **Additional information on CDQs & Community impacts**

Executive Summary

Figure ES-1. Total Volume and Wholesale Value of Groundfish Catch for All AM80 Vessels in the BSAI and GOA

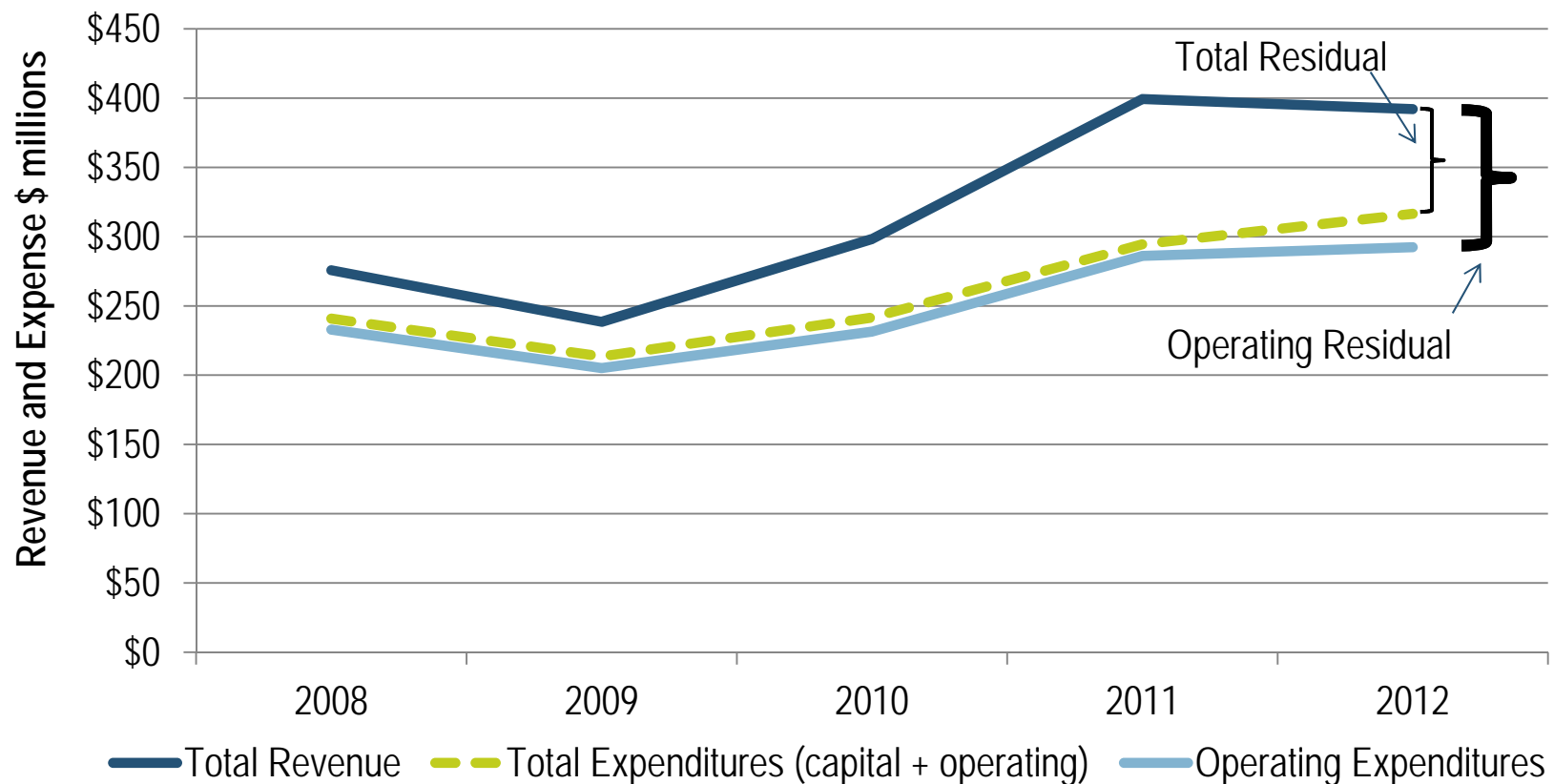


Note: Includes all AM80 CPs along with their CDQ and mothership activities.
Source: Figure developed by Northern Economics from CAS data provided by AKFIN Fey, 2014.



Executive Summary

Figure ES-2. Total Volume and Wholesale Value of Groundfish Catch for All AM80 Vessels in the BSAI and GOA



Note: Includes all AM80 CPs along with their CDQ and mothership activities.
Source: Figure developed by Northern Economics from EDR data provided by AKFIN Fey, 2014.



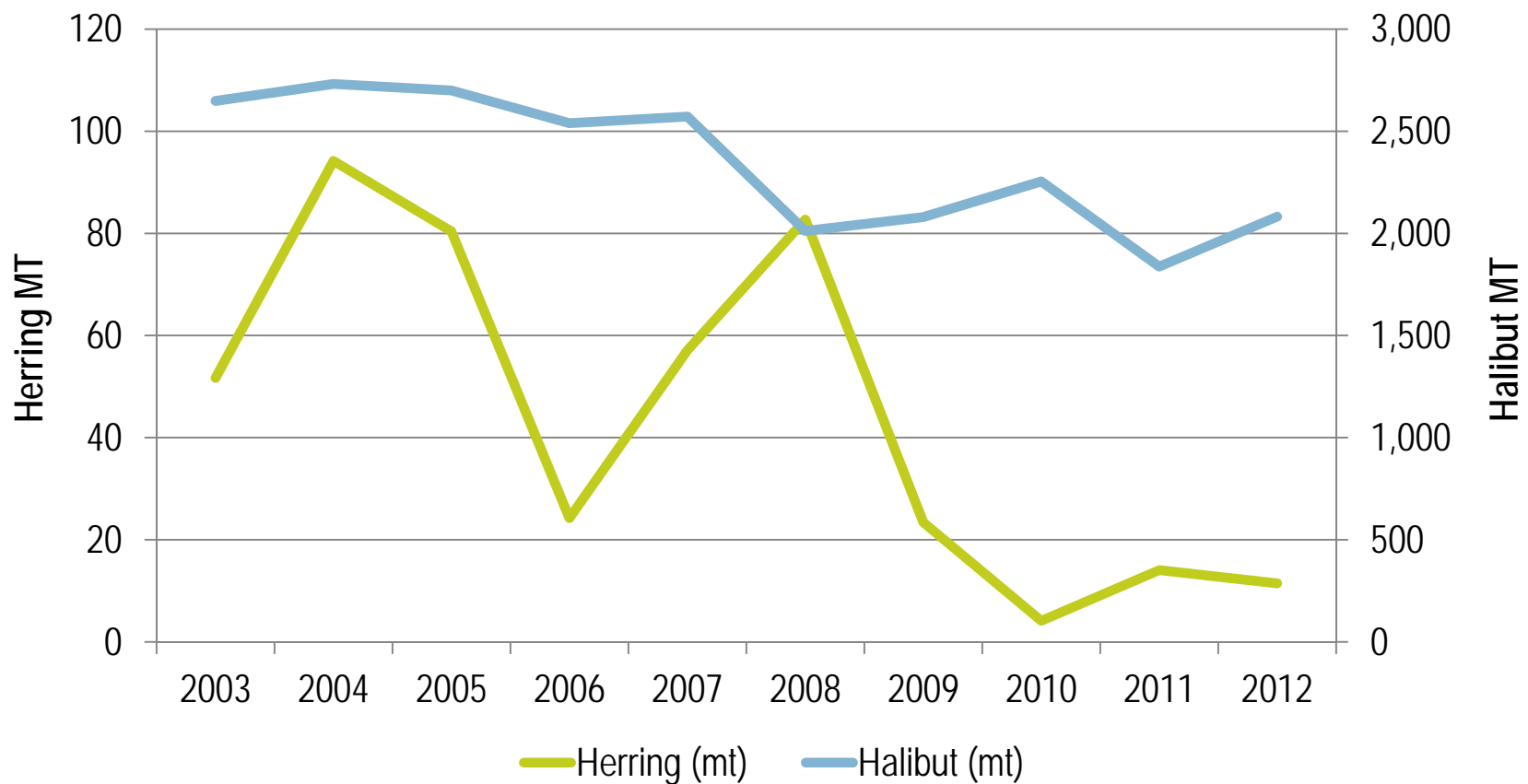
AM80 Goal #1: Maintain Healthy Ecosystems

To maintain a healthy marine ecosystem to ensure the long-term conservation and abundance of the groundfish and crab resources

- **Elimination of the race for fish in most BSAI non-pelagic trawl fisheries**
 - Gear Changes: Regulations to modify trawl sweeps were relative easy,
 - Other behavioral changes to reduce bycatch: Voluntary use of halibut excluder devices. Proposals to develop deck sorting to reduce halibut mortality

