Goals

Financially stable observer program
stable sample size
January 2017-June 2019

Assumptions

List of Voluntary EM vessels
Voluntary 100% BSAI vessels
Budgets stable with no Federal Funds
1.25% fee totaling $3.9 M
Changes from Last Year

Cost is now included in optimization
Precision and bias not evaluated
Hurdle model approach not used
Gaps based on NMFS Area + Gear, not Target, BS Areas not combined
G scores more straightforward

Four stratification schemes:
Gear (status quo)
Gear + partial CP HAL
Gear x Tender
Gear x Tender + partial CP HAL
Calculate optimal weighting for retained and discarded catch (second term, equation 1)

2014 & 2015 Trip data

Calculate n for 2017 (equation 2)

Calculate n for each strata based on retained and discarded catch in 2017 (equation 1)

Calculate n for each strata based on compromise allocation (equation 3)

\[ n = \frac{(C - C_T) \sum_{h=1}^{H} \left( \frac{N_h S_h}{\sqrt{c_h}} \right)}{\sum_{h=1}^{H} \left( \frac{N_h S_h \sqrt{c_h}}{c_h} \right)} \]

\[ n_h = n \times W_{hop} \]

2015 Trip data

Gap analysis

\[ n_h = \frac{n}{N_h} \]

\[ m_h = n \times \bar{n}_{hop}, \quad \text{where } \bar{n}_h = \frac{\sum_{l=1}^{L} n_{lh}}{L} \]
NMFS Recommends

Gear x Tender (6) stratification scheme with discard optimal allocation

Preliminary Coverage Rates* % ($N_h$):

- Hook & Line **11.1** (2790) [2016: 15%]
- Pot **3.4** (979) [2016: 15%]
- Trawl **17.6** (2370) [2016: 28%]
- Hook and Line Tender **27** (30)
- Pot Tender **5.9** (183)
- Trawl Tender **14.5** (168)

* Rates have been multiplied by 0.9 to account for potential uncertainty in final ADP
**Conclusions**

Observer Program is employing optimized allocation while balancing its ability to fill gaps for in-season management of quotas and focusing on core role of at-sea deployment (discards).

No Federal Funding + 1.25% fee  
= 3,505 days expected in 2017

2013: 3,533  
2014: 4,573  
2015: 5,318  
2016: 4,900 (estimated 2016 ADP)

2017 ADP days 30.7 % below the 2013-2016 average (4,581)

3,505 -> 4,581 would require fee change 1.25 -> 1.63 %, or $1.165M (1076 d x $1,083 d)*

Observer deployment in 2017 and beyond is likely to be spatially and temporally biased and miss some strata entirely (Pot Tender, Hook and Line Tender).

* 2015 Annual Report
Next Steps (Final ADP)

With Final EM and Voluntary 100% BSAI vessel lists:

Adjust anticipated fishing effort if warranted given trends seen in fishery Jan-Oct of each year (incl. 2016)

Simulate sampling of ‘2017’ fishery given optimal weightings for each stratum from this draft ADP,

iterate with increasing sample size,

stop when proportion of outcomes over:under budget reaches 0.50.

Present results as 2017 Final ADP and program resulting selection rates into ODDS.
A Proposal

Move ADP from an every year process to a “on year- off year” schedule.

Every other year NMFS will evaluate potential deployment designs including stratification schemes, allocation strategies, and resulting deployment rates that will be reviewed by the Council’s Plan Teams, Observer Advisory Committee, Advisory Panel, and Council (the “on-year” process).

The following year, only adjustments to the rates will be evaluated by NMFS and reported to the Council (the “off-year” process).