PHASE 2 OF CATCH SHARE COST STUDY

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PRESENTATION STRUCTURE

- Introduction
- Background
- Project Objectives
- Options Analyzed
- Findings & Conclusions

PHASE 1 CATCH SHARE PROGRAMS CONSIDERED AT SEPTEMBER 2023 MEETING

- There were three primary objectives of the study.
  - Identify costs borne by stakeholders and NMFS in the West Coast Trawl IFQ program and how they are affected by specific program elements and document industry concerns with those costs.
  - Provide a comparison of those costs to similar programs.
  - Organize and present the information in a way that informs future studies that may consider program element modifications.

INTRODUCTION

- Phase 2 is a focused look at specific Program elements with an emphasis on the tradeoffs associated with reducing the costs of those elements:
  - At-Sea Monitoring (Observers and Electronic Monitoring)
  - Shoreside Catch Monitoring (at First Receivers)
  - Economic Data Collection Program

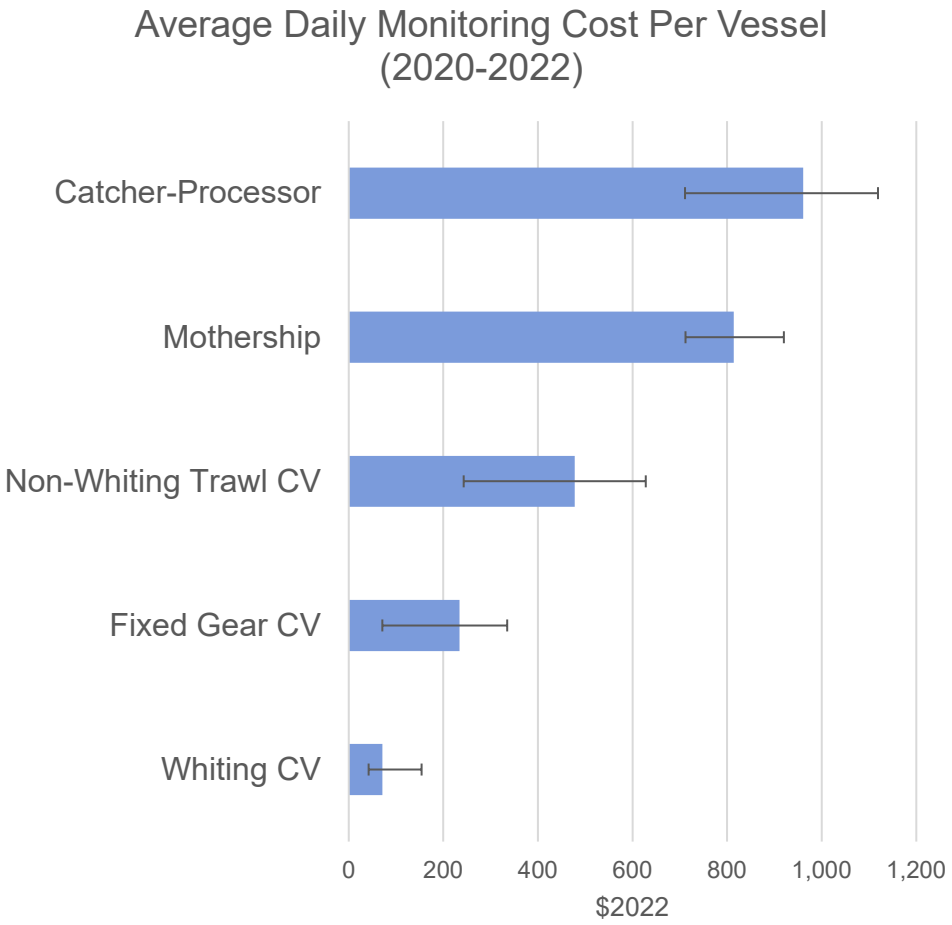