AM80 Goal #2: Reduce Bycatch

Figure ES-3. Herring and Halibut Bycatch in AM80 BSAI Fisheries



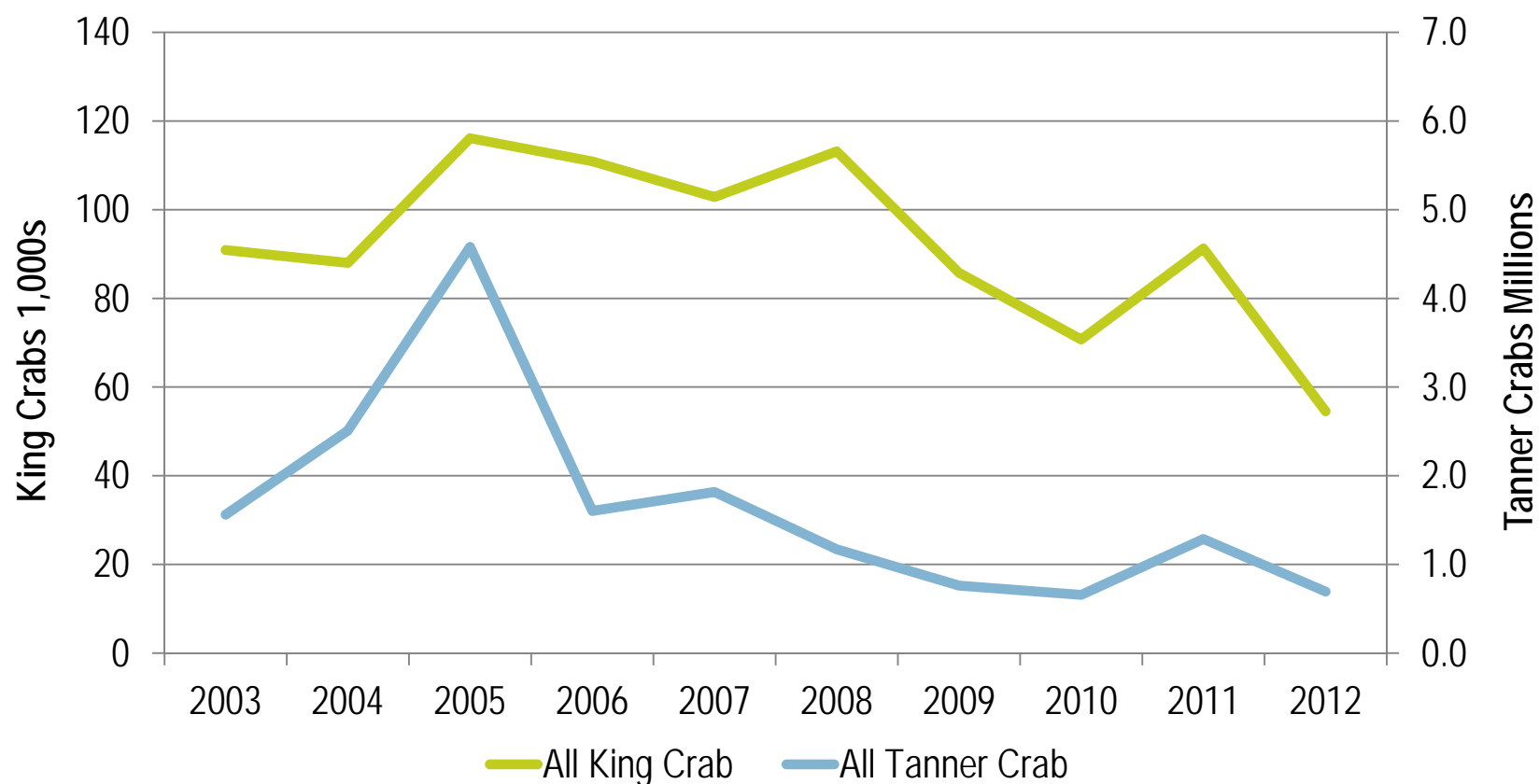
Note: Includes AM80 CP activity only

Source: Figure developed by Northern Economics from CAS data provided by AKFIN Fey, 2014.



AM80 Goal #2: Reduce Bycatch

Figure ES-4. King and Tanner Crab Bycatch in AM80 BSAI Fisheries



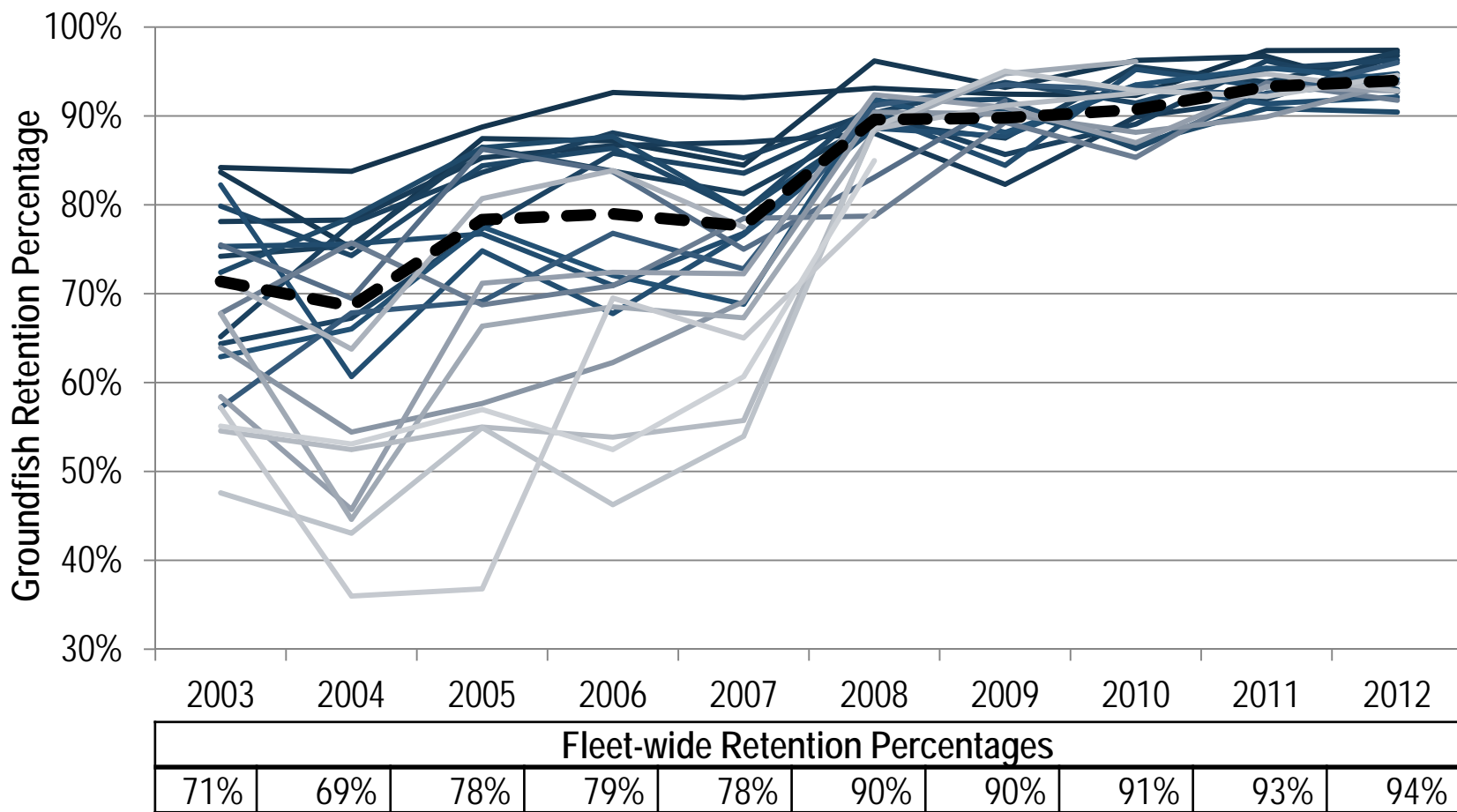
Note: Includes AM80 CP activity only

Source: Figure developed by Northern Economics from CAS data provided by AKFIN Fey, 2014.



AM80 Goal #3: Minimize Waste & Improve Utilization

Figure ES-6. Groundfish Retention Percentages in the BSAI



Note: Includes AM80 CP and Motherhip activity, and AM80 CPs in CDQ Fisheries
 Source: Figure developed by Northern Economics from CAS data provided by AKFIN Fey, 2014.



AM80 Goal #4: Maximize Benefits to Fishermen, CDQ Groups, Communities, and the Nation

■ Benefits to owners summarized in Figure ES-1.

■ Crew Member Benefits

■ Table ES-6. EDR Revenue and Labor Expenses

Expenditure Item	2008		2009		2010		2011		2012		2008 – 2012 Average	
	\$ million	%	\$ million	%	\$ million	%	\$ million	%	\$ million	%	\$ million	%
Total Revenue	275.7	100%	238.5	100%	298.3	100%	399.3	100%	392.1	100%	320.8	100%
Direct Labor Expenditures	79.6	28.9%	71.1	29.8%	82.6	27.7%	104.6	26.2%	106.6	27.2%	88.9	27.7%
Indirect Labor Expenditures	14.3	5.2%	12.8	5.4%	13.4	4.5%	17.3	4.3%	15.1	3.8%	14.6	4.5%
Total Labor Expenditures	93.92	34.1%	83.83	35.2%	95.96	32.2%	121.92	30.5%	121.62	31.0%	103.45	32.2%

Note: EDR revenues and expenses have not been adjusted for inflation.
 Source: Developed by Northern Economics from EDR Data from provided by AKFIN Fey, 2014



AM80 Goal #4: Maximize Benefits—Safety

- The Executive Summary includes the findings from Section 4 which was developed by the National Institute of Occupational Safety and Health NIOSH.
- Based on data for all worker injuries and vessel casualties that were reported to the USCG and NMFS for the AM80 fleet during 2001–2012.
- The rates of injuries are steady over the time period (except for the minor injuries as explained in the text).
- Serious vessel casualties did decline slightly.

AM80 Goal #4: Maximize Benefits—Safety

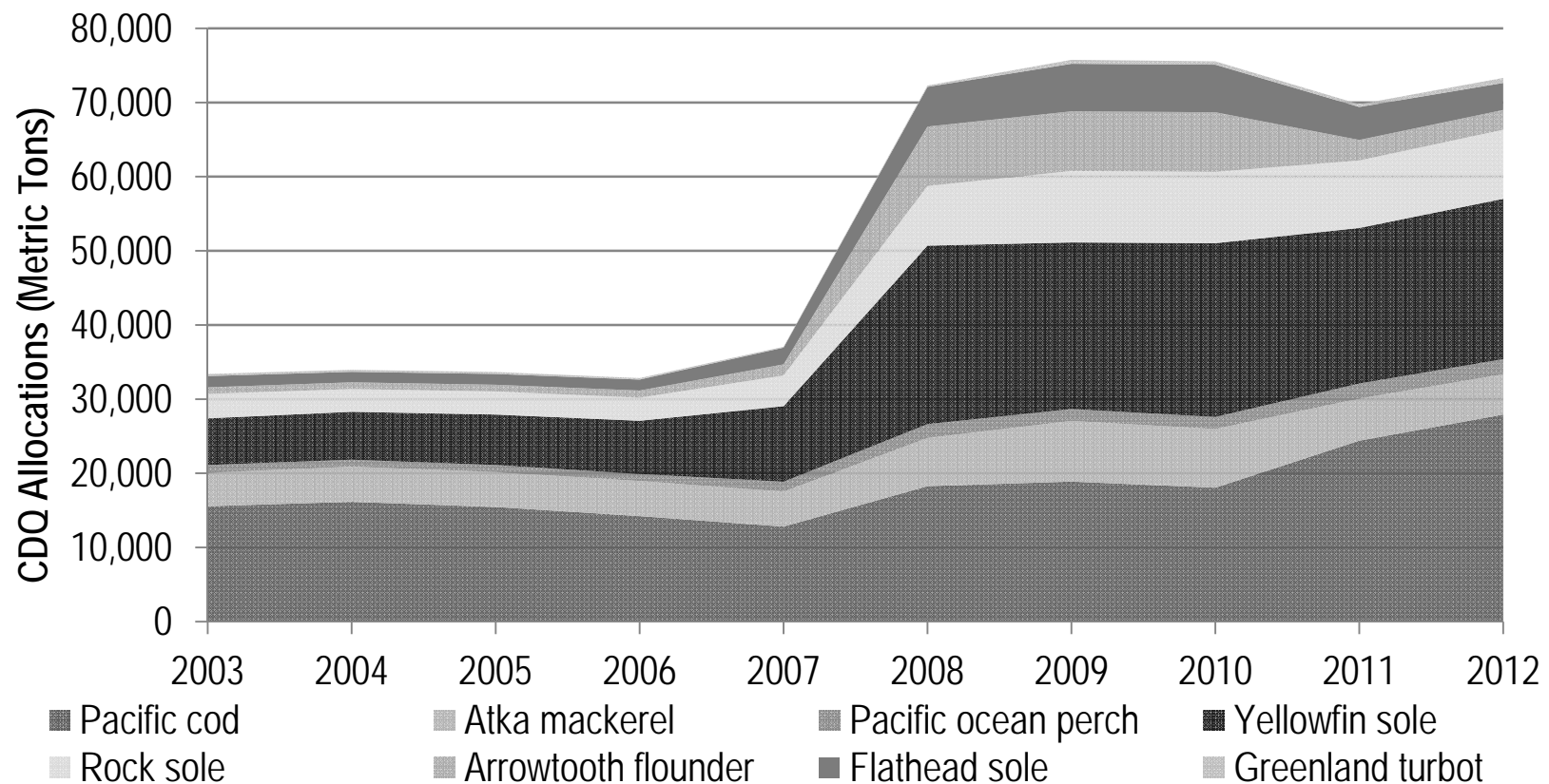
- Attribution of safety improvements are complicated by the fact that Alternate Compliance and Safety Agreement (ACSA) was in place from 2006 – 2009.
- Since ACSA and AM80 occurred at similar times, it is impossible to establish definitively which program influenced the decrease in serious vessel casualties.
- However, because ACSA focuses entirely on improving vessel safety, NIOSH believes it is likely that it had the more direct influence

