Atlantic States Marine Fisheries Commission

Executive Committee

February 6, 2020
8:00 – 10:00 a.m.
Arlington, Virginia

Draft Agenda

The order in which these items will be taken is subject to change;
other items may be added as necessary.

A portion of this meeting may be a closed session for Commissioners and Committee members only.

1. Welcome/Call to Order *(P. Keliher)*
2. Committee Consent
   - Approval of Agenda
   - Approval of Meeting Summary from October 2019
3. Public Comment
4. Discuss Potential Allocation of Remaining Plus-up Funds (*R. Beal*)
5. Update on Review of Advisory Panel and Public Input Process (*R. Beal*)
6. Discuss Management Board Changes to Accommodate Shifts in Species Distributions *(R. Beal)*
7. Discuss Use of Modes Split in Recreational Fisheries Management *(R. Beal)*
8. Future Annual Meetings Update *(R. Beal)*
9. Other Business/Adjourn

Please Note: Breakfast will be served as members arrive; members may arrive as early as 7:30 a.m.

The meeting will be held at the Westin Crystal City; 1800 S. Eads Street, Arlington, Virginia 22202; 703.486.1111

Atlantic States Marine Fisheries Commission

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MEMORANDUM

TO: Executive Committee

FROM: Robert Beal

DATE: 1/29/20

SUBJECT: ASMFC Plus-Up Funding Update

Background

The Commission's Executive Committee has discussed the allocation of approximately $400,000 in plus-up funding from Congress at a number of previous meetings. The Executive Committee selected five priority projects for funding. These five projects used about $225,000 of the available plus-up funding. This memorandum provides updates on the five funded projects, provides alternatives for use of the remaining funds, and details options for use of remaining plus-up funds. As a reminder, the remaining funds need to be spent by June 2023.

Update on Funded Priority Projects

1. Striped Bass Hook & Line Tagging - $50,000 (funding for two years)

Tagging of coastal migrant striped bass in winter has occurred for most of the past 25 years via a tagging cruise off the North Carolina Outer Banks and lower Chesapeake Bay. USFWS, NC DMF, MD DNR, VMRC, and ASMFC have combined resources to conduct tagging in January and February since the late 1980s. Tagging results have been used directly in striped bass stock assessments to generate mortality estimates, as well as movement and migration information. Hook and line based tagging has proven to be a very economical method of tagging fish from the overwintering population. Funds would cover 10-15 charter trips to tag fish in winter 2019 and 2020.

UPDATE: The tagging trips have begun for 2020 and will likely not be completed prior to the Commission's Winter Meeting.

2. Travel Funds to Coordinate Offshore Lobster Enforcement - $5,000

Enforcement of regulations in the offshore lobster fishery has been identified as a priority issue by the New England Commissioners and law enforcement staff. Significant progress has been made on the funding of a vessel to be used for offshore enforcement, however there are multiple details on operating, staffing, sharing, maintenance, etc. that will need to be worked out through in-person meetings and conference calls. These funds will be used to support meeting expenses.

UPDATE: A working group has been formed to develop a plan to operate and maintain an offshore lobster enforcement vessel. This working group has held one meeting and the Lobster Board will be updated on the progress at subsequent meetings.

3. **Lobster Maturity and Growth Data Collection - $38,000**

Increases in water temperatures over the past several decades have likely resulted in changes to lobster size at maturity and growth patterns, given temperature has a strong influence on these vital processes. Maturity data used in the 2015 Benchmark Stock Assessment are more than 20 years old, making it likely that changes have since occurred. Evidence to suggest that decreases in the size at which females reach maturity exists in both the Gulf of Maine/Georges Bank (GOM/GBK) stock (see Pugh et al. 2013) and the Southern New England (SNE) stock. It is critical to collect updated information on maturity in order to appropriately assign molt probabilities to lobsters in the assessment models.