MONITORING PROGRAM

CURRENT PROGRAM STRUCTURE

- **At-Sea Monitoring (observers/EM)**: 100% coverage for all IFQ and at-sea whiting catcher vessels, and at-sea whiting processing vessels (motherships and catcher-processors). Focus is on discard estimation.
  - Two observers on catcher-processors and motherships
- **Shoreside Monitoring (catch monitors)**: 100% catch monitoring coverage for all vessels that deliver IFQ landings to shorebased first receivers. Verifies landings reported on Fish Tickets.
- Harvesters and processors are responsible for paying for catch monitors and observers
- Supports goal of achieving individual accountability of catch and bycatch and the objective of providing a mechanism for total catch accounting

INDUSTRY MONITORING COSTS

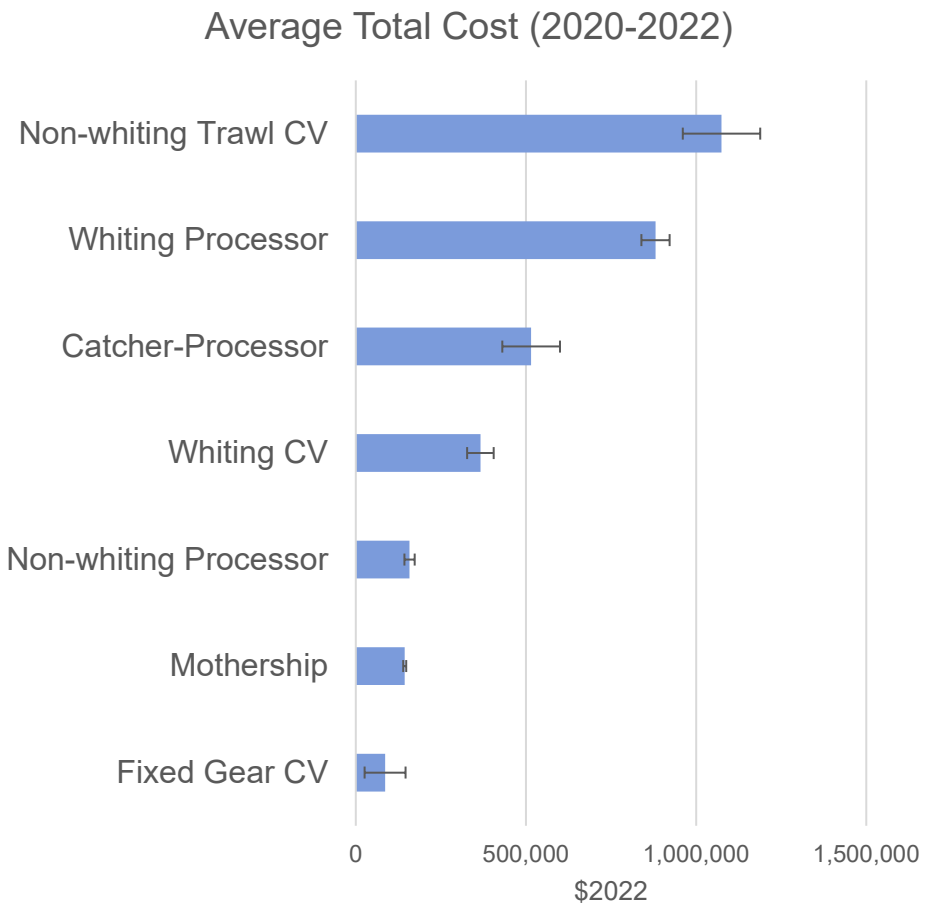
- **At-Sea Monitoring Cost (observers)**:
  - April of 2024: $585 to $645 per seaday.
  - At least one provider is now charging $700 per day
- **Shoreside Monitoring Cost (catch monitors)**:
  - The seaday rate (e.g., $645) or
  - Hourly rate ($90/hour)



