NOAA FISHERIES
Alaska Region

# Lead Level 2 Observers Regulatory Impact Review

## C10 – INITIAL REVIEW DRAFT

## April 2017

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# Outline

This Regulatory Impact Review examines the benefits and costs of alternatives to address the potential for a shortage of lead level 2 endorsed (LL2) observers for deployment on freezer longline vessels in the groundfish fisheries of the Bering Sea and Aleutian Islands (BSAI) and Gulf of Alaska (GOA).

- Background (Ch. 1 & Ch. 3)
- History of the Action
  (Sec. 1.7 & Appendix C)
- Alternatives & Impacts
  (Ch. 2 & Ch. 4)

Photo: North Pacific Observer Program

# Background - Observer Coverage Requirements

| | Vessel and Gear type | Fishery | | Min number of observers and Deployment endorsements |
|---|---|---|---|---|
| Full Coverage | Mothership[5] | Groundfish CDQ – delivery of unsorted codends | | LL2 L2 |
| | Trawl CPs & Motherships | Pollock CDQ<br>Groundfish CDQ<br>BSAI Pollock<br>Amendment 80 vessels in BSAI<br>Rockfish Program | | LL2 |
| | H&L CP[6] | BSAI Pacific cod<br>Groundfish CDQ | Two observer option | LL2 |
| | | | Scales option | LL2 |
| | Pot CP | Groundfish CDQ | | LL2 |
| | CP & MS<br>All gear types | All other fisheries (including H&L CPs that "opt out" of the BSAI Pacific cod fishery) | | |
| | Trawl CV | Groundfish CDQ<br>BS Pollock<br>CGOA Rockfish Program | | |
| | H&L CV | 46' LOA CDQ Groundfish | | |
| Partial Coverage[7] | H&L CP | Small CPs, except full coverage | | |
| | CV ≤ 46' LOA | Groundfish CDQ fishing | | |
| | CV ≥ 40' LOA | All other fisheries except full coverage | | |
| | CV < 40' LOA[8] | All Fisheries | | |
| | EM Selection pool | | | |

= certified observer  L2 = level 2  LL2 = lead level 2  = electronic monitoring

4 permitted Observer Providers
2012 – 2016

5 permitted observer provider 2016 - now

1 Observer Provider

Table 1 & 2, Section 1.4, Pg 16

# Background - Observer Coverage

| | Vessel and Gear type | Fishery | | Min number of observers and Deployment endorsements | Vessels |
|---|---|---|---|---|---|
| Full Coverage | H&L CP[6] | BSAI Pacific cod Groundfish CDQ | Two observer option |   | 1 |
| | | | Scales option |   | 28 |
| | Pot CP | Groundfish CDQ | |   | 2 |

29 - freezer longline vessels participating in a year round fishery

2 - pot CPs fishing groundfish CDQ

Table 1, Section 1.4, Pg 16

# Purpose and need

*Under monitoring and enforcement regulations in place since October 2012, owners of freezer longline vessels named on License Limitation Program (LLP) licenses endorsed to catch and process Pacific cod in the (BSAI) are required to select between two monitoring options: carry two observers so that all catch can be sampled, or use a motion-compensated flow scale to weigh Pacific cod before it is processed and carry one observer. Under both monitoring options, at least one of the observers must be endorsed as a lead level 2 observer for vessels using fixed-gear.* ***In addition to freezer longline vessels selecting the scales option, freezer longliners selecting the two-observer option and pot catcher/processors participating in the groundfish CDQ fisheries also are required to carry a nontrawl LL2 observer.***

*All freezer longline vessels except one have chosen the flow scales with a single LL2 observer option. This, combined with current observer deployment model that places most fixed-gear catcher vessels in the partial observer coverage category, means that there are few fixed-gear vessels in the full observer coverage category which do not require a LL2 observer. Therefore, observers employed by* ***four of*** *the* ***five*** *full coverage observer providers have few opportunities to gain the necessary experience to obtain the LL2 endorsement for vessels using fixed-gear.*

*NMFS, observer providers, and industry undertook a series of non-regulatory actions designed to build and retain a pool of available LL2 endorsed observers. This included industry voluntarily deploying second observers on some freezer longline vessels, at a cost to the industry, in order to allow them the experience to earn the LL2 endorsement.*