Funding from Maine is supporting a maturity study along coastal Maine that started in spring 2018; however, further funding is needed to conduct maturity studies in New Hampshire for the SNE stock (MA-NC). Funds would be used by state agencies to (1) cover travel costs for the two workshops, (2) purchase supplies (dissecting tools, etc), and (3) collect and process samples through existing fishery-independent and fishery-dependent sampling programs, estimate maturity by means of ovarian staging, and enter data in state databases. Ovarian staging requires sacrificing the lobster and, therefore, would require purchase of any lobsters sampled through fishery-dependent sources. A report from the workshop series and final data will be provided to the ASMFC for future stock assessments.

UPDATE: The Lobster Stock Assessment Subcommittee developed a protocol and timeline for 2019 sample collections and this work has been completed and the findings included in the ongoing benchmark stock assessment. Additional statistical areas could be sampled with additional funds. (Approximately $15,000 remains unspent.)

4. **Atlantic Herring Georges Bank/Nantucket Shoals Maturity Sampling – No funding needed if sampling current trips/$80,000 - $100,000 if fishery independent sampling is initiated (would require multi-year funding)**

Given recent declines in herring recruitment and spawning stock biomass, several questions have been raised regarding the need for, and ability to implement, spawning protections in Georges Bank and Nantucket Shoals. Both areas are recognized as major spawning grounds for Atlantic herring but do not have protections specific to spawning. This project would collect herring maturity samples from Georges Bank and Nantucket Shoals to inform a potential spawning closure management strategy.

The existing GSI_{30} spawning closure system requires enough samples to inform the relationship between GSI and maturity, and annually project spawning closures. In the Gulf of Maine, the

long term use of closures to protect spawning aggregations has prompted the collection of samples to meet these needs. In contrast, significantly fewer samples have been collected from Georges Bank and Nantucket Shoals. Staff from Massachusetts Department of Marine Fisheries summarized the number of herring samples taken in Georges Bank and Nantucket Shoals over the last 20 years. The majority of samples are from Georges Bank (~96%), with only 2 samples taken from Nantucket shoals.

If a spawning closure approach is considered for Georges Bank, a higher number of annual samples will be required there to determine the spatial extent of specific spawning locations and their timing. In contrast, implementing a single, large spawning closure across the northern edge of Georges Bank would require fewer annual samples but would likely require a longer closure in order to protect asynchronous spawning. Potential economic impacts of this larger and longer closure may need to be considered.

UPDATE: The New England Fishery Management Council contracted GMRI to conduct a study of herring spawning on Georges Bank. This work provided the following research Priorities:

- *Enhance Portside Sampling Efforts*
- *Develop a new spawning survey of Atlantic herring on Georges Bank*
- *Examine the feasibility of collecting spawning data at-sea by observers and at-sea monitors, and on land by portside samplers*

5. <u>Menhaden Aerial and Hydroacoustic Surveys Design - $30,000 – 50,000</u>

An estimate of menhaden biomass in Chesapeake Bay is needed to better evaluate potential options for the Bay cap. The project could occur in two phases: 1) a study design phase where aerial and hydroacoustic survey experts work with the TC to design Chesapeake surveys targeting menhaden, 2) implementation of the surveys following the design recommendations of experts. Phase 1 is relatively inexpensive (~$30,000-50,000) and could be in the form of 2-3 workshops and an associated report detailing new Chesapeake survey design elements. Phase 2 is expensive (~$450,000 to $650,000) and includes costs of hiring pilots for aerial survey and ship time and equipment for hydroacoustic surveying. There are two ways such a survey could be useful for management: 1) a one-time estimate of biomass could be useful for evaluating the Bay cap; 2) multiple years of estimates may be a useful addition for the assessment. A time series would take 7+ years of surveying to be of value to menhaden stock assessments.

It should be noted that a new benchmark menhaden assessment will be finalized in late 2019. This assessment will have a list of research needs to improve future assessments. Input from the Technical Committee will be helpful in prioritizing the research needs following the assessment. In addition, Technical Committee input will be needed for survey design. Several members of the committee have significant workloads in 2019 in order to meet the SEDAR Peer Review of the assessment.

