Scallop Report

Jonathon Peros

Scallop Report
September 29, 2021
Webinar
Today’s Meeting:

- Updates
- Framework 34 – Surveys and projections, management measures
- Progress report on Scallop Survey Working Group and Evaluation of Rotational Management

- No action required today.
**Update on Petition for Rulemaking Process: Scallopers Campaign Request for LA Leasing**

Key Issue: DOC/NMFS has been asked to prepare an amendment to the Scallop FMP on LA leasing outside of the Council process.

Process so far:
- Request to the Secretary of Commerce on January 15, 2021
- NMFS letter to the Council on March 10, 2021
- Council reply to NMFS on July 19, 2021 (see correspondence)
- Scallopers Campaign letter to NMFS on July 29, 2021
  - Ask the agency to delay response to the Campaign’s petition until after the Council’s vote on 2022 scallop work priorities in December.

Next Steps:
- NMFS response to Campaign’s petition (TBD – likely after December 2021)

Two work items from last year’s discussion that are currently on the list of possible priorities for next year.
Predict that the scallop fishery will be subject to accountability measure (AM) in FY2022
Estimated catch exceeded 150% of sub-ACL in FY2020. (34.8 mt; sub-ACL ~12mt).

AM is a Year-round Gear Restricted Area (GRA)

Gear
5 row apron
Max 1.5:1 hanging ratio
Must use the gear inside the area shown in red (CAII and CAII-EXT)
Amendment 21

Timeline

- Final submission of Amendment 21 to NMFS on August 13, 2021.
- NMFS published a notice of availability on September 8, 2021.
- Comment must be received on or before November 8, 2021.
- A final decision expected before the Council takes final action on Framework 34. Decision date is December 3, 2021.
- Expect that NMFS will implement Amendment 21 concurrently with Framework 34 (April 1, 2022, start of FY2022).

Outlook

- FW34 is the vehicle to implement measures proposed in A21.
  - NGOM measures.
  - LAGC IFQ AA possession limits.
- Developing action as if all measures will be approved.
  - NMFS has not raised any red flags about Council’s preferred alternatives.
## A21 - LAGC IFQ and Other Measures

<table>
<thead>
<tr>
<th>ACTION</th>
<th>FINAL PREFERRED ALTERNATIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase LAGC IFQ Possession Limit (Section 4.7 of EA)</td>
<td>Increase LAGC IFQ possession limits to 800 pounds for access areas and maintain the 600 pound possession limit for open area trips</td>
</tr>
<tr>
<td>Increase Observer Compensation for LAGC IFQ Vessels (Section 4.8 of EA)</td>
<td>Allow LAGC IFQ vessels to be eligible for additional compensation when carrying an observer on fishing trips longer than one day; daily compensation rate would be prorated at 12-hour increments for trips exceeding 24 hours up to 48 hours</td>
</tr>
<tr>
<td>One-Way Transfer of Quota from LA with IFQ to LAGC IFQ-Only (Section 4.9 of EA)</td>
<td>Allow temporary one-way transfers of quota from LA with IFQ to LAGC IFQ-only with no change to the pool of quota LAGC IFQ accumulation caps apply to (5% of APL)</td>
</tr>
<tr>
<td>Specifications and Framework Adjustment Process (Section 4.10 of EA)</td>
<td>The Council voted to support Alternative 2, which adds details about what kinds of changes could be made to the management of the NGOM and monitoring in future FW actions.</td>
</tr>
</tbody>
</table>
**A21 - Northern Gulf of Maine Measures**