Tables 4 and 5, page 29-30

INDUSTRY MONITORING COSTS

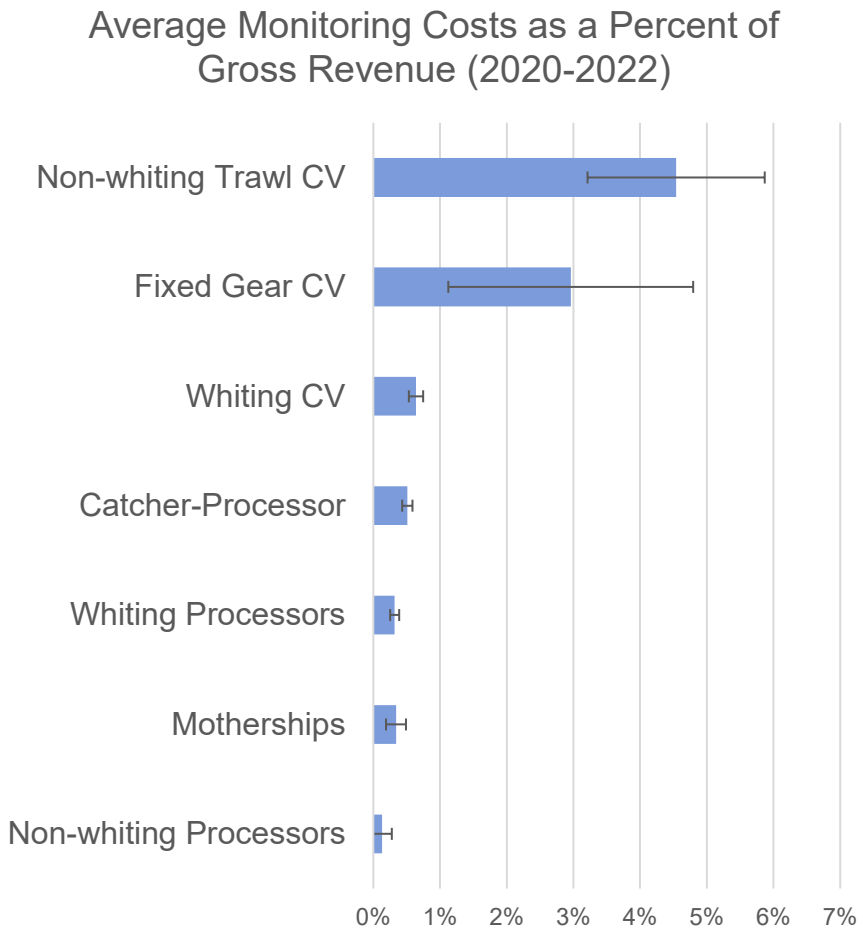
- Average At-Sea Monitoring Costs: $2,185,881 (2020-2022)
  - Including EM
  - Non-whiting Trawl: $1.1 million
- Average Shoreside Monitoring Costs: $1,038,668 (2020-2022)
  - Whiting processors: $880,673
  - Non-whiting processors: $157,995



Tables 4 and 5, page 29-30

INDUSTRY MONITORING COSTS

- Non-whiting catcher vessels pay the most of gross revenue towards monitoring (4.5%)
- Costs are influenced by EM, do not include EM video review or equipment



Tables 4 and 5, page 29-30

PROGRAM ELEMENTS AND OPTIONS ANALYZED

Shoreside and At-Sea Monitoring Programs

- Shoreside catch monitoring (catch monitors at first receivers):
  - No shoresidemonitoring
  - Reduced coverage (fixed, e.g., 50%)
- At-sea monitoring (observers/EM, all sectors):
  - Reduced coverage (fixed, e.g., 50%)
  - Variable coverage based on biological, economic or other conditions

POTENTIAL COST SAVINGS

- Shoreside monitoring has lower potential cost savings
- Cost savings may not be 1:1, due to inefficiencies