UPDATE: An initial design has been completed and reviewed by the Technical Committee. A second TC review will occur this winter. If complete in May, the design can be presented at the Spring Meeting. (Cost of the design was $43,000)

Options for Use of Remaining Plus-Up Funds

With the five priority projects funded, about $175,000 remain unspent. These funds must be used on projects that will be completed by June 2023. Therefore, a final decision is not required at the Winter Meeting. The following options for spending a portion of the remaining funds (not in a priority order):

1. **Analysis of Atlantic Herring Gulf of Maine Inshore Spawning ($35,000)**

The New England Fishery Management Council recently contracted with GMRI to conduct an analysis of herring spawning on Georges Bank. This analysis provided important information to consider if offshore spawning protections were to be implemented. Funding could support a similar analysis for the Gulf of Maine to potentially better inform current spawning closures.

2. **Fund and Expand the Lobster Research Fleet**

The Commercial Fisheries Research Foundation (CFRF) has been coordinating a lobster research fleet since 2013 to collect biological, fishery, and environmental data to support improved assessment and management of the resource. This effort has had various sources of funding and future funding is uncertain.

3. **Aerial Menhaden Survey ($450,000 - $650,000)**

Upon completion of the design work for the menhaden aerial survey, a source of funding to support the survey will need to be identified.

4. **Expansion of Predator/Prey Work – Striped Bass Predation**

With the development of ecological reference points for Atlantic menhaden that include striped bass as primary predator, it is important to continue to collect striped bass diet information to support future updates of the model.

5. **Size at Maturity of Female Lobsters in the Gulf of Maine ($30,000)**

Recent studies by MEDMR and others have shown that an increase in temperature over the past few decades has resulted in a decrease in the size at which female lobsters reach maturity. The maturity datasets currently used to represent the offshore Gulf of Maine (NMFS statistical areas 464, 465, 515) in the stock assessment model were collected in Brown's Bank, Canada more than 20 years ago. This means that key parameters used to understand female growth and spawning stock biomass are likely out of date. The ASMFC American Lobster Technical Committee has repeatedly stated it is crucial to update these key parameters in order to

appropriately assign molt probabilities to females and calculate the reproductive potential of each stock. For these reasons we propose to conduct a full maturity assessment on female lobsters collected from NMFS statistical area 515. (See attached)

6. **Maine 100% Lobster Reporting ($650,000 – $830,000)**

The state of Maine is required to transition to 100% trip level reporting for their lobster fishery as a component of Addendum XXVI by January 1, 2024. Maine would like to accelerate this timeline to better characterize the fishery to understand the potential for interactions between lobster gear and Atlantic right whales.

7. **NEAMAP and Maine/Hew Hampshire Trawl Survey**

Both of these surveys collect data to support assessments for multiple species from Cape Hatteras through the US/Canadian border. Funding has come from NOAA Fisheries, however as the costs of these surveys increase there is concern there may be funding short falls in the future.

8. **ASMFC Staff Hire - Stock Assessment Scientist - $85,000 (would require multi-year funding)**

Demand for new stock assessments continues to grow in order to generate scientific advice to fisheries managers. The Commission currently has three Stock Assessment Scientists on staff who contribute to all aspects of developing assessments for 17 of the 27 stocks in the Commission's portfolio. Hiring a 4th Scientist would increase capacity on staff.

9. **Summer Flounder Stock Assessment Support - $50,000 - $100,000**

The Save the Summer Flounder Fishery Fund (SSFFF) is seeking $50,000 to $100,000 support to obtain two years funding for a postdoc. The postdoc would work closely with both the SSFFF team and NEFSC to investigate a range of aspects of the summer flounder assessment and management and provide a candidate stock assessment model based on the Stock Synthesis program. The model will be sex-structured, but simulations will be conducted to determine the benefit of including sex-structure and alternative assumptions about sex-specific selectivity to account for lack of sex-specific data. The project will also investigate using the Rutgers sex composition data. The analysis and simulations will investigate both the stock assessment results and management implications (e.g. reference points, including dynamic reference points, and ABC calculations).