<table>
<thead>
<tr>
<th>ACTION</th>
<th>FINAL PREFERRED ALTERNATIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NGOM Catch Limits</strong> <em>(Section 4.1 of EA)</em></td>
<td>Account for the scallop biomass in the NGOM as part of the legal limits in the fishery by adding biomass from the area into calculations of the overfishing limit (OFL) and acceptable biological catch (ABC), i.e., included in the “ABC flowchart”</td>
</tr>
<tr>
<td><strong>NGOM Total Allowable Landings (Allocations)</strong> <em>(Section 4.2 of EA)</em></td>
<td>Create a NGOM Set-Aside and a NGOM Set-Aside trigger of 800,000 pounds. When the NGOM TAL is over 800,000 pounds, pounds above the trigger would be shared with 5% for the NGOM Set-Aside and 95% for the NGOM APL (for the LA and LAGC IFQ).</td>
</tr>
<tr>
<td><strong>Monitoring Directed Scallop Fishing in the NGOM</strong> <em>(Section 4.3 of EA)</em></td>
<td>Expand the IFO program to include LAGC NGOM vessels, increase scallop observer set-aside with scallops from the NGOM; require call-in for all vessels fishing in the NGOM</td>
</tr>
<tr>
<td><strong>Support Scallop Research Using Scallops from the NGOM</strong> <em>(Section 4.4 of EA)</em></td>
<td>Allocate 25,000 pounds of the NGOM Allocation to increase the overall Scallop Research Set-Aside (RSA) to 1.275 million pounds and support RSA compensation fishing</td>
</tr>
<tr>
<td><strong>NGOM Fishing Season</strong> <em>(Section 4.5 of EA)</em></td>
<td>No Action. Maintains current measures for the number of landing days and sailings per day vessels are allowed in the NGOM, as well as maintaining a year-round opening of the NGOM management area unless an allocation is reached</td>
</tr>
<tr>
<td><strong>Cumulative Maximum Dredge Width Fished in the NGOM</strong> <em>(Section 4.6 of EA)</em></td>
<td>No Action. Maintains the provisions in the current Gulf of Maine dredge exemption program with no additional restrictions on maximum dredge width</td>
</tr>
</tbody>
</table>
2021 Surveys – GB and Mid-Atlantic

RSA survey coverage
2021 Surveys – Gulf of Maine
FW33 Estimate:
1,799 pounds per day

As of Sept 15, 2021:
FY2021
Open Area Fishing:
• 12,734,905 lbs
• 5,704 DAS used
• LPUE: 2,233

Figure 8: LPUE by month for Open Area Limited Access fishing. LPUE was calculated by dividing monthly scallop meat total landings by the days-at-sea charged.
Estimates of Biomass and Exploitable Biomass

Recent landings and Projections

<table>
<thead>
<tr>
<th>FY</th>
<th>Total Landings (lbs)</th>
<th>Projected Landings (lbs) from FW</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>58,461,465</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>57,098,684</td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>39,807,589</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>32,020,980</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>36,974,195</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>42,423,177</td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>51,325,269</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>58,100,342</td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td>60,453,876</td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td>47,524,175</td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td>~39 million lbs</td>
<td></td>
</tr>
</tbody>
</table>

Source: year-end catch reports, updated August 3, 2021.
2022 Projections – Exploitable Biomass by SAMS area

Landings for each area at F=0.45

<table>
<thead>
<tr>
<th>Habitat/Closure</th>
<th>Exploitable Biomass (millions lbs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAII Ext</td>
<td>9.8</td>
</tr>
<tr>
<td>CAII SW</td>
<td>5.7</td>
</tr>
<tr>
<td>CAII SE</td>
<td>3.0</td>
</tr>
<tr>
<td>CAII N</td>
<td>2.4</td>
</tr>
<tr>
<td>CAII Middle</td>
<td>0.5</td>
</tr>
<tr>
<td>CAII Silver</td>
<td>0.5</td>
</tr>
<tr>
<td>NLS-S</td>
<td>6.9</td>
</tr>
<tr>
<td>NLS-N</td>
<td>0.7</td>
</tr>
<tr>
<td>NLS-W</td>
<td>0.1</td>
</tr>
<tr>
<td>SF</td>
<td>5.8</td>
</tr>
<tr>
<td>GSC</td>
<td>4.0</td>
</tr>
<tr>
<td>NF</td>
<td>1.4</td>
</tr>
<tr>
<td>LI</td>
<td>6.3</td>
</tr>
<tr>
<td>NYB</td>
<td>3.5</td>
</tr>
<tr>
<td>Inshore</td>
<td>0.9</td>
</tr>
<tr>
<td>DMV</td>
<td>0.1</td>
</tr>
<tr>
<td>VIR</td>
<td>0.0</td>
</tr>
<tr>
<td>HCS</td>
<td>1.0</td>
</tr>
<tr>
<td>ETop</td>
<td>0.6</td>
</tr>
<tr>
<td>EFflex</td>
<td>0.3</td>
</tr>
</tbody>
</table>

ACL = Landings at F=0.45

<table>
<thead>
<tr>
<th></th>
<th>GB</th>
<th>MA</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>GB</td>
<td>40,895,750</td>
<td>12,692,012</td>
<td>53,587,762</td>
</tr>
</tbody>
</table>

Open area landings at F=0.45 is ~22 mil. lbs

Tasking for F=0.3, 0.36, 24 DAS
Committee Tasking for FW34 Specifications

NYB Closure Area

CAII Access Area Options: ~9-10mil lbs.