AM80 Goal #4: Maximize Benefits—Safety

- Text in this version of the Executive Summary inappropriately attributes safety benefits in AM80 fisheries to AM80. This text should be revised.

AM80 Goal #4: Maximize Benefits—CDQ Groups

Figure ES-7. CDQ Allocations of Groundfish other than Pollock and Sablefish

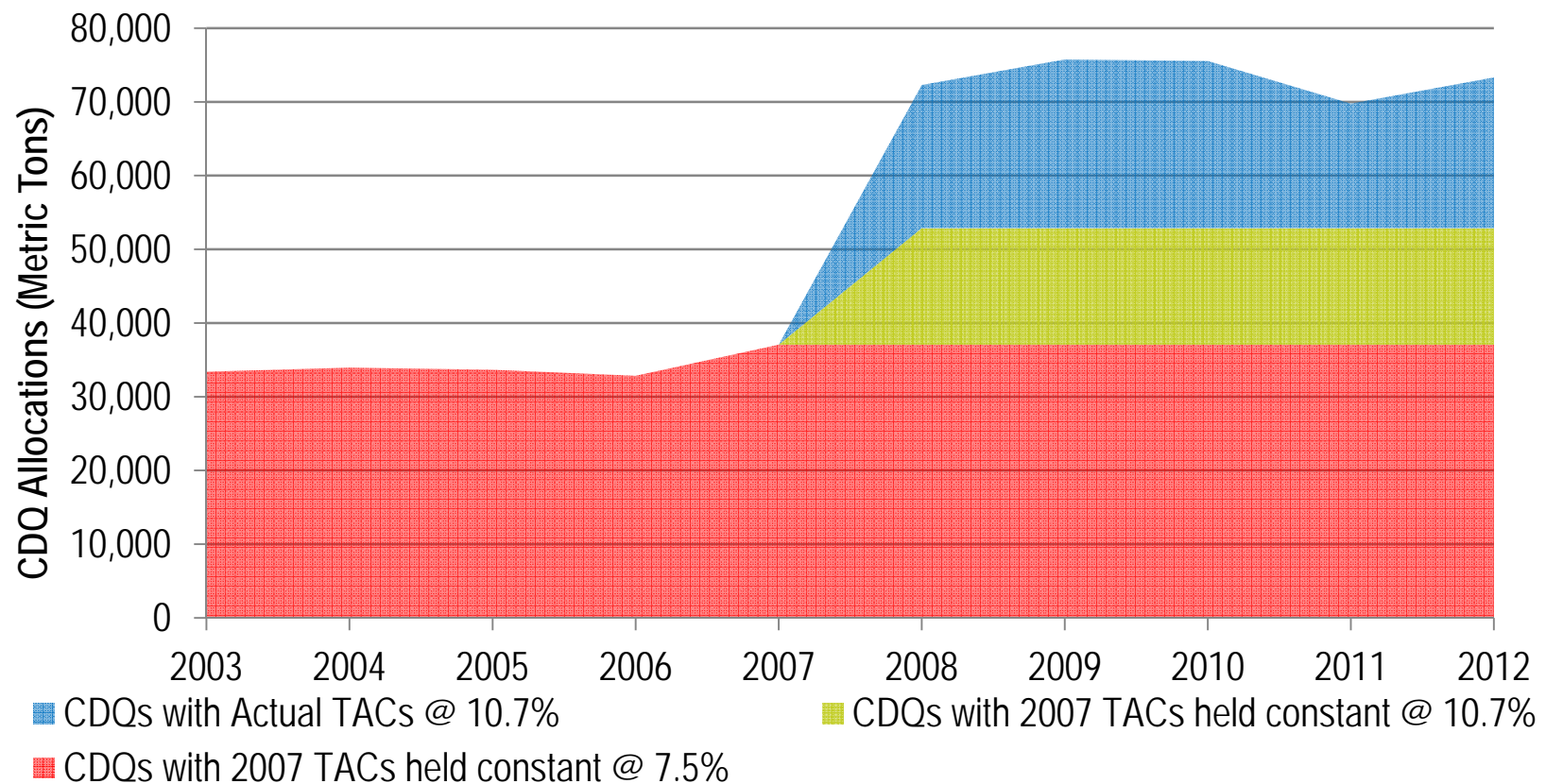


Source: Developed by Northern Economics based on information at NMFS-AKR webpage, (NMFS, 2014a).



AM80 Goal #4: Maximize Benefits—CDQ Groups

Figure 38. Components of Change in Non-pollock/Non-Sablefish Allocations (*Not in executive Summary*)



AM80 Goal #4: Maximize Benefits—CDQ Groups

Figure ES-8. Catch (mt) in CDQ Non-Pollock/Non-Sablefish Target Fisheries

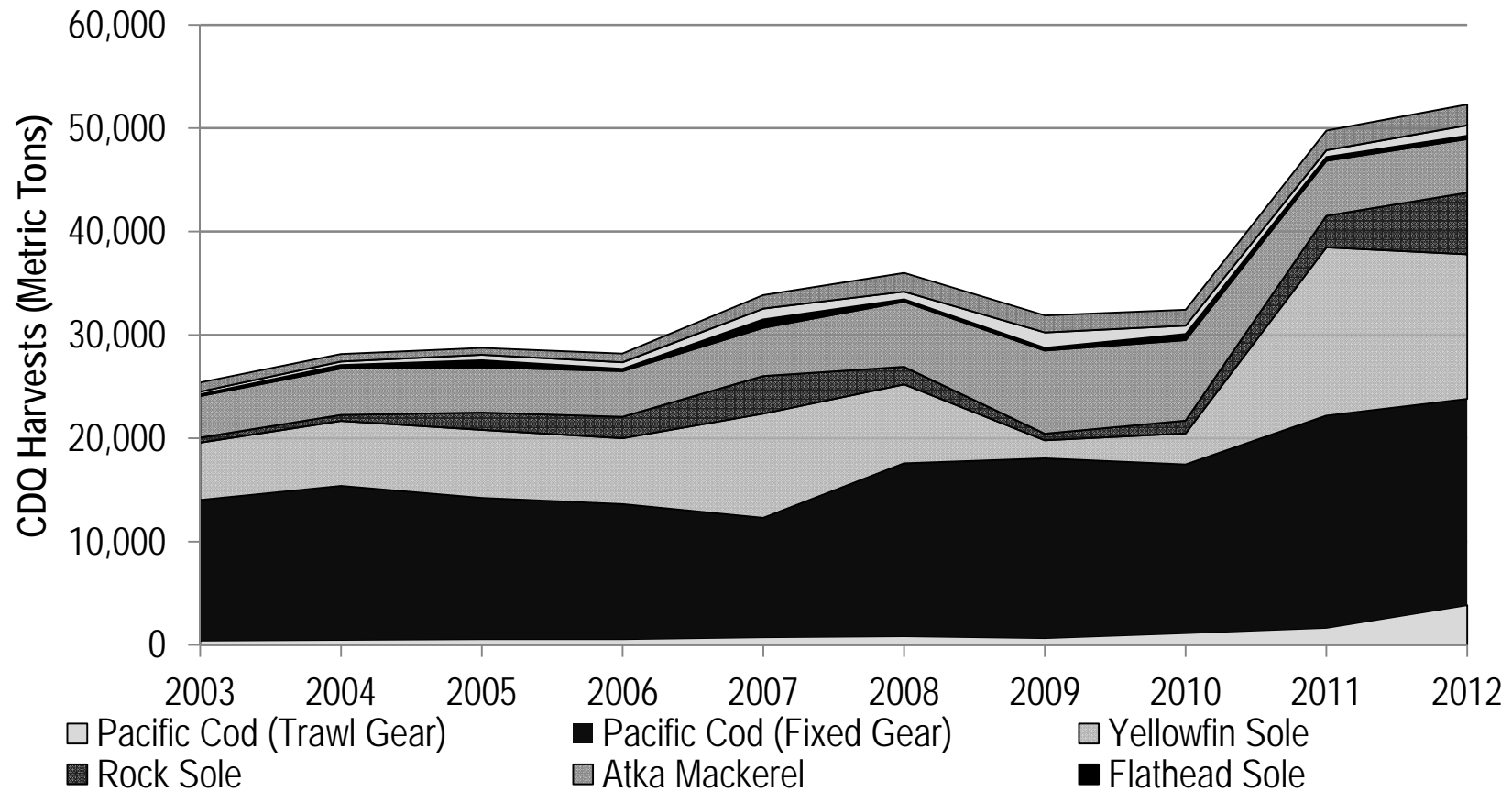


Figure developed by Northern Economics from CAS data provided by AKFIN Fey, 2014.