A benchmark assessment of the summer flounder stock was recently completed and peer reviewed through the federal SAW/SARC process. The results of this work are not yet available due to the federal shutdown.

Proposal for Funding made to:

Atlantic States Marine Fisheries Commission
1050 N. Highland Street, Suite 200 A-N
Arlington, VA 22204

Determining the size at maturity of female American lobsters (*Homarus americanus)* in an offshore area of the Gulf of Maine

Primary Investigator: Jesica Waller
Marine Resource Scientist III
Maine Department of Marine Resources (MEDMR)
194 McKown Point Road, West Boothbay Harbor, ME 04575
Jesica.D.Waller@maine.gov | 207-350-6440

Co-PI: Heidi Henninger, Atlantic Offshore Lobstermen's Association (AOLA)
heidi@offshorelobster.org | 603-828-9342

Duration of Project: April 1, 2021 – March 31, 2022

Project Location: NMFS Statistical Area 515, Maine, New Hampshire

Requested Funding: $29,956

Project Justification: Recent studies by MEDMR and others have shown that an increase in temperature over the past few decades has resulted in a decrease in the size at which female lobsters reach maturity. The maturity datasets currently used to represent the offshore Gulf of Maine (NMFS statistical areas 464, 465, 515) in the stock assessment model were collected in Brown's Bank, Canada more than 20 years ago. This means that key parameters used to understand female growth and spawning stock biomass are likely out of date. The ASMFC American Lobster Technical Committee has repeatedly stated it is crucial to update these key parameters in order to appropriately assign molt probabilities to females and calculate the reproductive potential of each stock. For these reasons we propose to conduct a full maturity assessment on female lobsters collected from NMFS statistical area 515.

The maturity ogive and datasets generated through this work would be made available to the ASMFC American Lobster Technical Committee in 2022 to inform the development of the Resilience Addendum (XXVII) as well as update the stock assessment ogives. This work would build upon and complement recent maturity studies conducted in coastal Maine (MEDMR) and in Southern New England and Georges Bank (ASMFC). This proposed study will also be incorporated into a larger ongoing effort by MEDMR, AOLA and Dalhousie University to identify and develop non-invasive maturity assessment methodologies. The funding provided through this effort would be leveraged by funds we are currently seeking from the 2020 National Sea Grant American Lobster Research Program to compare maturity assessment methodologies and develop protocols for future use across the American lobsters' range.

Project Components:

- Coordinate the collection of 400 female lobsters in NMFS statistical area 515.
- Collect a robust suite of biological parameters to estimate maturity by ovarian staging, the method recommended by the ASMFC American Lobster TC.
- Organize and enter these data into state databases and the ASMFC Lobster Database.
- Analyze all data collected and perform maturity determinations.
- Calculate a maturity ogive and provide these data to the ASMFC American Lobster TC. PI Waller (MEDMR) has recently performed this type of analysis for NMFS statistical areas 511, 513, 537 and 562 and has provided all necessary work to this group.

Timeline:

- Overall: April 1, 2021 to March 31, 2022
- April 2021: Final laboratory and collection preparations. Finalize collection logistics and provide all necessary datasheets.
- May-June 2021: AOLA will work with industry research partners to collect live lobsters from statistical area 515. AOLA/MEDMR will transport live lobsters to MEDMR.
- June- July 2021: Live lobster holding, lab data collection and image analysis performed by MEDMR.
- July 2021: MEDMR will compile and perform quality control measures on all data collected and begin making final maturity determinations.
- July 2021- March 2022: MEDMR will complete all image analysis, maturity determinations and calculate a maturity ogive for statistical area 515. All analysis and a final report will be provided to ASMFC.