*The Council is concerned about the potential for a shortage of LL2 observers for deployment on freezer longline vessels and the resulting costs that could be incurred. This action is intended to address the need to maintain a high standard of observer data quality, and the need to minimize the potential for shortages of LL2 observers and additional costs to industry.*

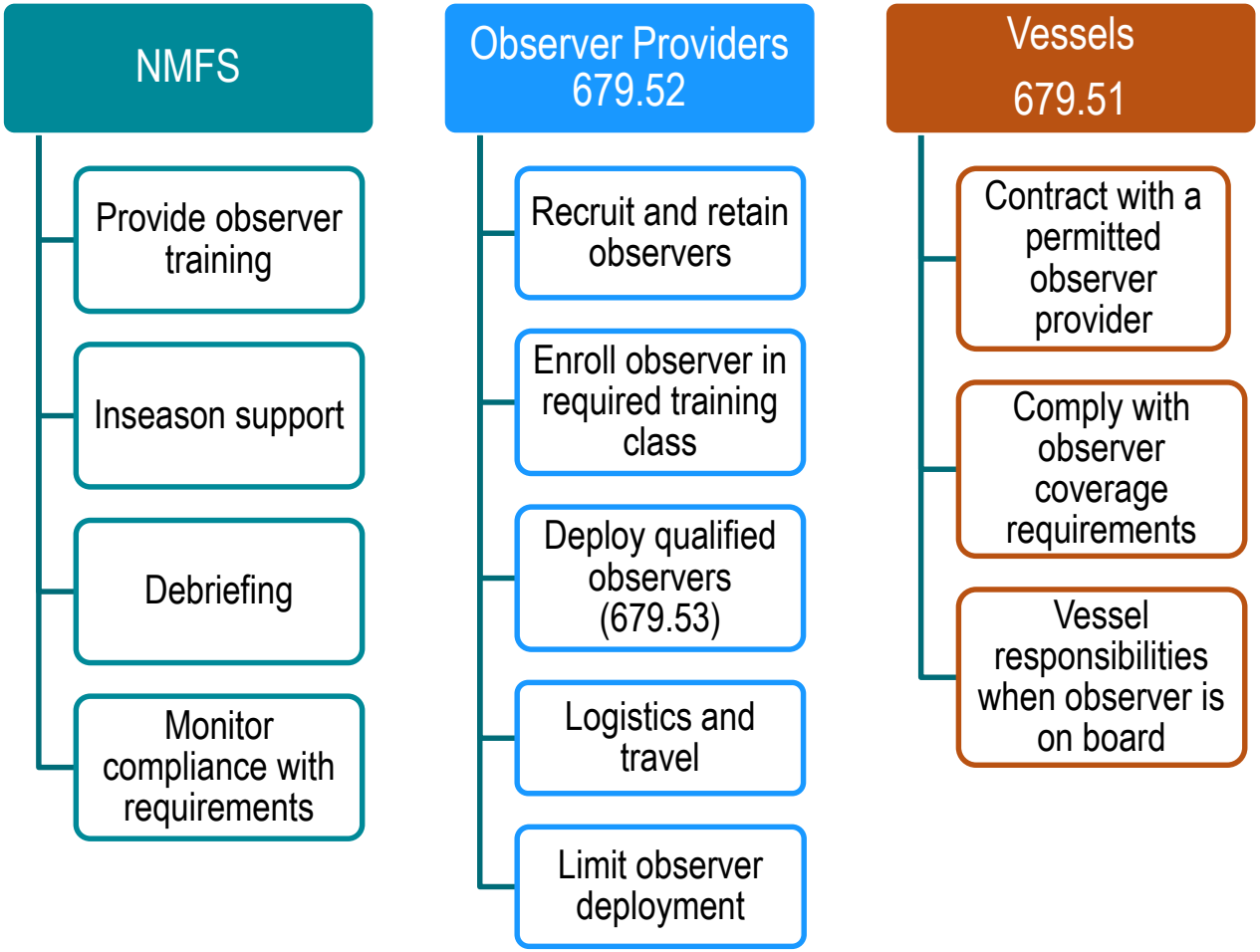
(Section 1.1, pg 13)