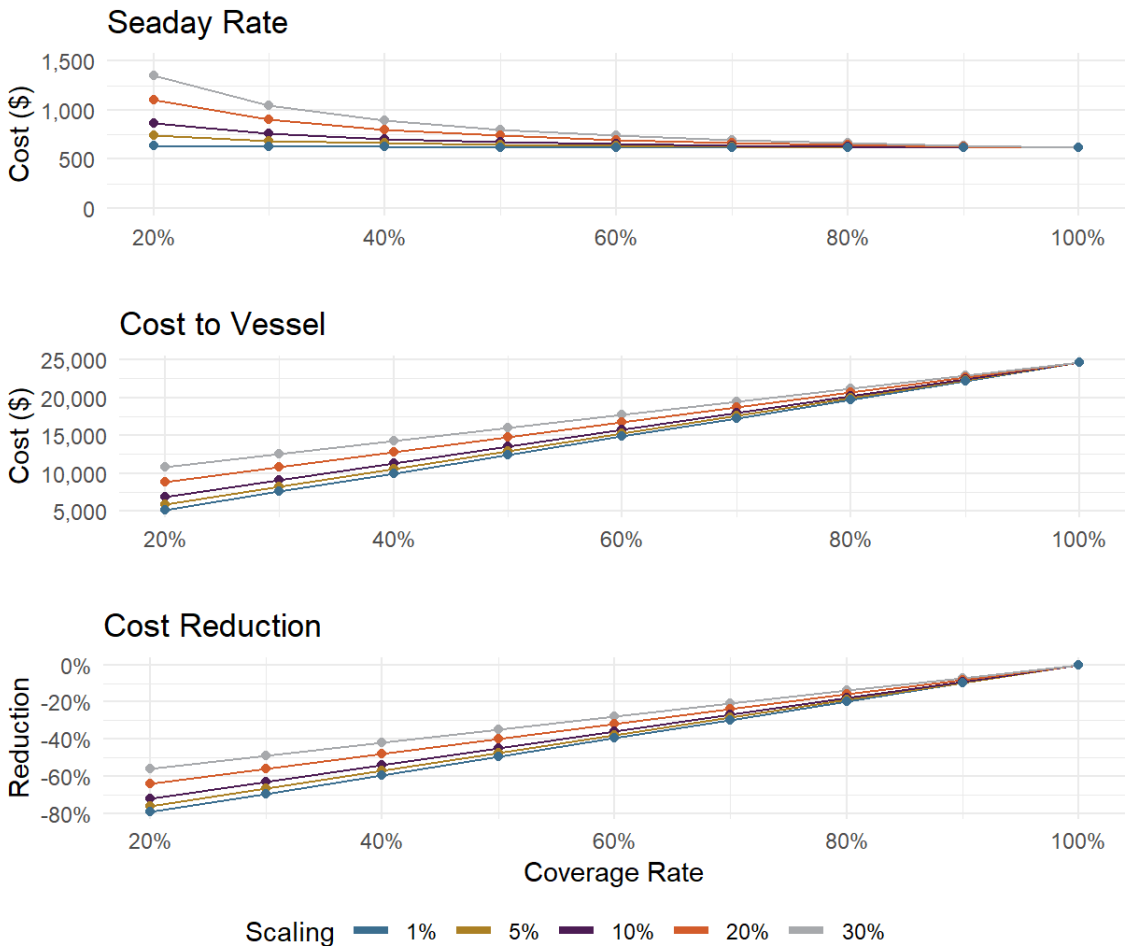


Figure 9, Page 45

COMPLIANCE AND ENFORCEABILITY IMPACTS

- Lower monitoring will decrease the ability for the program to ensure full catch accounting of catch and bycatch
- Catch accounting may be negatively affected by both intentional and unintentional changes in fishing behavior when monitored vs. not monitored
- For example, intentional misreporting of catch and discards might occur when:
  - Quota price to ex-vessel price ratios greater than 1 (page 49)
  - Large differences in ex-vessel price across market grades (page 52)
- Noncompliance and bias could result in exceeding catch limits and stock assessment issues (page 53)