AM80 Goal #4: Maximize Benefits—CDQ Groups

Figure ES-9. Real Wholesale Revenue (\$2012) in CDQ Target Fisheries

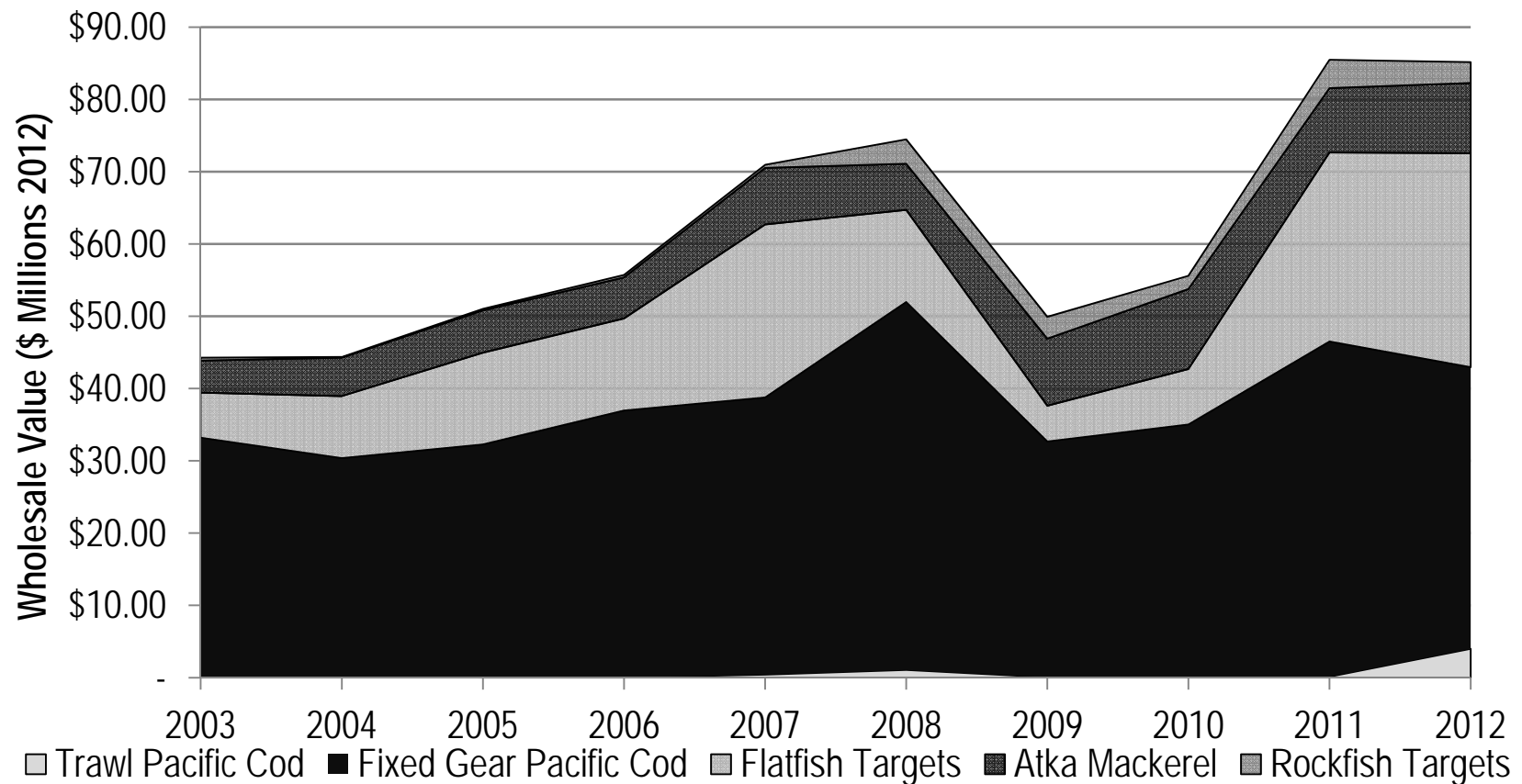


Figure developed by Northern Economics from CAS data provided by AKFIN Fey, 2014.



AM80 Goal #4: Maximize Benefits—State of Alaska and Alaska Communities

Figure ES-10. Estimates of Fish Taxes Paid by BSAI Fisheries Affected by AM80

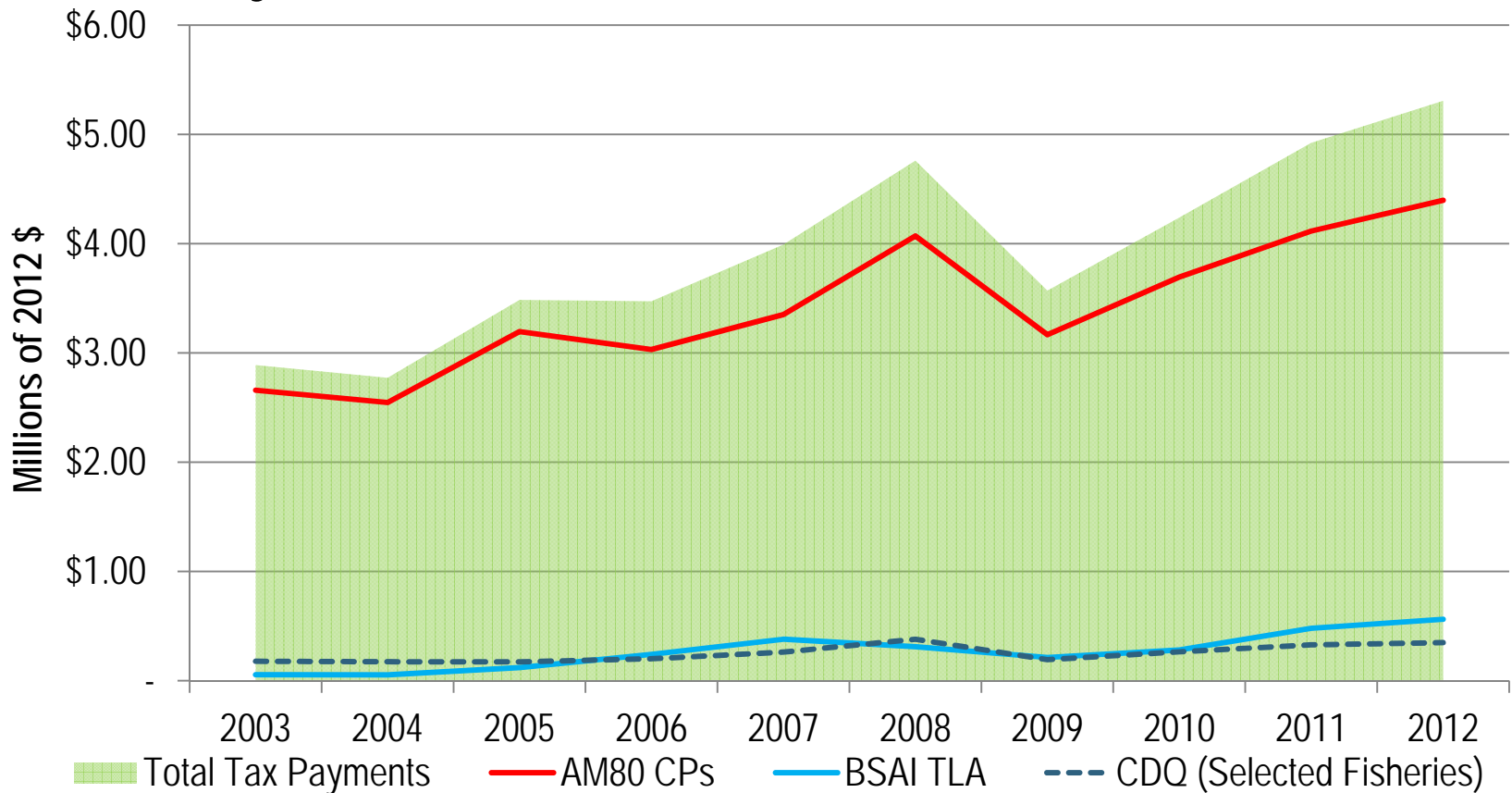


Figure developed by Northern Economics from CAS data provided by AKFIN Fey, 2014.



AM80 Goal #4: Maximize Benefits—Alaska, West Coast, U.S. as a Whole

Table ES-7 Estimated Geographic Distribution of Total AM80 Sector Impacts

Region	Output	Household Income	S-L Government Revenue	Jobs
Alaska	47%	20%	29%	53%
West Coast	18%	39%	27%	18%
Rest of the U.S.	35%	40%	44%	29%
Total (Direct, Indirect and Induced) U.S. Impacts:				
Total U.S. Impact in \$ million	1,027	351	79	-
Total U.S. Impact in jobs (1,000)	-	-	-	6.8

Note: Economic impacts are based on the 2008 economic contribution from the SAM model
 Source: Table excerpted from Table 6 of Waters (2014).



AM80 Goal #5: Further Rationalization to Achieve Bycatch and Other Goals, and to Mitigate Costs

- AM80 rationalized the AM80 fishery by allocating catch shares of primary target and prohibited species to vessel owners, and by allowing vessels to form cooperatives.
- With rationalization, AM80 CPs have been able to:
 - Reduce bycatch of prohibited species across the board, as shown in Tables ES-4 and ES-5, as well as in Figures ES-3 – ES-5;
 - Improve retention and utilization of groundfish species and meet target retention rates set under GRS rules as shown in Figure ES- 6; and
 - Increase overall harvest levels and wholesale revenues as seen in Figure ES- 1.

AM80 Goal #6: Minimize Negative Impacts on Other Fisheries

- **AM80 implemented sideboards on AM80 CPs in the GOA.**
 - Without sideboards AM80 CPs could use the program to increase participation in the GOA.
- **Sideboards Northern rockfish, pelagic shelf rockfish, and POP, Pacific cod and pollock.**
- **AM80 CPs have been generally stayed within their sideboard limits for Pacific cod, northern rockfish, and pelagic shelf rockfish.**
- **AM80 CPs have exceeded limits for POP and Pollock.**
 - According NMFS-AKR, the sideboards for pollock are managed as a soft constraint, limiting target take but not total catch.
- **AM80 also imposes deep- and shallow-water halibut PSC limits for AM80 vessels fishing in the GOA.**

AM80 Goal #7: Create BSAI Trawl Limited Access Fishery for Yellowfin Sole

- AM80 eliminated sideboards on yellowfin sole harvests for AFA CVs and AFA CPs if TACs are above 125,000 mt.
- AFA vessels can expand their operations in the yellowfin sole fishery
- One of AM80 vessels has operated as a mothership utilizing non-AFA CVs in the yellowfin sole fishery every year since 2003
- The BSAI TLA fishery for yellowfin sole comprises both groups
- The BSAI TLA fishery for yellowfin receives PSC for halibut, king crab, and tanner crab (*c. bairdi* and *c. opilio*).

AM80 Goal #7: Create BSAI Trawl Limited Access Fishery for Yellowfin Sole

- Neither the AFA CPs nor the mothership operations have an exclusive privilege to harvest a predetermined quantity of YFS.
- The operations must engage in a race for fish if they want to maximize their revenues from the fishery.
- As with other “race for fish” fisheries, both halibut and crab bycatch limits have the potential to shut down the fishery or move the activity out of preferred fishing areas.
- The BSAI TLA yellowfin sole fishery has been contentious with both groups hoping the other will limit their activities.
- An in-depth analysis of the fishery that could shed light on the difference between AFA CPs and motherships is constrained by confidentiality rules.