CAI Options: LAGC AA trips/RSA or Open Bottom

NLS-South Access Area Options: ~5-6mil lbs.

Legend
- Scallop Rotational Area
- Potential Rotational Closure (FW34)
- SAMS Area
- NGOM Management Area
- Groundfish Closure Areas
- Habitat Management Areas

Date: 9/24/2021
Mid-Atlantic Access Area

- 2021 Survey Data – Length frequencies
- PDT Input for 2022:
  - Blips of pre-recruits, but no signs of strong incoming YC.
  - Twilight of the exceptional 2013 YC in ET and HCS.
  - Biomass is down substantially.
  - Remaining scallops are 9 years old, limited growth potential. ~120mm in average size.
  - Consider open bottom for FY2022, not enough biomass for access area fishing.
  - Limited fishing in this area.

<table>
<thead>
<tr>
<th>Sub-Area</th>
<th>Projection of Exploitable Biomass 2022</th>
<th>Recruitment?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hudson Canyon</td>
<td>3 mil. Lbs (1,378 mt)</td>
<td>No</td>
</tr>
<tr>
<td>Elephant Trunk Flex</td>
<td>.73 mil. Lbs (331 mt)</td>
<td>No</td>
</tr>
<tr>
<td>Elephant Trunk Open</td>
<td>1.6 mil. Lbs (747 mt)</td>
<td>No</td>
</tr>
</tbody>
</table>

Outlook for 2022

F=0.45 is expected to result in 1.9 mil lbs of landings.
Meat Quality

Nematode Prevalence 2015-2021

Shell Disease

condition code 1  condition code 4

Percentage of Scallops with Shell Blisters Disease

2019  2020  2021

Latitude  Longitude

Survey Domain Access Area
Shell Disease Percentage

0  100

36  38  40  42
Mid-Atlantic Research
Dr. Dvora Hart and Dr. Han Chang

- Increases in recruitment were observed down current of the HCS after this area was closed. Models support connectivity from HCS to ET.
- Scallop habitat has declined in the Mid-Atlantic (in general), and will continue to decline with warmer temperatures.

Recent Surveys
- Order of magnitude decline of biomass in DMV.
- VIR and DMV no longer rotational areas.
New York Bight – Possible Closure

- Multiple cohorts in the NYB, opportunity to improve yield-per-recruit with a closure.
- Research suggests that a closure could increase the odds of downstream recruitment in the HCS and/or ET.
- AP recommended to pair this closure with larger closure in NLS-West region.
- Committee tasking to look at NYB closure (blue box in maps) and open bottom.
Nantucket Lightship

- Fishing continues to be on exceptional 2012 YC in NLS-South, holds highest densities
- 10 years old, slow growers in marginal habitat
- High densities of smaller scallops. Harvest has been on lower count scallops, price ↑

Density and Distribution map of NLS-S with insert of high-density seed area in northeast corner of track.
Nantucket Lightship

<table>
<thead>
<tr>
<th>Sub-Area</th>
<th>Projection of Exploitable Biomass 2022</th>
<th>Recruitment?</th>
<th>Average Size (2021 Dredge surveys)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NLS-North</td>
<td>2.1 mil. Lbs (977 mt)</td>
<td>No</td>
<td>Survey: 101mm Comm: 121mm</td>
</tr>
<tr>
<td>NLS-South</td>
<td>18 mil. Lbs (8,187 mt)</td>
<td>No</td>
<td>Survey: 92 mm Comm: 94 mm</td>
</tr>
<tr>
<td>NLS-West</td>
<td>493,835 lbs (224 mt)</td>
<td>YES</td>
<td>Survey: 24 mm Comm: 112 mm</td>
</tr>
</tbody>
</table>

Possible 2022 Allocations to NLS-South

F=0.45 is projected to result in ~6.9 million lbs

Only sign of large-scale recruitment in rotational areas.