# Timeline and History

| | |
|---|---|
| 2012 | • Implemented Freezer Longline monitoring requirements<br>• LL2 experience req. reduced from 60 to 30 sets |
| 2013 | • Implementation of the restructured Observer Program |
| 2014 | • LL2 Shortages in August, Council requested a discussion paper.<br>• Industry Workshop, November 13, 2014<br>  • Begin Vol. deployment of 2nd Observers ($178k) |
| 2015 | • Vol. deployment of 2nd observers ($167K) |
| 2016 | • AIS permitted as full coverage provider<br>• October discussion paper.<br>  • Vol. deployment of 2nd observers ($111k) |
| 2017 | • April – Initial Review<br>  • Vol. deployment of 2nd observers continues |

Table 3 pg 21, Table 14 pg 46, Table 16 pg 48, & Appendix C

# Background – Observer Deployment Responsibilities




(Section 3.3, pg 39 & Appendix B)

# Background – Observer Deployment

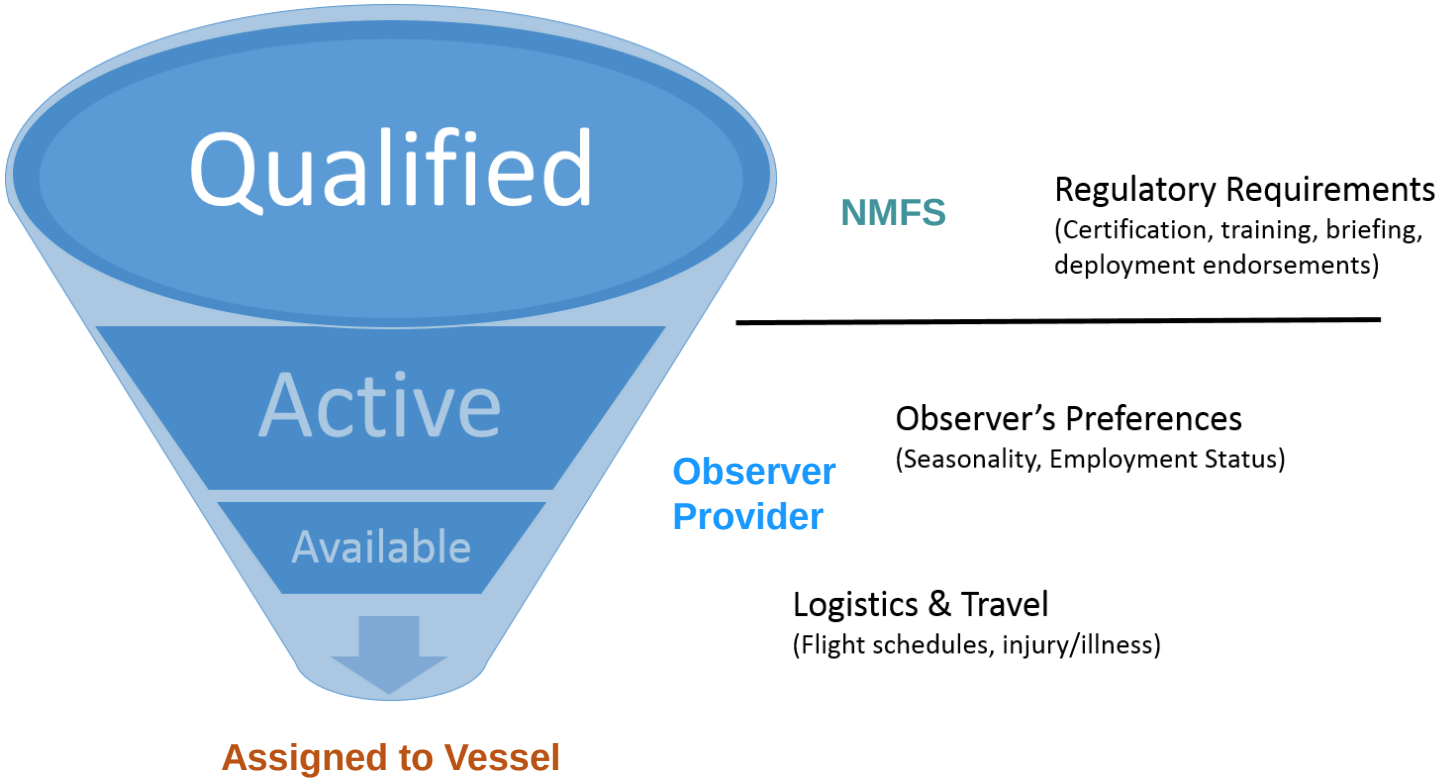



**Figure 6** **How observer availability is affected by regulatory requirements, observers preferences and logistics and travel in the full coverage fisheries.**

(Section 3.3, pg 41)

# Outline

- Background
- History of the Action
- Alternatives & Impacts (Ch. 2 & Ch. 4)

Questions?