AM80 Goal #7: Create BSAI Trawl Limited Access Fishery for Yellowfin Sole

Figure ES-11. Volume, Wholesale Value and Processor Count in the BSAI TLA Yellowfin Sole Fishery

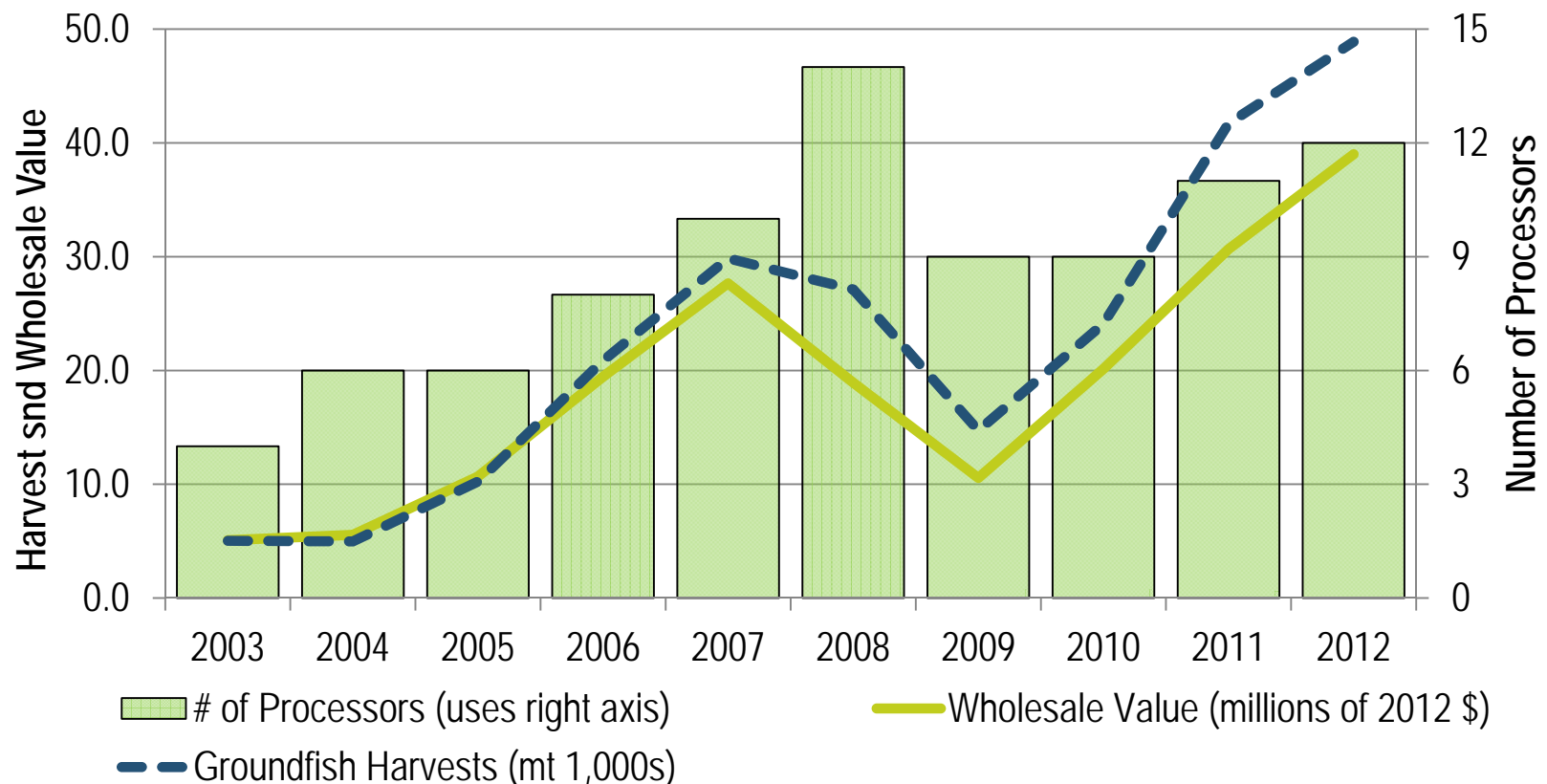


Figure developed by Northern Economics from CAS data provided by AKFIN Fey, 2014.



AM80 Goal #7: Create BSAI Trawl Limited Access Fishery for Yellowfin Sole

Figure 2. Halibut Bycatch Rates in BSAI TLA and AM80 CP Yellowfin Sole Fisheries (*Not in executive Summary*)

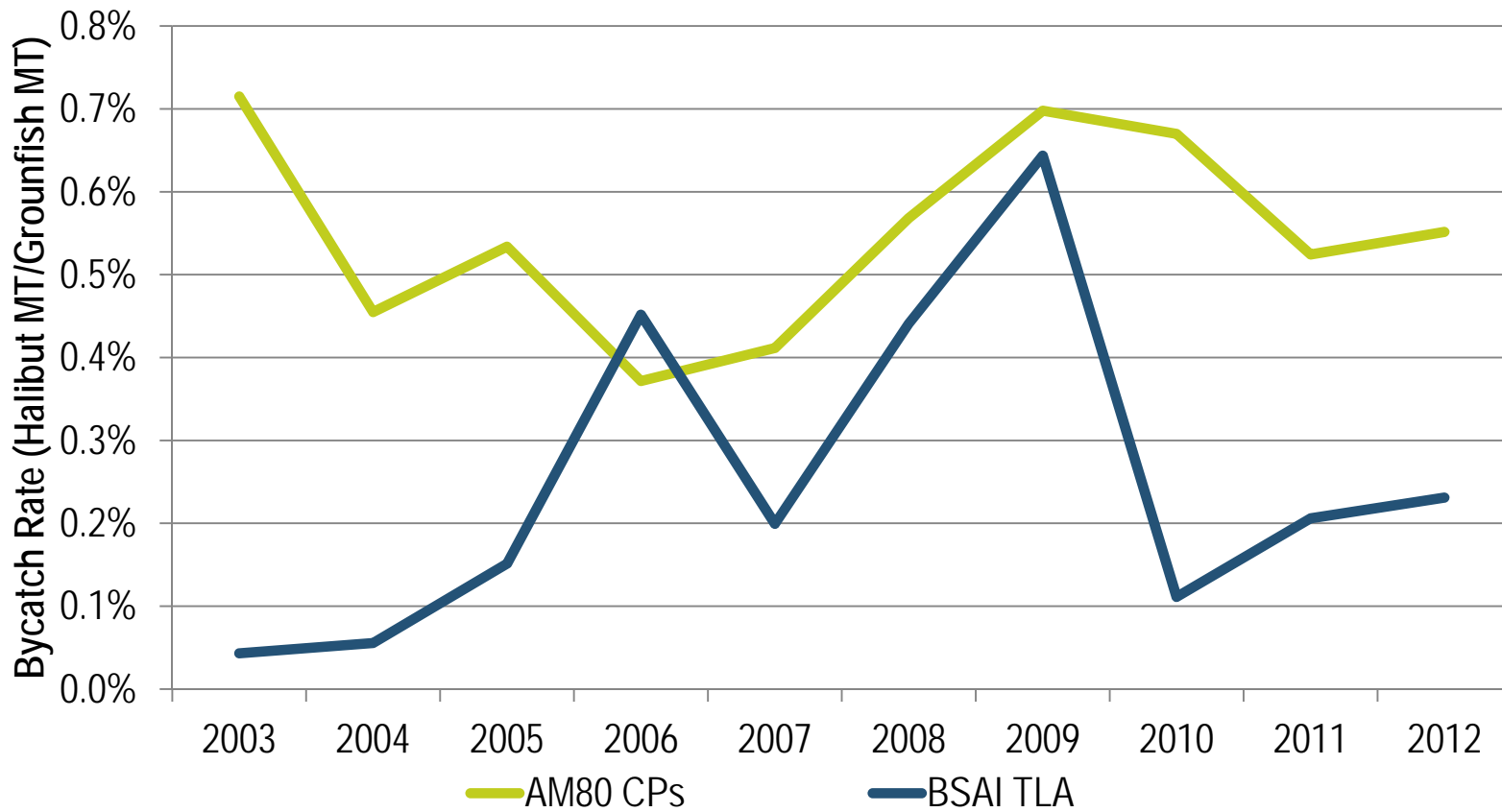
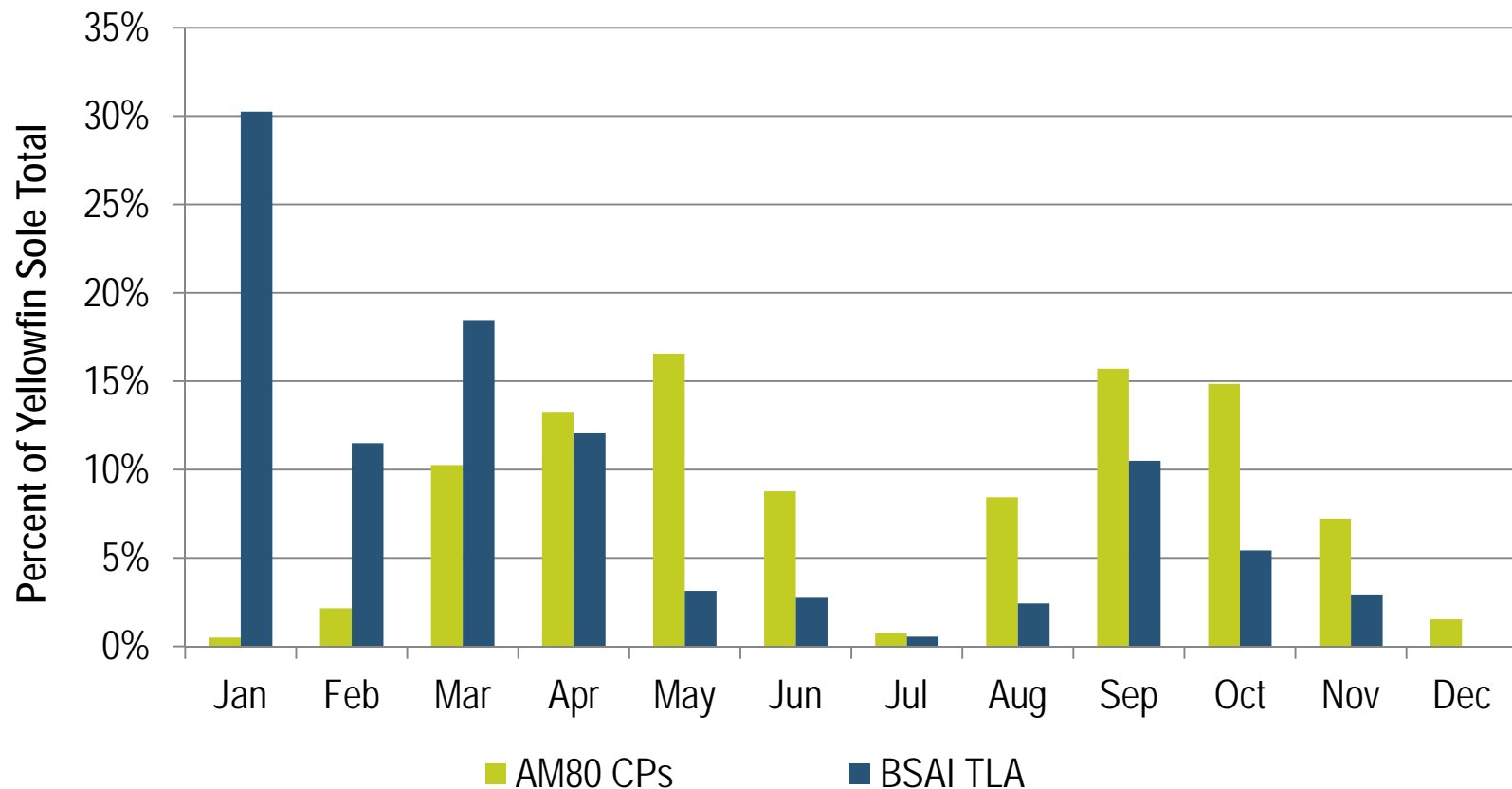


Figure developed by Northern Economics from CAS data provided by AKFIN Fey, 2014.