SHORESIDE MONITORING OPTIONS

Option	Tradeoff Type	Summary of Impact	Description
Reduced Shoreside Monitoring (catch monitors)	Monitoring Cost Savings	Neutral to Low Positive	If changes are coupled with at-sea monitoring rate changes, savings are more likely to be positive. Higher administrative costs may increase cost recovery fees.
	Compliance and Enforceability	Low Negative to Neutral	If harvesters and processors know when they will be monitored, compliance and enforceability may be negatively affected.
	Biological Impacts	Low Negative to Neutral	If compliance is high, biological impacts may be neutral
	Administrative Impacts	Negative	New catch monitor deployment and trip selection systems will need to be developed. EM program requirements may need to be redesigned.
	Information and Data Availability	Neutral	Catch monitors (other than those used for EM) do not make data records.

Table 12, page 65

SHORESIDE MONITORING OPTIONS

Option	Tradeoff Type	Summary of Impact	Description
No Shoreside Monitoring (catch monitors)	Monitoring Cost Savings	Low Positive to Positive	Extent of cost savings depends on sector and fleet. Cost savings may primarily accrue to processors. Higher administrative costs may increase cost recovery fees.
	Compliance and Enforceability	Low Negative to Negative	Enforcement agents may still be able detect shoreside violations, but risk for nonreporting or misreporting may still increase.
	Biological Impacts	Low Negative to Neutral	If noncompliance is minimal, minimal impacts may occur. If more noncompliance occurs, biological impacts may be more negative.
	Administrative Impacts	Low Negative	No new catch monitor deployments systems would be needed, but the EM program may need to be redesigned, causing more short-term impacts.
	Information and Data Availability	Neutral	Minimal impacts to data streams since catch monitors (other than those used for EM) do not make data records.

Table 12, page 65

AT-SEA MONITORING OPTIONS

Option	Tradeoff Type	Summary of Impact	Description
Reduced At-Sea Monitoring (observers /EM)	Monitoring Cost Savings	Low Positive to High Positive	Cost savings may be less than 1:1 due to decreases in efficiency. Higher administrative costs may increase cost recovery fees.
	Compliance and Enforceability	Low Negative to High Negative	Substantial changes in compliance may occur with small changes in coverage
	Biological Impacts	Low Negative to Negative	Biological impacts may be more negative at lower levels of coverage.
	Administrative Impacts	Negative	Potentially new catch observer deployment, trip selection and quota monitoring systems will need to be developed. EM program requirements may need to be redesigned. Regulatory flexibility may decrease.
	Information and Data Availability	Low Negative to High Negative	Reduced information from observers will decrease information for quota monitoring and information about protected species interactions.
	Other Impacts	Neutral to Negative	MSC certification scores may be negatively affected by uncertainty in data and lower at-sea monitoring requirements.

AT-SEA MONITORING OPTIONS

Option	Tradeoff Type	Summary of Impact	Description
Variable At-Sea Monitoring (observers/ EM)	Monitoring Cost Savings	Uncertain	Will depend on the nature of the program and triggers for determining coverage rates.
	Compliance and Enforceability	Uncertain	Will depend on the nature of the program and triggers for determining coverage rates.
	Biological Impacts	Uncertain	Will depend on the nature of the program and triggers for determining coverage rates.
	Administrative Impacts	High Negative	Similar to other options and will require more ongoing costs for determining coverage rates and monitoring performance.
	Information and Data Availability	Uncertain	Will depend on the nature of the program. May be difficult to have variable and uncertain levels of information across years.
	Other Impacts	Neutral to Negative	MSC certification scores may be negatively affected by uncertainty in data and lower at-sea monitoring requirements.