# Summary of the Alternatives

Alternative 1: No action

Alternative 2: LL2 Exception

- Option 2.1: Trawl LL2 observer
- Option 2.2: Level 2 endorsement
- Option 2.3: Certified observer

Alternative 3: Observer Options

- Option 3.1: One nontrawl LL2 observer or two observers
  - Suboption 3.1.1: Two Level 2 observers
  - Suboption 3.1.2: One Level 2 observer and a certified observer
- Option 3.2: Modify the nontrawl lead level 2 endorsement to allow CP trawl sampling experience to count.

Alternative 4: Agency funding

- Option 4.1: NMFS-funded deployment of second observers
- Option 4.2: NMFS-funded At-Sea Training Program

(Section 2, pg 23-24)

# Analysis of Impacts

Five impact categories:

- Observer Health and Safety
- Data Quality
- Observer Availability
- Cost to Industry (Observer Providers and Vessels)
- Administrative Costs (NMFS)

(Section 4, pg 48)

# Alternative 1 – No Action, Status Quo

Components

- Nontrawl LL2 observer required at all times on freezer longline vessels operating under one of the two monitoring options at 679.100 and pot CPs fishing groundfish CDQ
- Limited opportunities for new observers employed by 4 of the 5 observer providers to gain required sampling experience  of 30 sampled sets on fixed gear vessel
- Voluntary deployment of 2nd observers to supplement the current pool of available observers

(Section 2.1 pg 25)

# Alt. 1 – Observer Health and Safety & Data Quality

- Difficult and stressful assignment but manageable for experienced observers
- NMFS recommends reviewing sampling expectations to possibly reduce workload (Sec. 1.8, pg 22)
- Monitoring requirements were designed to produce high quality data
- Observer input on workload, sampling, and coverage requirements (Appendix E)

(Section 4.1.1 pg 49 & Appendix E)

# Alternative 1 - Observer Availability

Table 11 Total Number of distinct qualified observers and newly qualified observers who attained each endorsement type as of the December 31 of each year 2012 to 2016.

| | Total Qualified (Eligible pool) | | | | Newly Qualified (Annual Growth) | | | |
|---|---|---|---|---|---|---|---|---|
| Year | Certified | Level 2 | Trawl LL2 | Nontrawl LL2 | Certified | Level 2 | Trawl LL2 | Nontrawl LL2 |
| 2012 | 511 | 275 | 208 | 214 | 168 | 102 | 64 | 60 |
| 2013 | 501 | 285 | 224 | 216 | 116 | 101 | 75 | 55 |
| 2014 | 500 | 292 | 229 | 202 | 161 | 99 | 73 | 39 |
| 2015 | 532 | 321 | 241 | 215 | 144 | 119 | 77 | 60 |
| 2016 | 515 | 339 | 254 | 213 | 107 | 110 | 77 | 53 |

Table 12 Total number of distinct certified observers deployed and distinct observers deployed 2012 to 2016.

| | Distinct Observers Deployed | | |
|---|---|---|---|
| Year | Certified Observer | Trawl LL2 | Freezer Longline LL2 |
| 2012 | 409 | 128 | 129 |
| 2013 | 407 | 130 | 108 |
| 2014 | 433 | 141 | 113 |
| 2015 | 454 | 130 | 109 |
| 2016 | 458 | 139 | 105 |

Table 13 Number of distinct observer deployments in 2015 by vessel operation type and gear used.

| Vessel Type | Gear | Number of distinct observer deployments (Permit/cruise) |
|---|---|---|
| Catcher/Processor | Trawl | 192 |
| | H&L | 165 |
| | Pot | 26 |
| Catcher Vessel | Trawl | 602 |
| | H&L | 382 |
| | Pot | 141 |
| | Total | 1509 |