AM80 Goal #7: Create BSAI Trawl Limited Access Fishery for Yellowfin Sole

Figure 3. Harvests in BSAI TLA and A80-CP Yellowfin Sole Fisheries by Month, 2008–2012 (*Not in executive Summary*)



Other Notable Changes to the 5-year Review

- Section 3.1.2 beginning on page 20 contains an expanded discussion of crew participation including Table 5 which provides observer data on crew complements and calculate crew member weeks.
- Average Crewmember weeks have increased from 32.2 weeks per vessel to 36.8 weeks per vessels following AM80

Other Notable Changes to the 5-year Review

- Section 3.1.7.2 beginning on page 34 contains an expanded discussion on the transition of Pacific cod from a target fishery to an incidental catch fishery.
- Table 17 shows that AM80 CP Pacific cod landings in PCOD target fisheries fell from over 50% prior to AM80 to less than 10% in 2011 and 2012.

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Pacific Cod Targets	17,756	23,279	17,206	18,657	25,106	3,959	3,867	3,477	1,601	2,356
All Other Targets	12,378	14,732	13,868	11,234	9,259	12,619	18,392	21,732	24,203	26,763
All Targets	30,134	38,012	31,074	29,891	34,364	16,578	22,259	25,209	25,805	29,119
% of PCOD in PCOD Targets	59%	61%	55%	62%	73%	24%	17%	14%	6%	8%

Source: Table developed by Northern Economics from CAS data provided by AKFIN Fey, 2014.



Other Notable Changes to the 5-year Review

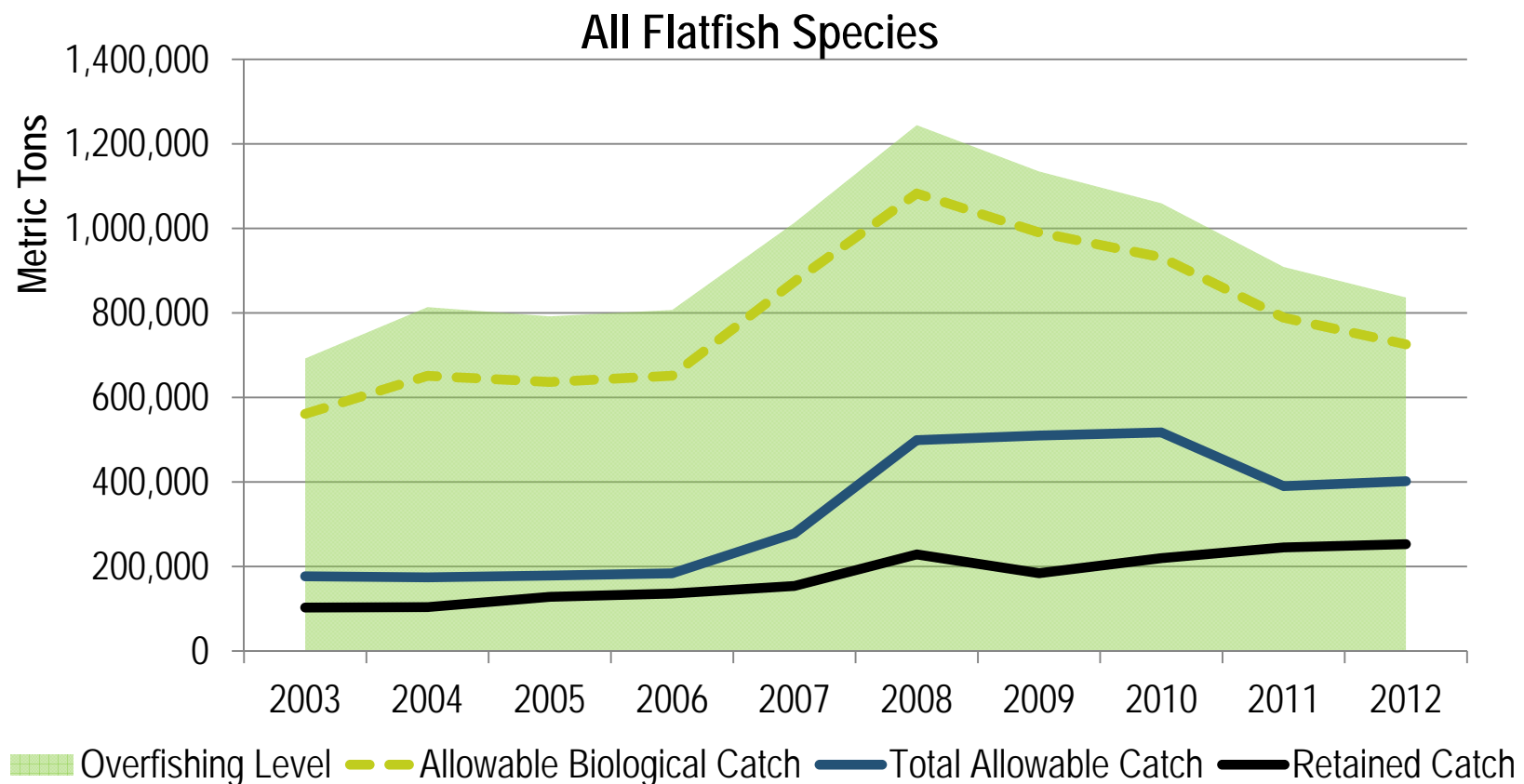
- Section 3.1.7.3 (page 39) is new and discusses behavioral changes innovation, and flexibility in reducing PSC.
- Changes include more night tows, more movement after high bycatch tows, more use of halibut excluders.

Other Notable Changes to the 5-year Review

- In Section 4—the NIOSH section on vessel safety, the conclusions and summary have been moved to the Executive Summary.

Other Notable Changes to the 5-year Review

- New text and figures in Section 6 (p 60/61) showing changes in OFLs, ABCs, TACs, and retained catch.

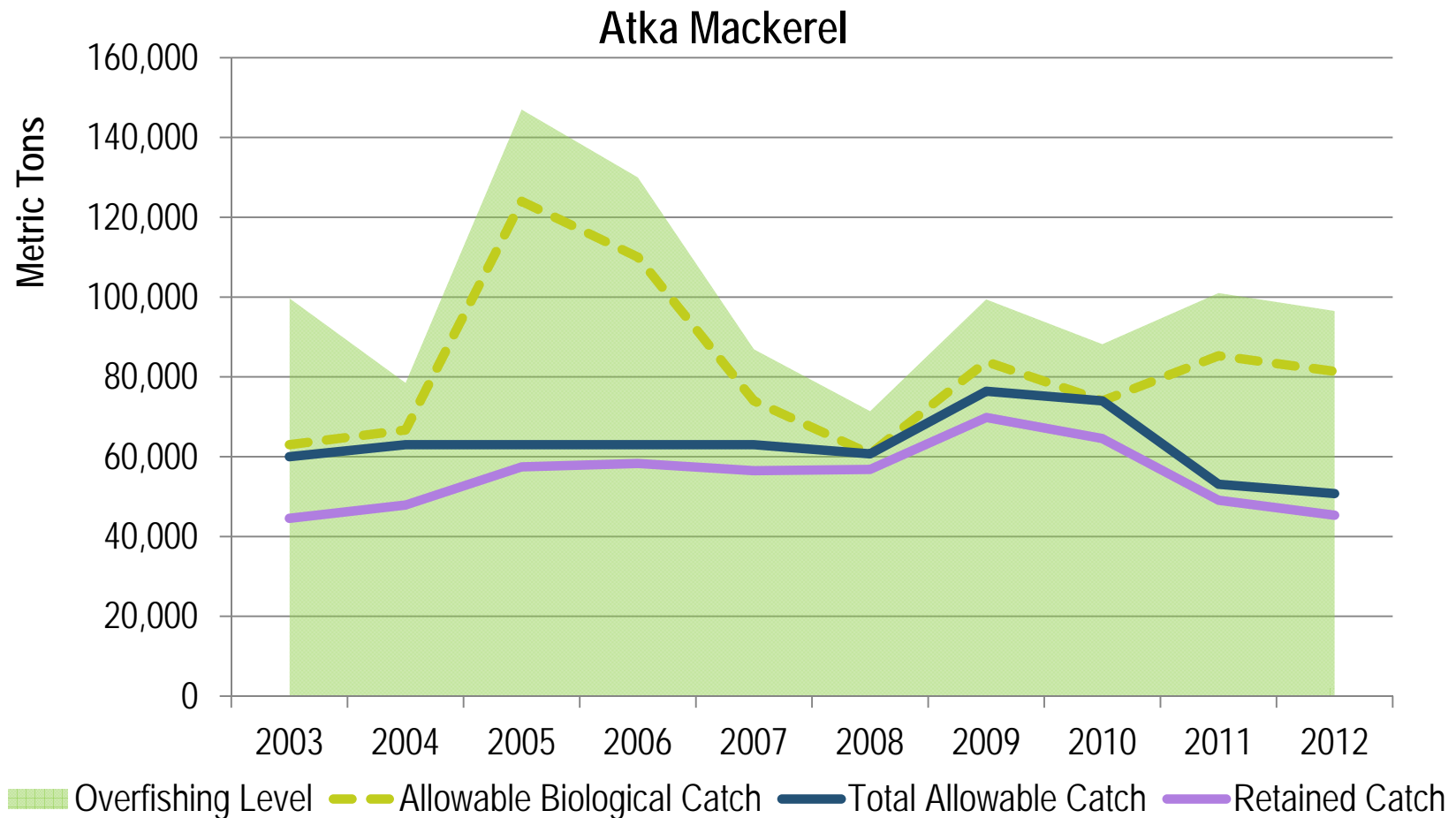


Note: Figures include retained catch from all BSAI trawl activity including CDQ.