CONCLUSIONS - MONITORING

- Changes to at-sea monitoring requirements have higher potential cost savings than changes to shoreside monitoring options
- Also have greater potential trade-offs:
  - Reduced accountability of catch
  - Introduction of bias
  - Risk of exceeding catch limits
  - Potential impacts to stock assessments
- As observer coverage rates decrease, cost savings may not be 1:1 due to additional inefficiencies
- Negative administrative impacts may stem from new observer deployment and quota monitoring systems, redesign of the EM program, and loss of regulatory flexibility for harvesters

ECONOMIC DATA COLLECTION

ECONOMIC DATA COLLECTION

- All participants in the Catch Share program are required to annually provide economic data to NMFS
- Fishery managers use the data to determine whether the Catch Share program meets its goals of:
  - Increasing the fishery's net economic benefits
  - Creating economic stability for participants

EDC COSTS

- Costs are discussed in terms of direct and indirect costs
- Direct costs are incurred by firms to maintain and submit information required to complete the EDC surveys
- Indirect costs are the recoverable costs NOAA Fisheries incurs to oversee and support the EDC program

ESTIMATED DIRECT COST BY SURVEY CATEGORY

Information Collection	Annual Responses	Burden Hours / Response	Total Annual Burden Hours	Hourly Wage Rate of Respondent	Average Cost per Respondent	Total Annual Wage Burden Costs
Mothership	6	8	48	$37.22	$297.76	$1,787
Catcher Vessel	127	8	1,016	$67.62	$540.96	$68,702
Catcher-Processor	10	8	80	$37.22	$297.76	$2,978
First Receivers/ Shorebased Processors	47	20	940	$37.22	$744.40	$34,987
Quota Share Owner	152	1	152	$52.42	$52.42	$7,968
Totals	**342**	**n/a**	**2,236**	**n/a**	**n/a**	**$116,422**

ESTIMATED INDIRECT COST BY SECTOR

Year	EDC Program Costs (Fiscal Year)			
	IFQ	Mothership	Catcher-Processor	Total
2023	$121,830	$9,297	$7,812	$140,962
2022	$129,188	$10,573	$9,970	$151,753
2021	$233,797	$10,229	$5,696	$251,743
2020	$332,758	$19,989	$16,414	$371,181
2019	$318,460	$37,958	$25,528	$383,965
2018	$399,694	$35,809	$14,132	$451,653
2017	$448,088	$88,703	$37,678	$576,486

IMPACT OF EDC ON COST RECOVERY FEE

- Table 17 on Page 78 summarizes EDC and Cost Recovery Fee data from 2017 through 2023
- Because of the 3% cost recovery fee limit, if the EDC program had not been in place, the cost recovery fee charged to industry in the IFQ sector would not have changed in 5 of the 8 years
- Cost Recovery Fees for the MS and CP sectors have been relatively small, but any EDC savings would directly reduce their fees

OPTIONS CONSIDERED TO REDUCE EDC COSTS

- Three general approaches to reduce EDC costs relative to the status quo were considered:
  1. Continue the current census survey structure but do not collect information from participants yearly or only census some sectors during a year
  2. Modify collections to sample a portion of the population from each sector annually or to sample a portion of the population of certain sectors on a rotating basis while continuing a census of sectors, but not every year
  3. Survey active participants in the fishery instead of all permit holders

EXAMPLE OF SUMMARY TABLE IN THE DOCUMENT OPTION 1. CENSUS LESS OFTEN

Option	Tradeoff Type	Summary of Impact	Description
IFQ	Direct Cost Savings (industry)	Low Positive to Positive	Cost savings depend on how often sectors surveyed and bookkeeping cost savings in non-survey years. No cost to submit the data, but still incur bookkeeping costs.
	Indirect Cost Savings (industry)	Neutral to Low Positive	Lower administrative costs may decrease cost recovery fees when not at maximum amount. Cost savings would be less the years regulatory changes are developed and implemented, including PRA requirements.
	Agency Cost Savings	Neutral to Low Positive	Agency cost savings would occur during the years the survey is not conducted. Cost savings would not be expected to change during survey years.
	Data Impacts	Low Negative to Negative	Data would be unavailable for years when it is not collected. Greatest impact when substantial changes to the fishery occurred. Increased QA and QC costs. Inconsistent data when assumptions are made by different people submitting the data.
	Other Impacts	Low Negative to Negative	Knowledge loss could increase the time required to complete the forms. Requires regulatory and PRA changes.

