New England Fishery Management Council
50 WATER STREET | NEWBURYPORT, MASSACHUSETTS 01950 | PHONE 978 465 0492 | FAX 978 465 3116
E.F. "Terry" Stockwell, Chairman | Thomas A. Nies, *Executive Director*

DRAFT MEMORANDUM v1

DATE: April 5, 2016

TO: Groundfish Committee

FROM: Groundfish Plan Development Team (PDT)

SUBJECT: **Groundfish Monitoring Program**

The Groundfish Plan Development Team (PDT) met on March 30, 2016 in Falmouth, MA at the Northeast Fisheries Science Center Fisheries Sampling Branch. The following summarizes the PDT discussion. *The PDT plans to update this memo in time for the April Council meeting later this month in version 2 of this memo.*

January 2016 Council Motion

On January 27, 2016, the Council unanimously approved a problem statement for an action on the groundfish monitoring program and tasked the PDT with analysis for consideration by the Council at its April meeting.

> *Problem statement:*
> *When Industry-Funded ASM requirements were established in Amendment 16, the expectation was that increased catch limits – as a result of rebuilding – would enable the industry to afford the cost of monitoring. Since 2010, ACLs for many stocks have declined sharply, along with groundfish revenues, and the size of the fleet. The affordability of the ASM program for groundfish sectors is in question. The current configuration of the ASM program may lead to significant economic impacts (i.e., economic losses) to the groundfish fishery and negative social impacts (i.e., those that reduce resiliency and increase vulnerabilities of fishing communities).*
>
> *Therefore, the Council requests analysis of the following by the PDT prior to the April Council meeting to assess whether:*
> *(1) The CV requirements and methodologies are the most appropriate to verify area fished, catch and discards by species and gear type for the sector system.*
> *(2) ASM provides the sector fishery, recognizing heterogeneity within the fleet (e.g., trip length, homeport, etc.), the maximum flexibility to meet ASM goals and objectives.*
>
> Motion carried 17/0/0.

DRAFT

PDT Discussion: Council motion

The PDT discussed items (1) and (2).

(1) The CV requirements and methodologies are the most appropriate to verify area fished, catch and discards by species and gear type for the sector system.

The PDT expanded its discussion beyond CV requirements and methodologies. The PDT discussed the current groundfish monitoring system with respect to the ability to verify area fished, catch and discards by species and gear type for the sector system. The PDT recognizes that while ASM monitoring requirements focus on the precision of discard estimates, overall catch estimation is the monitoring goal.

Verify area fished

- Information on area fished is provided by industry through VTRs.
- Starting in FY 2015, NMFS required VMS catch reports.
- NEFOP, ASM and VMS information could be used to verify area fished.

Verify landings by species and gear type

- Information on landings by species is provided through dealer reports.
- Information on gear type is provided by industry through VTRs (dealers record the VTR number).
- NEFOP, ASM, EM and portside monitoring could be used to verify landings by species and gear type.

Verify discards by species and gear type

- NEFOP and ASM data is used to verify discards by species and gear type.
- EM could be used to verify discards by species and gear type.

(2) ASM provides the sector fishery, recognizing heterogeneity within the fleet (e.g., trip length, homeport, etc.), the maximum flexibility to meet ASM goals and objectives.

The PDT discussed (2) with respect to landings accuracy, discard precision, and discard accuracy. The PDT also brainstormed ideas and analysis to develop to investigate item (2) in more detail.

Landings accuracy

- Landings accuracy is particularly important for the ACE trading market, accounting for highly constraining stocks, and stock assessments.
- Increase ASM coverage and the usage for species composition information.
- Develop a portside sampling program.
    - Some considerations:
        - Do 100% of trips need to be sampled?
        - If not, what rate of portside sampling coverage is needed?
        - Examine issues, concerns, and data from the 2010 dockside monitoring program.

DRAFT

Discard precision

- Optimizing stratification by trip length/home port or adding/removing other strata.
- Examine how to preferentially target stocks for monitoring coverage to improve discard estimation.
- Discard methodology review by GARFO/NEFSC later this year will examine the cumulative approach.

Discard accuracy

- Improved retention of catch (maximized or full retention with portside samplers).
- Using EM as a tool within the overall monitoring program (e.g., catch composition or compliance).
- Revisit analytical work done during the development of FW48.

PDT Discussion: draft objectives for consideration

Following the discussion of the Council's motion, the PDT developed draft objectives for consideration by the Committee and potential tasking for the PDT to address the various objectives.

Draft objectives for Sector Catch Monitoring and Accounting (tasking in italics):

- Verify up to 100% of the landings to confirm accurate data for removals to ensure fairness and equity for all fishery participants
    - *Evaluate the effectiveness of portside sampling, EM, and other strategies*
- Improve the cost effectiveness of discard monitoring
    - *Evaluate establishing monitoring rates based on a pre-determined risk tolerance for discards by stock*
- Account for bias in discard estimation
    - *Evaluate and build on prior work by the PDT and Center on discard accuracy*

Recent publications on groundfish fishery monitoring

The PDT also discussed two recent journal publications on groundfish monitoring. Authors, Gina Shields and Dr. Jenny Sun presented an overview of their papers, respectively. In general, the discussions with the authors helped to inform the PDT's discussion on groundfish monitoring. Additional details on the discussion will be provided in version 2 of this memo.

Publications discussed:

Palmer, M. C., P. Hersey, H. Marotta, G.R. Shield, and S. B. Cierpich. 2016. The design and performance of an automated observer deployment system for the Northeastern United States groundfish fishery. *Fisheries Research* 179: 33-46.

Sun, C.-H. J. and L. Fine. 2016. A cost-effective discards-proportional at-sea monitoring allocation scheme for the groundfish fishery in New England. Marine Policy 66: 75-82.

DRAFT