NOAA FISHERIES

North Pacific Observer Program
Draft Annual Deployment Plan
2017

Presented by
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Annual Deployment Plan Schedule

- June 2016 Council Meeting -- Annual Report review of 2015
- Sept 2016 OAC Meeting – Draft 2017 Annual Deployment Plan
- October 2016 Council Meeting – Draft 2017 Annual Deployment Plan
- December 2016 Council Meeting – Final 2017 Annual Deployment Plan

2015 Annual Report Recommendations

- The Annual Report recommended, and the Council supported, using trip-selection to assign observers to vessels in 2017.
- The Council recommended maintaining 3 sampling strata defined by gear in 2017, and continue to use optimal allocation to evaluate deployment rates.
- The Annual Report recommended, and Council supported, evaluating two additional strata for the 2017 ADP.
    1) Vessels delivering to tenders
    2) Partial coverage catcher-processors

2017 Goals and Assumptions

- Based on a financially stable observer program
  Stable sample size
  January 2017-2019
- List of Voluntary EM vessels
  Voluntary 100% BSAI vessels
  Budgets stable with no Federal funds
  1.25% fee totaling $3.9M
- No Federal Funding = 3,505 days expected in 2017

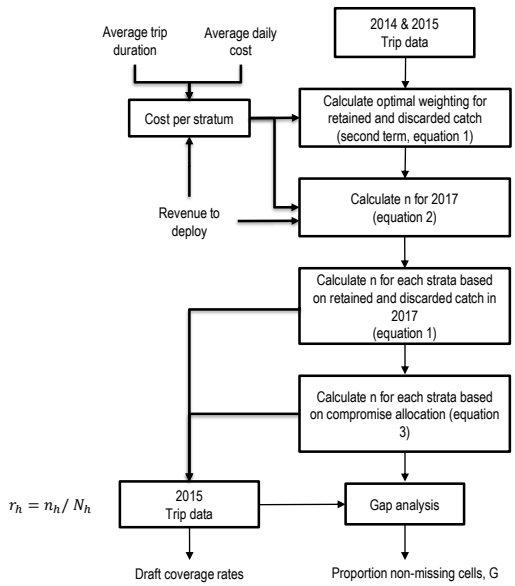
Approach

Deployment design involves two elements – stratification and allocation

- Stratification - How the population of partial coverage trips is subdivided
- Four stratification schemes and three allocation schemes were analyzed:
  1. Gear (status quo) – 3 strata
  2. Gear + partial coverage catcher-processors – 4 strata
  3. Gear x Tender – 6 strata
  4. Gear x Tender + partial coverage catcher-processors – 7 strata

Approach

- Allocation - What proportion of the total observer deployments occur within these subdivisions
- Optimal allocation is that which achieves the most precision with the lowest cost
- Three allocation schemes were analyzed:
  1) Retained
  2) Discarded
  3) Compromise (retained + discarded)



$$where\ W_{hopt} = \frac{N_h S_h / \sqrt{c_h}}{\sum_{h=1}^{H}\left(N_h S_h / \sqrt{c_h}\right)}$$

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

$$n_h = n * W_{hopt}$$

$$m_h = \bar{n}_{h\,opt},\ \text{where}\ \bar{n}_h = \frac{\sum_{l=1}^{L} n_{lh}}{L}$$