(Section 3.3.2, pg 43)

# Alternative 1 – Costs

- Observer Coverave$2.6M to $3.4M annually
  1.39% - 1.49% gross annual revenue 2013 to 2015 (Table 10, pg 38)
- Vessel delays reported in 2014 (Table 14, pg 46)
- Increased costs for observer providers
  (deployment incentives and subcontracting)
- Voluntary deployment of 2nd observers

Table 16, pg 48
Number of Freezer longline trips with a 2nd observer

| | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|
| Total Number of trips | 352 | 378 | 405 | 358 |
| Number of Observer Assignments (Count unique vessel/cruise ) | 176 | 194 | 221 | 187 |
| Number of trips with voluntary second observer | 0 | 16 | 15 | 10 |
| Number of vessels that voluntarily carried 2nd observer | 0 | 12 | 13 | 6 |
| Estimated cost of voluntary second observers (assumes 30 day trips at $371/day) | $0 | $178,080 | $166,950 | $111,300 |

(Section 3.2, Section 3.4, Section 4.1)

# Alternative 1 – Administrative Costs

Observer Program is responsible for:

- Training observers before deployment
- Inseason advising during deployment
- Debriefing observers after deployment
- Monitoring for compliance with requirements and & reporting

(Section 3.3.1, pg 40)

# Alternative 1 – Summary

| | Observer Requirement | Observer Health & Safety | Data Quality | LL2 Observer Availability | Cost to Industry | Administrative Cost |
|---|---|---|---|---|---|---|
| **Alternative 1** Status Quo |   | Stressful but manageable | High Quality | Limited | $110K -$180K Potential delays Obs. Provider costs | Normal Operations |

# Alternative 2 – LL2 Exception

Components

- Regulatory Administrative Approval Process for a vessel owner or operator to request and exception
- Three options for experience level of substitute observer (Trawl LL2, Level 2, Certified observer)
- Reactive approach to limit the potential cost of a shortage of LL2 observers
- Requirements for the nontrawl LL2 endorsement and observer procurement would remain same as status quo
- If a qualified observer is available from any of the 5 permitted observer providers, an exception would not be granted
- Most vessels would carry a LL2 observer, a less experienced observer would deploy if exception approved

(Section 2.2, pg 25)

# Alternative 2 - Implementation

- Implementation questions:
  - What information would be submitted to NMFS?
  - How would NMFS verify the information?
  - How long would this process take?
- The exact steps in the administrative process may impact how long NMFS review and determination might take.

(Section 4.2.1, pg 57)

# Alternative 2 – Observer Health and Safety

- If an exception were approved, a less experienced observer would be deployed.
- NMFS has identified potential health and safety concerns for observers with less than trawl LL2 endorsement.
- The negative impact on observer health and safety would be greater for less experienced observers because of the potential for a completely inexperienced observer to be incapacitated due to seasickness and the potential lack of experience for a Level 2 observers to deal with the demanding and stressful workload.

(Section 4.2.2, pg 59)

# Alternative 2 – Data Quality

- Impact depends on frequency an exception would be approved. Deployment of less experienced observers would have greater negative impact.