4+ years from rotational fishing if the YC survives

SMAST Drop Camera Data for NLS-S-deep

<table>
<thead>
<tr>
<th>Year</th>
<th>Density per m²</th>
<th>Avg. Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>13.66</td>
<td>73mm</td>
</tr>
<tr>
<td>2018</td>
<td>6.85</td>
<td>76mm</td>
</tr>
<tr>
<td>2019</td>
<td>6.26</td>
<td>87mm</td>
</tr>
<tr>
<td>2020</td>
<td>3.69</td>
<td>93mm</td>
</tr>
<tr>
<td>2021</td>
<td>3.1</td>
<td>91mm</td>
</tr>
</tbody>
</table>
Nantucket Lightship West Recruitment

- Spat in the NLS-West. Some scallops are swimming, you can see shadows around them.
- PDT: Extend 2022 surveys to the south and west to assess full scale of recruitment event.
Several year classes in the region, mixed in some areas.

Highest biomass in the region.

Candidate areas to open, close.

CAII-SE pre-recruits
## Closed Area II Region

<table>
<thead>
<tr>
<th>Sub-Area</th>
<th>Projection of Exploitable Biomass 2022</th>
<th>Year Classes in the Area</th>
<th>Recruitment?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Closed Area II SE</td>
<td>8.3 Mil. Lbs. (3,776 mt)</td>
<td>2+ YCs</td>
<td>Yes</td>
</tr>
<tr>
<td>Closed Area II SW</td>
<td>15,639,593 Mil. Lbs. (7,094 mt)</td>
<td>One year class 5 years old, survey mean 103mm</td>
<td>No</td>
</tr>
<tr>
<td>Closed Area II Ext</td>
<td>26.3 Mil. Lbs. (11,945 mt)</td>
<td>2+</td>
<td>Yes</td>
</tr>
<tr>
<td>Closed Area II-N (HAPC)</td>
<td>7.4 Mil. Lbs. (3,378)</td>
<td>2+</td>
<td>Yes</td>
</tr>
</tbody>
</table>

---

### CAII-North Projection 2021 → 2022

- **CAII-North Projection**
- **NEFSC Dredge Tow in CAII-N**
Closed Area II Access Areas

- 2021 Survey Data & Projections
  - PDT Input
    - Keep CAII-SE closed protect recruitment and optimize yield (blue lines). Multiple YCs in this area.
    - Region with highest exploitable biomass.
  - CTE/AP/PDT discussion
    - Fishing in EXT and in SW
    - Projections show options for trips into each area individually (see motions), or as one larger combined area (like in FY2021)
Closed Area I

<table>
<thead>
<tr>
<th>Sub-Area</th>
<th>Projection of Exploitable Biomass Year Classes in the Area</th>
<th>Recruitment?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Closed Area I Sliver</td>
<td>1.47 Mil. Lbs. (666 mt)</td>
<td>2, Yes</td>
</tr>
<tr>
<td>Closed Area I Middle</td>
<td>1.28 Mil. Lbs. (580 mt)</td>
<td>No</td>
</tr>
</tbody>
</table>

Committee tasking: Options for CAI as open bottom, or as rotational area with LAGC IFQ AA and RSA fishing.
Stellwagen Bank - NGOM

- Majority of biomass in NGOM on Stellwagen Bank (north of 42 20’).
- Area will stay closed until changed by a future action (FW34).
- F=0.32 results in ~1mil pounds.
- Committee recommended using F rates (0.15, 0.18, 0.20) to set 2022 TAL for NGOM.

Figure 6. Scallop (> 75 mm) density from the 2021 SMAST Drop Camera survey.

Projection 2021 → 2022
Committee Tasking for FW34 Specifications

Open Areas
- Scenarios with:
  - CAI open bottom
  - CAI allocated CAII AA trips for LAGC IFQ and RSA comp fishing
  - MAAA open bottom
  - NYB closure for YPR, source/sink
  - PDT to develop boundaries for NYB and NLS-W closure areas
  - Suggest using one F rates across all runs (F=0.3), 24 DAS and F=0.36 on one of the runs. (7 model runs total)