Source: Developed by Northern Economics based on from the CAS provided by AKFIN (Fey, 2014) and information at NMFS-AKR webpage, (NMFS, 2014a).



Other Notable Changes to the 5-year Review

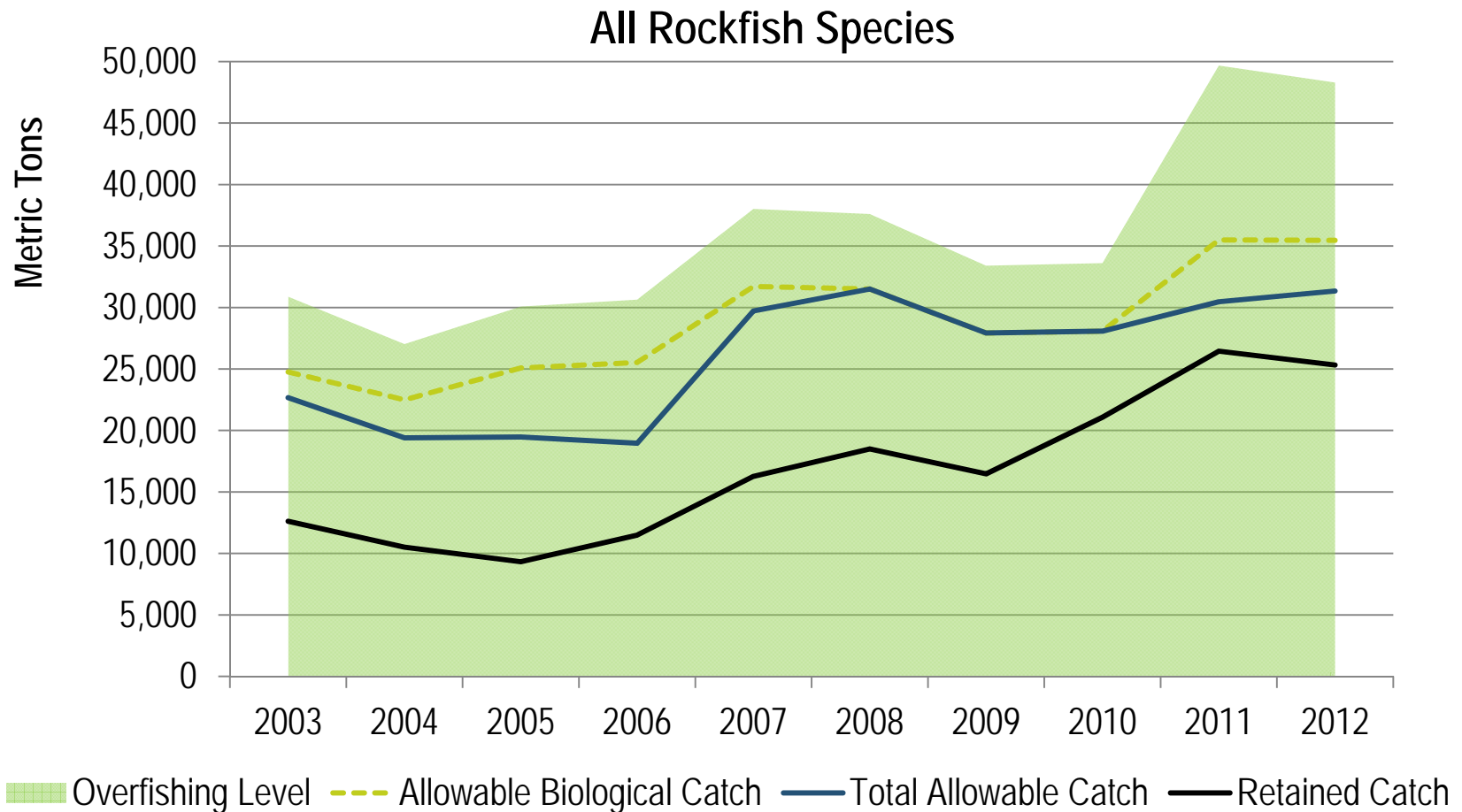


Note: Figures include retained catch from all BSAI trawl activity including CDQ.

Source: Developed by Northern Economics based on from the CAS provided by AKFIN (Fey, 2014) and information at NMFS-AKR webpage, (NMFS, 2014a).



Other Notable Changes to the 5-year Review



Note: Figures include retained catch from all BSAI trawl activity including CDQ.

Source: Developed by Northern Economics based on from the CAS provided by AKFIN (Fey, 2014) and information at NMFS-AKR webpage, (NMFS, 2014a).



Other Notable Changes to the 5-year Review

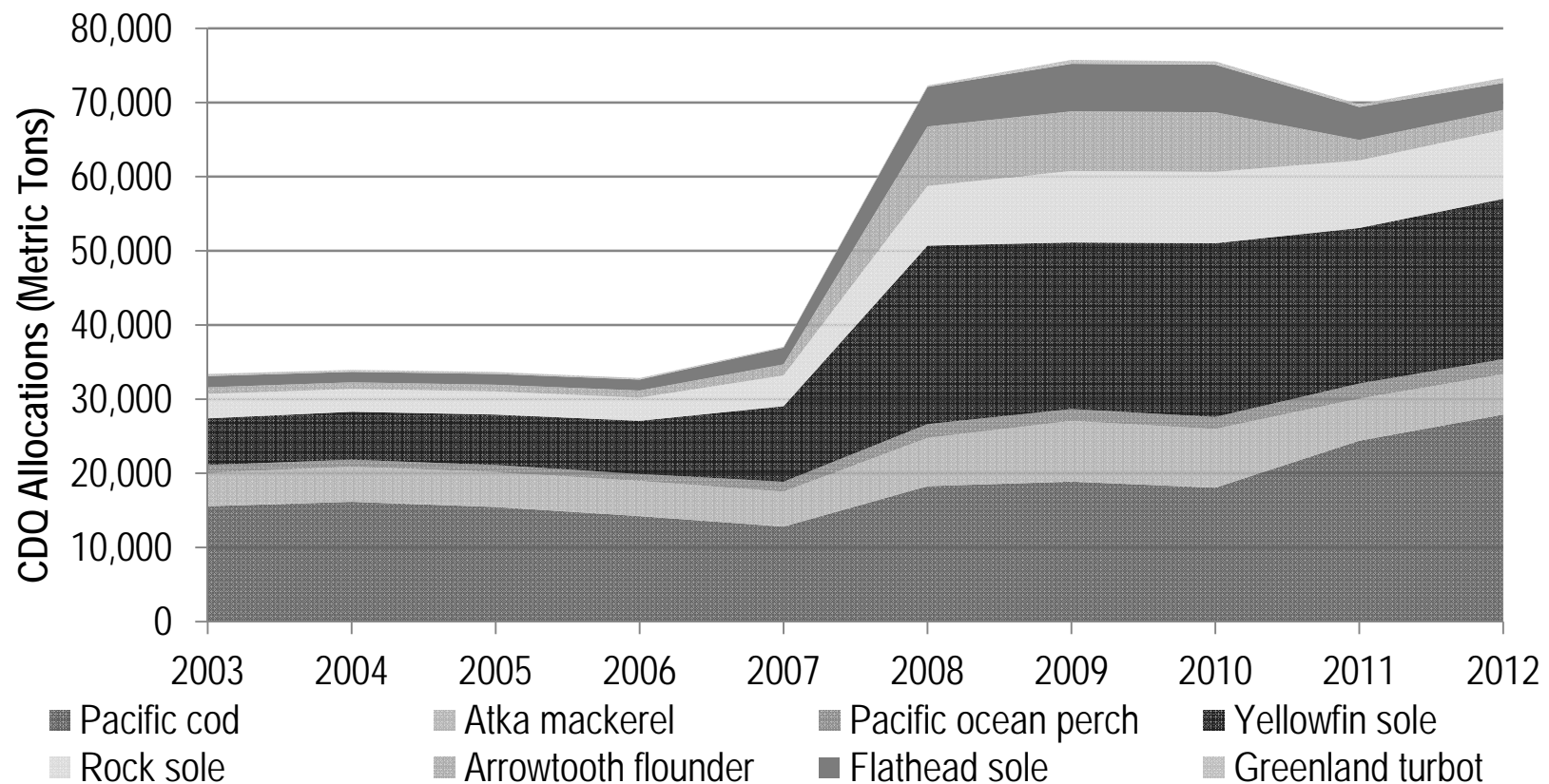
- In Section 9 (p. 85) which summarizes benefits to vessel owners using EDR data, there is an expanded discussion of capital costs and operating residuals.
- The EDRs do not includes information historical capital costs and investments, so it is not possible to determine actual rates of return to owners.
- Operating residuals provide information that can lead to estimates of the value of the vessel to an investor through the use of discounted cash flow models.
- Also included is a discussion of returns to owners in the mining and oil & gas industries.

Other Notable Changes to the 5-year Review

- Several additions to Section 10 re CDQ Allocations starting on page 101.
- New figures as shown in the Executive Summary
- Assessment includes harvest with fixed gear of CDQ Pacific cod.

AM80 Goal #4: Maximize Benefits—CDQ Groups

Figure 37. CDQ Allocations of Groundfish other than Pollock and Sablefish



Source: Developed by Northern Economics based on information at NMFS-AKR webpage, (NMFS, 2014a).