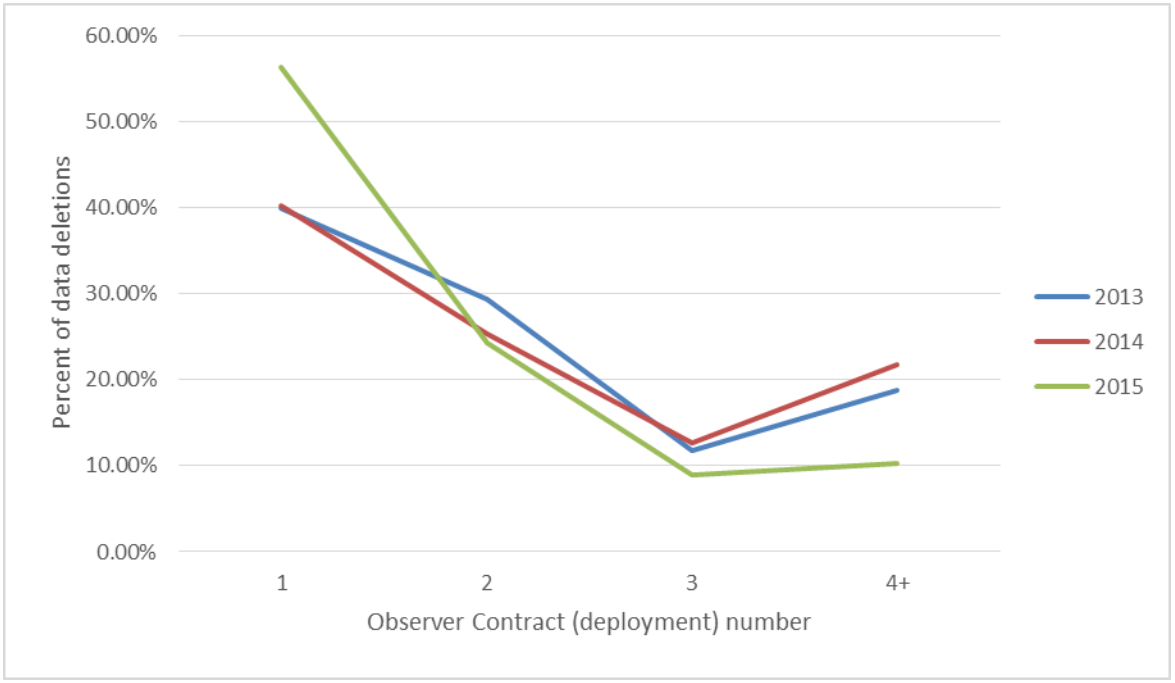



Figure 7, pg 52
Data deletions by observer contract number.

(Section 4.2.3, pg 59)

# Alternative 2 – Observer Availability

- Same as status quo
- New pathway for observers deployed as the substitute observer to gain nontrawl LL2 endorsement.

Table 11 , pg 43

| | Total Qualified (Eligible pool) | | | | Newly Qualified (Annual Growth) | | | |
|---|---|---|---|---|---|---|---|---|
| Year | Opt 2.3 Certified | Opt 2.2 Level 2 | Opt 2.1 Trawl LL2 | Nontrawl LL2 | Opt 2.3 Certified | Opt 2.2 Level 2 | Opt 2.1 Trawl LL2 | Nontrawl LL2 |
| 2012 | 511 | 275 | 208 | 214 | 168 | 102 | 64 | 60 |
| 2013 | 501 | 285 | 224 | 216 | 116 | 101 | 75 | 55 |
| 2014 | 500 | 292 | 229 | 202 | 161 | 99 | 73 | 39 |
| 2015 | 532 | 321 | 241 | 215 | 144 | 119 | 77 | 60 |
| 2016 | 515 | 339 | 254 | 213 | 107 | 110 | 77 | 53 |

(Section 4.2.4, pg 60 )

# Alternative 2 – Costs

| Vessels | Observer Providers |
|---|---|
| • Submit a request with supporting information to NMFS<br>• Potentially reduce vessel delays if fast and efficient process<br>• Would be required to utilize any available LL2 observer regardless of cost. | • Assist NMFS to verify observer availability (periodically or as needed?)<br>• Potential increase in flexibility to deploy less experienced observers if exception approved |

| Administrative Costs |
|---|
| • Ongoing administrative workload to review requests for an exception<br>• Could require short turn-around to be efficient and reduce potential costs to industry<br>• Could be complicated and burdensome for NMFS to determine if an observer is available. |

(Section 4.2.5 -7, pg 60-61)

# Alternative 2 - Summary

| | Observer Requirement | Observer Health & Safety | Data Quality | LL2 Observer Availability | Cost to Industry | Administrative Cost |
|---|---|---|---|---|---|---|
| **Alternative 1** Status Quo | LL2 | Stressful but manageable | High Quality | Limited | $110K -$180K Potential delays Obs. Provider costs | Normal Operations |
| **Alternative 2** LL2 Exception | **If no LL2 available, then:** 2.1 LL2 (Trawl) | ↓ | ↓ | = | ↓ | ↑ |
| | 2.2 L2 | ↓ | ↓ | | | |
| | 2.3 | ↓ | ↓ | | | |

Blue: positive impact (benefit)

Orange: negative impact (cost)

(Section 4.6, pg 70, Table 17)

# Alternative 3.1 – 1 LL2 or 2 observers

Components

- Create an observer coverage option for freezer longline vessels selecting the scales option
- Two suboptions for the experience level of the two observers
  - 3.1.1 – Two level 2 Observers
  - 3.1.2 – One level 2 observer and one certified observer
- LL2 experience requirements same as status quo
- Most vessels would carry a LL2 observer unless none are available

(Section 2.3, pg 26)

# Alt. 3.1 – Observer Health and Safety, & Data Quality

- Option 3.1.1 - the impact of deploying two less experienced observers (level 2) on health and safety and data quality would be balanced by having two observers each with a scheduled shift.