$$r_h = n_h / N_h$$

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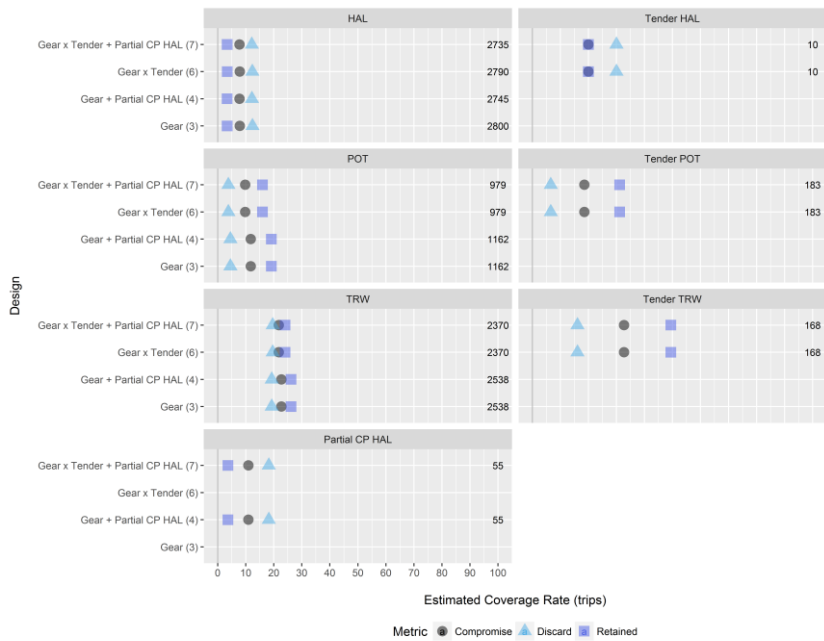

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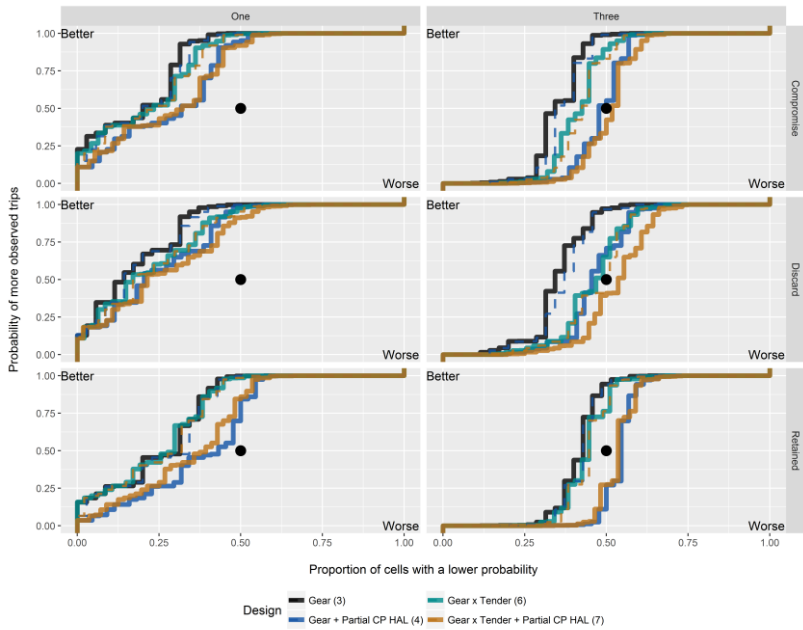

NMFS Recommendation

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

Preliminary deployment rates for 2017:

- 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)

Conditional Release Policy

- For 2017 NMFS recommends not granting any conditional releases or temporary exemptions to any vessels subject to observer coverage.

  ***No selection Pool*:** The "no selection" pool is comprised of vessels that will have no probability of carrying an observer on any trips for the 2017 fishing season. These vessels are broken into two categories:

  - Catcher vessels less than 40 ft LOA, or vessels fishing with jig gear, which includes handline, jig, troll, and dinglebar troll gear.
  - *EM Selection pool*: Fixed gear vessels that have opted-in and will participate in the 2017 EM cooperative research described in the EM Pre-Implementation plan.

Observer Declare and Deploy System

- Logging trips in ODDS
  - 3 trips can be logged into ODDS
  - Observed trips that are cancelled will automatically be selected for observer coverage on the next logged trip
  - ODDS programming prevents small vessels from being selected for a third consecutive trip.

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).

2013: 3,533
2014: 4,573
2015: 5,318
2016: 4,900 (estimated 2016 ADP)
2017: 3,505 (30.7 % below the 2013-2016 average of 4,581)

3,505 -> 4,581 would require
fee change 1.25 -> 1.63 %, or
$1.165M (1,076 d x $1,083 d)

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,

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).

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