AM80 Goal #4: Maximize Benefits—CDQ Groups

Figure 38. Catch (mt) in CDQ Non-Pollock/Non-Sablefish Target Fisheries

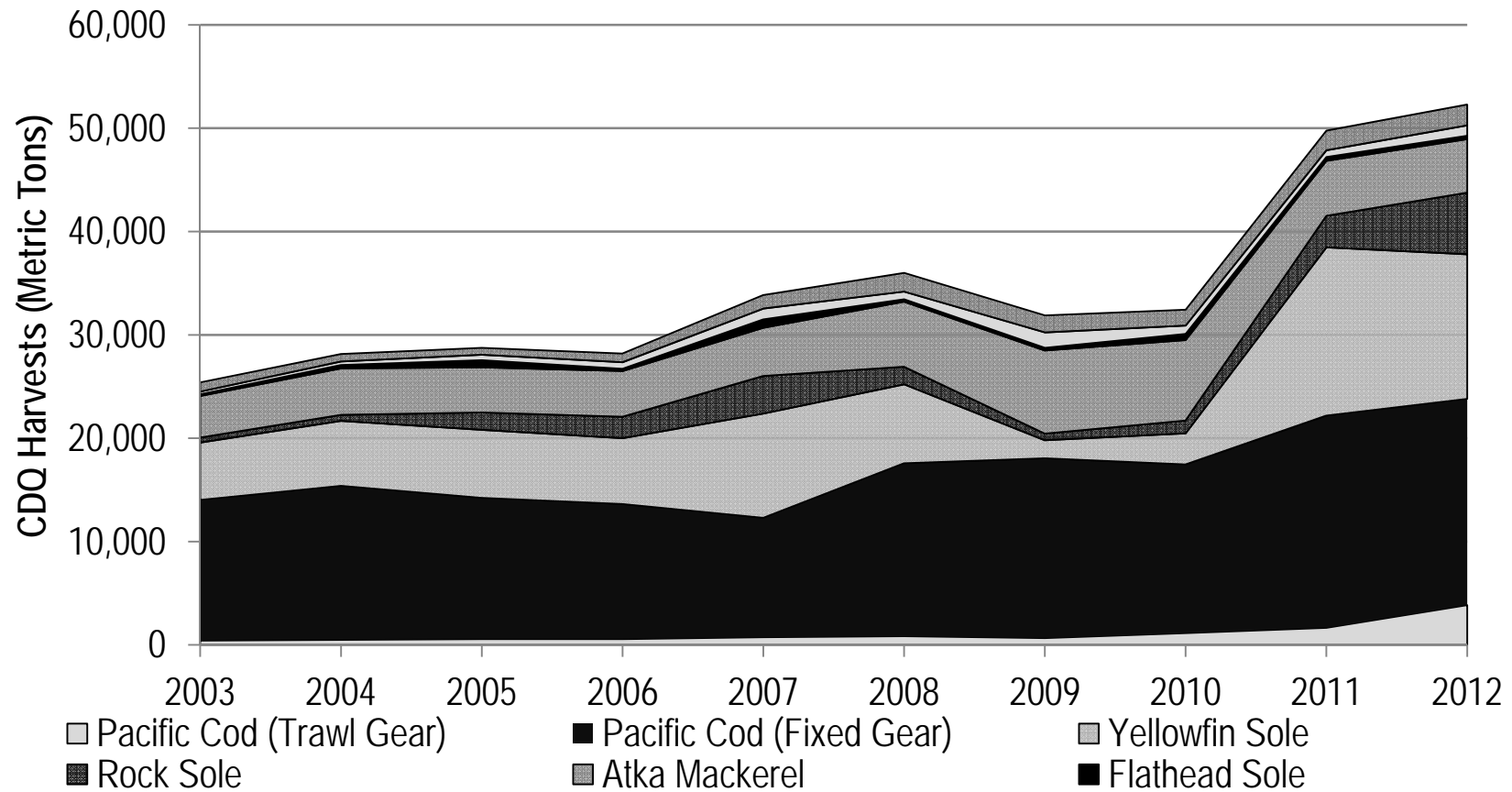


Figure developed by Northern Economics from CAS data provided by AKFIN Fey, 2014.



Other Notable Changes to the 5-year Review

Table 50. CDQ Harvest Volumes as a Percent of CDQ

Species	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Yellowfin Sole	89%	98%	97%	89%	99%	32%	8%	13%	78%	65%
Rock Sole	19%	29%	59%	70%	89%	24%	9%	14%	36%	66%
Flathead Sole	26%	38%	61%	28%	48%	9%	8%	15%	15%	14%
Arrowtooth Flounder	49%	48%	65%	70%	81%	10%	20%	11%	28%	39%
Greenland Turbot	27%	23%	28%	21%	68%	96%	34%	13%	27%	22%
Atka Mackerel	45%	95%	92%	94%	99%	97%	98%	98%	94%	95%
Pacific Cod	93%	99%	95%	100%	100%	100%	98%	100%	94%	87%
Pacific Ocean Perch	81%	71%	64%	86%	94%	89%	93%	93%	89%	93%
Sablefish	20%	19%	73%	55%	71%	50%	49%	68%	51%	59%
Pollock	101%	101%	100%	101%	99%	99%	99%	99%	93%	102%
Percent of Total Excluding Pollock & Sablefish	70%	87%	88%	89%	94%	52%	44%	44%	73%	73%

Source: Table developed by Northern Economics with CAS data provided by AKFIN (Fey, 2014) combined with CDQ allocations information from NMFS-AKR (NMFS, 2014a).


Other Notable Changes to the 5-year Review

- Section 11 summarizing Community Impacts of AM80 has been reorganized and expanded
- Port calls data has been checked, but not changed.
 - Dutch Harbor is the most important port from this analysis.
 - Comments indicating port call data doesn't match with actual trip counts of AM80 vessels has been investigated.
 - All CPs and Motherships must submit Product Transfer Reports (PTRs) to NMFS Enforcement whenever they offload.
 - Vessels owners and operator assume that PTR data are entered into a data system and available for analysis.
 - PTRs are not entered into the data system, and are not available for analysis.

Appendix D: NMFS Product Transfer Report Form

OMB No. 0648-0213
Expiration Date: 03/01/2015

Revised 04/03/2012

PRODUCT TRANSFER REPORT				<input type="checkbox"/> Original Report <input type="checkbox"/> Revised Report		NOAA Fisheries Office for Law Enforcement P.O. Box 21767 Juneau, AK 99802 Submit by FAX to Data Clerks at: FAX: 907-586-7313 Telephone: 800-304-4846 (option 1) E-Mail: enf.dataclerk@noaa.gov			
Shipper		Federal Fisheries or Processor permit No. IFQ Registered Buyer Permit No. RCR Permit No.		Representative Name Telephone No. Fax No.		Date and Time of Product Transfer Start Finish			
Receiver		Federal Fisheries or Processor Permit No. (if any)		Position of Product Transfer (Lat/Long) <i>(Mothership or Catcher/processor Only)</i>		Port or Location of Transfer			
Mode of Transportation and Intended Route									

PRODUCTS SHIPPING						Is this a <input type="checkbox"/> TOTAL OFFLOAD or a <input type="checkbox"/> PARTIAL OFFLOAD <i>Mothership or Catcher/Processor ONLY</i> If partial offload, record amount and type of product remaining onboard after this transfer					
Species Code	Product Code	Species Weight*	No. of Units	Unit Wt. <input type="checkbox"/> lb or <input type="checkbox"/> kg	Total Weight <input type="checkbox"/> lb or <input type="checkbox"/> kg	Species Code	Product Code	Amount <input type="checkbox"/> lb or <input type="checkbox"/> kg	Species Code	Product Code	Amount <input type="checkbox"/> lb or <input type="checkbox"/> kg

*This column to be used only for scale weight of multiple species within one unit only



Other Notable Changes to the 5-year Review

- **Section 11.3 contains an Assessment of Fish Tax Payments related to AM80**
 - Numbers in this section are estimates, developed by analysts. Estimates of actual payments by species or by sector are not generally available.
- **Estimates in this section include tax payments by BSAI TLA and CDQ vessels**
- **A figure was included in the Executive Summary**

Other Notable Changes to the 5-year Review

Figure 42. Estimates of Fish Taxes Paid by BSAI Fisheries Affected by AM80

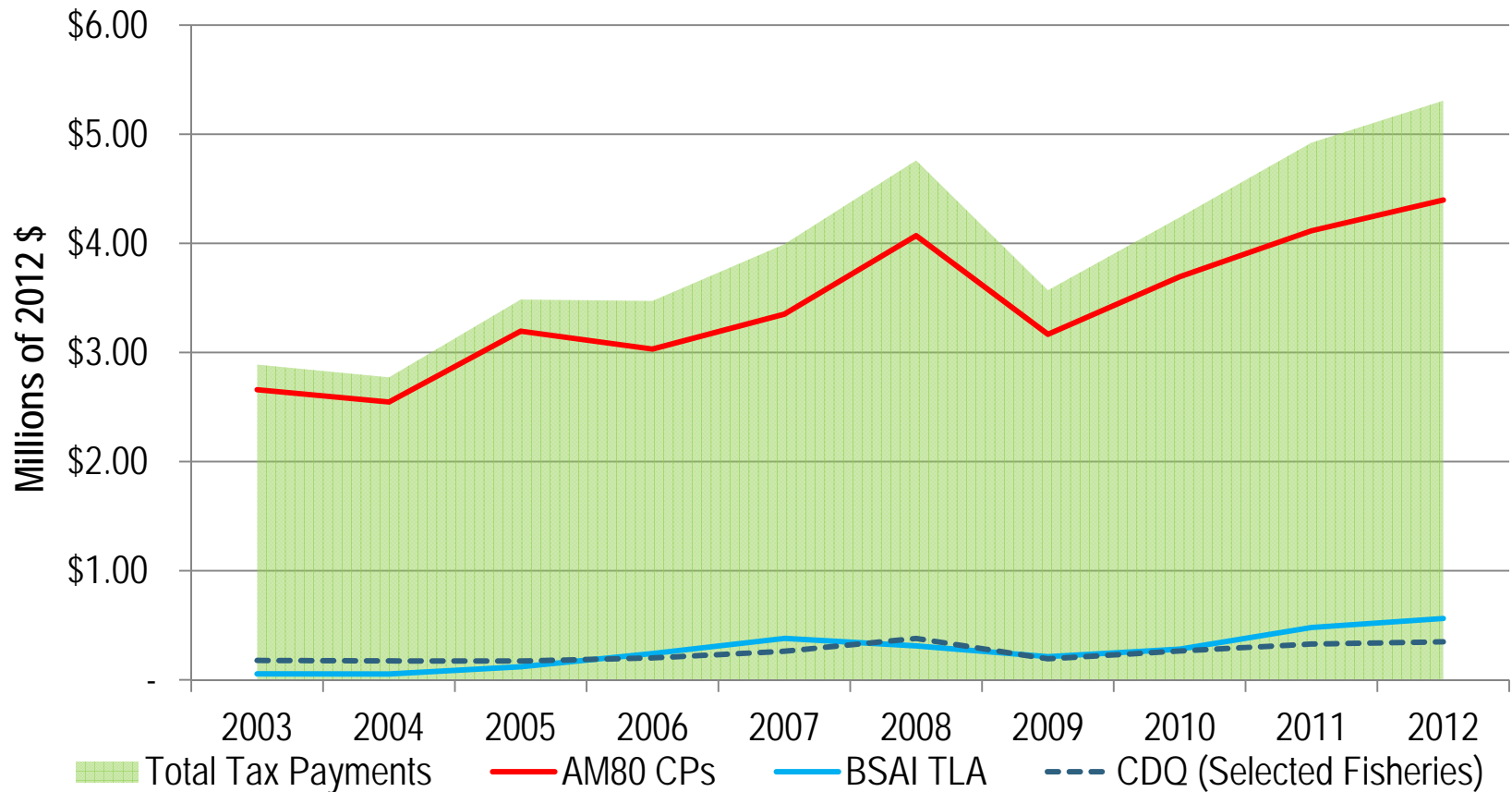


Figure developed by Northern Economics from CAS data provided by AKFIN Fey, 2014.