- Option 3.1.2 – the negative impact could be larger because of the potential for an inexperienced certified observer to be incapacitated due to seasickness and the higher likelihood of data deletion. (Figure 7)

(Section 4.3.1.2 & Section 4.3.1.3, pg 62)

# Alternative 3.1 – Observer Availability

- New pathway to LL2 endorsement: Two Level 2's

Table 11, pg 42

| | Total Qualified (Eligible pool) | | | | Newly Qualified (Annual Growth) | | | |
|---|---|---|---|---|---|---|---|---|
| Year | Opt 3.1.2 Certified | Opt 3.1.1 Level 2 | Trawl LL2 | Nontrawl LL2 | Opt 3.1.2 Certified | Opt 3.1.1 Level 2 | Trawl LL2 | Nontrawl LL2 |
| 2012 | 511 | 275 | 208 | 214 | 168 | 102 | 64 | 60 |
| 2013 | 501 | 285 | 224 | 216 | 116 | 101 | 75 | 55 |
| 2014 | 500 | 292 | 229 | 202 | 161 | 99 | 73 | 39 |
| 2015 | 532 | 321 | 241 | 215 | 144 | 119 | 77 | 60 |
| 2016 | 515 | 339 | 254 | 213 | 107 | 110 | 77 | 53 |

(Section 4.3.1.4, pg 63)

# Alternative 3.1 – Costs

| Vessels | Observer Providers |
|---|---|
| • Reduce costs of second observers from proactive calculation to as needed basis<br>• Reduce the potential for delays due to increased pool of Level 2 observers if LL2 is not available | • Increased deployment flexibility<br>• Reduce the need to subcontract by increasing opportunity to deploy two Level 2 observers instead of nontrawl LL2 |

**Administrative costs would remain the same as status quo.**

(Section 4.3.1.5 – 4.3.1.7, pg 63)

# Alternative 3.2 – Modify LL2 Endorsement

Components

- Observer coverage requirement for vessels would be status quo (LL2 observer)
- Modify the LL2 experience requirements to allow sampling experience on trawl CPs to count
- Observer training requirement for nontrawl LL2 endorsement
- Pre-cruise meeting requirement for Freezer Longliners and Pot CPs groundfish CDQ fishing

(Section 2.3, pg 27 & Section 4.3.2.1, pg 64)

# Alt. 3.2 – Observer Health and Safety, & Data Quality

- Minimal impact to observer health and safety and data quality
  - Sole observers deployed would continue to be experienced
  - New training requirement would ensure observers without prior experience on a freezer longliner would be adequately prepared
  - Pre-cruise meeting requirement could allow sampling questions or challenges to be dealt with prior to departure

(Section 4.3.2.2, pg 64 & 65)

# Alternative 3.2 – Observer Availability

- New pathway to LL2 endorsement: Trawl CPs

Table 11, pg 42

| | Total Qualified (Eligible pool) | | | | Newly Qualified (Annual Growth) | | | |
|---|---|---|---|---|---|---|---|---|
| Year | Certified | Level 2 | Trawl LL2 | Nontrawl LL2 | Certified | Level 2 | Trawl LL2 | Nontrawl LL2 |
| 2012 | 511 | 275 | 208 | 214 | 168 | 102 | 64 | 60 |
| 2013 | 501 | 285 | 224 | 216 | 116 | 101 | 75 | 55 |
| 2014 | 500 | 292 | 229 | 202 | 161 | 99 | 73 | 39 |
| 2015 | 532 | 321 | 241 | 215 | 144 | 119 | 77 | 60 |
| 2016 | 515 | 339 | 254 | 213 | 107 | 110 | 77 | 53 |