Rotational Access Areas
- 18,000 lbs and 15,000 pounds trip limits; trading in 9k and 15k lb increments
- 2.5 or 3 total trips, all on Georges Bank
- 1 trip to NLS-South
- Several configurations for fishing in the CAII region
  - CAII SE open and closed, combined with CAII SW
  - CAII SW and EXT combined
  - CAII SW and EXT separate access areas
- Shifting LAGC IFQ share of CAII access area trips further inshore to CAI

AP & PDT discussed using seasonal closures to better match the timing of harvest and higher meat yields.
IFQ Access Area Trip Accounting

- Higher trip limit = fewer trips → concern that access area fishing is underutilized in LAGC component based on current accounting method

Trip allocation method:
- Allocated fleet-wide number of trips to access areas
- Total trips per area = available allocation in pounds divided by IFQ trip limit
- Vessels can choose to fish quota in AAs, or in open areas (not required to fish in AAs)
- When GARFO projects that total trips have been taken, area closes to entire LAGC IFQ component
- Anticipate AA trip limit to increase to 800 lbs (A21)
Progress to date

- Overview of FY2015-2020 fishery data at June/Sept 2021 meetings (see Doc.2d).

  **Key points:**
  - Majority of LAGC access area trips have been in 600-pound range.
  - Realized landings from LAGC access area trips are very close to potential landings when trip utilization is high (i.e., derby fishing).

- PDT input: **Stick with counting trips, not pounds**
  - Closure projections are more precise (i.e., no data lag in trip declarations, can track in real-time); Avoids need for AMs (i.e., payback measures).
  - Easier for industry to monitor access area utilization.

- Scallop Advisors and Committee recommended to not develop measures to change trip counting in FW34. (Stay with status quo).
  - **Tasking needed today if measures are to be included in FW34.**
Scallop Survey Working Group (SSWG)

- Scallop Survey Working Group (SSWG) Council website:
  - https://www.nefmc.org/committees/scallop-survey-working-group

- Purpose:
  - Facilitate collaboration around integrated approaches to conduct scallop surveys that support stock assessments and management
  - Explore mechanisms to implement approaches
SSWG

**Updates:**
- July 27, 2021 meeting by webinar:
  - Input gathered through a questionnaire and sub-groups was presented to full SSWG.
  - Spatial coverage, sampling intensity, and sampling frequency.
  - Data standardization, delivery, access and storage.
  - Impacts of offshore wind.

**Outlook:**
- Next SSWG meeting week of November 15 – 19, 2021 (TBD)
  - Continue to address ToRs, aiming to develop a set of guiding principals for coverage, intensity, and frequency.
  - Address data issues, RSA, and offshore wind.

**Updates on parallel projects in November**
- Updating scallop survey strata (TOR#2) (NEFSC contract)
- Offshore wind planning (TOR#3)
- Development of GeoSAMS projection model (TOR#4) (NEFSC contract)
Goals:
- Evaluate how the original management objectives (A10) of the rotational management program have been met; and
- Evaluate how the current version of rotational management that the Council is using meets expected outcomes.

Results are expected to inform the Council about performance, successes, and challenges of the rotational program.

The final report will identify recommendations and improvement opportunities for the Council to consider for future scallop management.

Project Objectives Overview

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Document the use of rotational management emphasizing the most recent period (2014 to 2021);</td>
</tr>
<tr>
<td>Assess the performance of the program relative to the primary objectives of Amendment 10 (Objectives 1, 4, and 7); consider secondary objectives of A10 (Objectives 2, 6, 7, and 9).</td>
</tr>
<tr>
<td>Describe how the rotational program is currently being applied in comparison to the original approach and describe the outcomes and rationale for alternative approaches;</td>
</tr>
<tr>
<td>Document two-year specification actions and evaluate outcomes; and</td>
</tr>
<tr>
<td>Identify possible changes or areas for improvement of the rotational program.</td>
</tr>
</tbody>
</table>
ERM Project Status

- Contract with Fishery Applications Consulting Team (Dr. Cate O’Keefe)
- Completed project workplan and draft report outline, starting the report writing
- Landings & LPUE data from GARFO, administrative records, some datasets still pending.
- Sub-group scheduling for mid-October.
- Presentations to Scallop AP and Committee at their October meetings.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Jonathon Peros</td>
<td>Sep-21</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oct-21</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nov-21</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dec-21</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Jan-22</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td>x</td>
</tr>
</tbody>
</table>
Questions