OPTION 1: LESS FREQUENT CENSUS

- Industry costs would decline, but the amount would depend on the frequency their sector is surveyed
- Agency costs would decrease but would continue to have costs to maintain and use the data
- Regulatory and PRA changes would increase costs in the near term
- Not collecting data when major events happen will impact data quality. Increased assumptions to explain changes in the fishery
- Could increase the time required to complete the forms if bookkeeps have less familiarity
- There would be direct cost savings. Indirect cost savings are less certain for the IFQ sector. There would be data loss

OPTION 2. SAMPLE POPULATIONS

- Confidentiality requirements would prevent using this option for the MS and CP sectors
- The industry will have record-keeping costs because they will be notified if they are selected after the season
- Minor direct cost savings - fewer completing the survey
- Higher administrative costs - greatest during the years when regulatory changes are developed/implemented, including PRA requirements
- Data collection and review costs would decrease because of fewer forms

OPTION 2. SAMPLE POPULATIONS

- Costs to develop models describing unsampled populations within the IFQ sector would increase
- Potential for large estimation errors. This could reduce confidence in data
- Heterogeneity within the IFQ fleet and processors would require the development of sampling strata
- Some firms/individuals would need to be surveyed every year, which may trigger fairness concerns
- Requires regulatory and PRA changes

OPTION 3. SURVEY ACTIVE PARTICIPANTS

- Trawl Limited Entry Permit holders:
  - On average 35 trawl catcher vessel LEPs are not used to catch any groundfish during a year from 2011 through 2022
  - The number of trawl catcher vessel LEPs not used to catch groundfish ranged from 31 to 42 over that same period
  - Assuming the cost reduction is proportional to the number of surveys that must be completed, there would be a reduction in direct average annual cost of about $19k
  - No data loss for active participants in the Catch Share Program
  - Other surveys could collect information for the LEP holders that are not active when needed

OPTION 3. SURVEY ACTIVE PARTICIPANTS

- First Receiver Site License holders
  - Decreases the reporting burden for individuals who did not buy IFQ fish during the year they held an FRSL
  - It is estimated that, on average, 24% of the FRSL were not used on an annual basis from 2019 through 2023. The number not used during that period ranged from 7 to 13
  - Reduce agency cost to enforce compliance with submitting the survey
  - No data loss for active participants
  - Inactive FRSL holders could be surveyed under other programs when necessary

OVERALL CONCLUSIONS

- Total industry costs for the EDC program in 2022 were $268,000 for all sectors
- Average annual monitoring program costs were $2,185,881 for at-sea monitoring and $1,038,668 for the shoreside monitoring, for a total of $3,224,549 (2020-2022).
- Due to the differences in total industry costs associated with the EDC program and the monitoring program, changes to the monitoring program have a greater potential to reduce costs than changes to the EDC program.

OVERALL CONCLUSIONS (CONT.)

- Major potential tradeoffs vary:
  - Impacts of changes to at-sea and shoreside monitoring include:
    - Changes in fishing behavior, reduced compliance and enforceability of rules
    - Potential increased risk of exceeding catch limits, impacts to stock assessments
    - Negative administrative impacts from new observer deployment and quota monitoring systems, redesign of the EM program, and loss of flexibility for harvesters
  - EDC program impacts include:
    - Loss of data, increased regulatory costs
    - Inability to model data not collected some years or for some strata
    - Increased QA and QC costs to ensure accurate data
    - Increased enforcement if people are not certain which years they must complete the surveys
    - Increased concern regarding the representativeness of the data utilized in analyses

THANK YOU

- Council and staff, especially Merrick Burden, Kelly Ames, Jessi Doerpinghaus, and Patricia Hearing
- NOAA Fisheries staff, especially Maggie Sommer and Erin Steiner
- Stakeholders that took the time to provide input to improve the depth and quality of this report