(Section 4.3.2.3, pg 65)

# Alternative 3.2 - Costs

| Vessels | Observer Providers |
|---|---|
| • Pre-cruise meeting if notified by NMFS<br>• Reduce costs due to voluntary second observers<br>• Reduce the potential for delays due to observer availability | • New observer training requirement<br>• Increased deployment flexibility<br>• Reduce the need to subcontract by increasing opportunities for observers employed by all observer provider to gain experience toward nontrawl LL2 endorsement |

**Administrative costs would increase for observer training and Observer Program participation in pre-cruise meetings.**

(Section 4.3, pg 63-66)

# Alternative 3 - Summary

| | Observer Requirement | Observer Health & Safety | Data Quality | LL2 Observer Availability | Cost to Industry | Administrative Cost |
|---|---|---|---|---|---|---|
| **Alternative 1** Status Quo |  | Stressful but manageable | High Quality | Limited | $110K -$180K Potential delays Obs. Provider costs | Normal Operations |
| **Alternative 3.1** Two Observers |  **OR:** 3.1.1  3.1.2  | = | = | = | ↓ | = |
| | | ↓ | ↓ | | | |
| **Alternative 3.2** Modify LL2 Experience Requirements |  | = | = | ↑ | ↓ | ↑ |

Blue: positive impact (benefit)

Orange: negative impact (cost)

(Section 4.6, pg 70, Table 17)

# Alternative 4 – Agency funding

- LL2 experience requirements same as status quo

Option 4.1: NMFS-funded deployment of second observers through a contract with observer providers to deploy second observers

Option 4.2: NMFS-funded at-sea training program through a contract with a vessel to deploy observers and staff on training trips

(Section 2.4, pg 27)

# Alternative 4 – Impacts

- Status quo for all impact categories except cost
- Could shift the cost of supplementing the qualified pool of LL2 observers from industry to NMFS if Federal funding source were to be available
- Administratively burdensome to NMFS

| | Observer Requirement | Observer Health & Safety | Data Quality | LL2 Observer Availability | Cost to Industry | Administrative Cost |
|---|---|---|---|---|---|---|
| **Alternative 1** Status Quo |  | Stressful but manageable | High Quality | Limited | $110K -$180K Potential delays Obs. Provider costs | Normal Operations |
| **Alternative 4** NMFS Funding |  | = | = | = | ↓ | ↑ |

Blue: positive impact (benefit)

Orange: negative impact (cost)

(Section 4.4, pg 67)

# Summary of Alternatives and Impacts

| | Observer Requirement | Observer Health & Safety | Data Quality | LL2 Observer Availability | Cost to Industry | Administrative Cost |
|---|---|---|---|---|---|---|
| **Alternative 1** Status Quo | LL2 | Stressful but manageable | High Quality | Limited | $110K -$180K Potential delays Obs. Provider costs | Normal Operations |
| **Alternative 2** LL2 Exception | **If no LL2 available, then:** 2.1 LL2 (Trawl) | ↓ | ↓ | = | ↓ | ↑ |
| | 2.2 L2 | ↓ | ↓ | | | |
| | 2.3 | ↓ | ↓ | | | |
| **Alternative 3.1** Two Observers | LL2 **OR:** 3.1.1 L2 L2 | = | = | = | ↓ | = |
| | 3.1.2 L2 | ↓ | ↓ | | | |
| **Alternative 3.2** Modify LL2 Experience Requirements | LL2 | = | = | ↑ | ↓ | ↑ |
| **Alternative 4** NMFS Funding | LL2 | = | = | = | ↓ | ↑ |

Blue: positive impact (benefit)

Orange: negative impact (cost)

(Section 4.6, pg 70, Table 17)

# NMFS Recommendations

- Revise the purpose and need statement to include pot CPs and to reflect AIS as a full coverage observer provider. (Section 1.1)
- NMFS recommends the Council consider the addition of option 3.2, and the two implementation options under Alternative 4. (Section 2)
- NMFS does not recommend further consideration of Option 2.2 or Option 2.3 under Alternative 2. (Section 4.2)
- NMFS does not recommend further analysis of Alternative 4 given existing funding and budget limitations. (Section 4.4)

(Executive Summary, pg 11)

# Thank you

## Contributors and Persons Consulted

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