Lobster Collection Strategy:

- AOLA will work with fishermen to collect non-ovigerous female lobsters from statistical areas 515. (Note: This will require obtaining an Exempted Fishing Permit from GARFO)
- A minimum total of 400 female lobsters (notched and non-notched) ranging from 73-152 mm carapace length (CL) will be collected. Females will be grouped and analyzed as a function of 5 mm CL size bins. We aim to collect at least 25 females per size bin.
- Potential F/Vs to collect lobsters in statistical area 515 have been identified and contacted.
- Fishermen will band lobsters collected for this project with a different color band than the retained portion of their catch. All lobsters will be stored separate from the catch.
- AOLA staff will collect (and pay for) lobsters from fishermen and transport lobsters to the MEDMR lab in West Boothbay Harbor for holding prior to processing.

Lobster Processing and Laboratory Methods:

- Waller and contract staff will perform all lab measurements, dissections and image analysis. Contract staff will be trained by Waller in May 2021.
- MEDMR staff will perform all data collection in May, June, and July 2021.
- For each lobster we will record a suite of external metrics (CL, abdomen width, shell hardness, whole body weight) and ovarian stage will be recorded via dissection. A hemolymph sample will also be collected and archived for potential future analysis. Digital images of the whole ovary, oocytes and pleopods will also be collected and analyzed to determine and record oocyte color, oocyte diameter, setogenic molt stage and cement gland stage.

Data Analysis:

- Ovarian staging will be used as the primary maturity assessment method in this study. Maturity criteria are based on the color of the ovary, relative weight of the ovary (ovary factor) and the range of oocyte diameters for each female. Using the criteria established in Aiken & Waddy (1982), any female that meets the threshold for stage 4b or higher will be classified as mature. Females with signs of spawning activity or ovary resorption will also be classified as mature.
- Final maturity determinations will be made without knowledge of the CL and v-notch status to avoid bias in these determinations.
- Females will be grouped into the appropriate 5 mm CL size bins and a logistic regression (binomial distribution, logit link) will be fit to these data using the GLM function in R.
- All datasets and analyses will be provided to the ASMFC American Lobster TC.

Budget:

- The total estimated budget is $29,956. This includes the costs of purchasing live lobsters, transporting live lobsters, all necessary lab supplies, contract staff time and staff time.
- Please see below for the full budget request.

MEDMR/AOLA Budget	Rate	Amount	Request	Budget Narrative
Personnel:				
Heidi Henninger (AOLA)	$ 36.16	67.50	$ 2,441	0.5 months in Year 1. (Month = 30 hrs/wk *4.5 wks). Effort = 2 days sorting/transporting lobsters + 2.5 hrs/wk
Jesica Waller (MEDMR)	$ 52.37	160	$ 8,379	Rate represents full bill rate. Four weeks of time (40 hours per week) is requested to train contract employees, oversee and assist in lab data collection, perform all data analysis and generate a final report.
MEDMR contract employee	$ 20.36	320	$ 6,515	Rate represents full bill rate for an employee hired through TriState Staffing Agency. Eight weeks of time (40 hours per week) to perform lab data collection.
Live lobsters and lab supplies:				
Lobsters (AOLA)	$ 16.20	400	$ 6,480	Total of 1080 lbs of lobster purchased at an assumed price of $6/lb. This was calculated from the average weight (73-152 mm CL) using the stock assessment weight/length conversion = 2.7 lbs per lobster.
MEDMR lab supplies			$ 300	Expendable supplies include nitrile gloves and dissection kit tools
Travel and shipping:				
Travel mileage/shipping	$ 127.60	2	$ 255	220 miles roundtrip Newington, NH to Boothbay, ME. Gov 2020 rate of $0.58/mi. Can use these funds to ship, if only one trip is made and smaller #s of small lobsters are shipped as collected.
Meals & travel incidentals	$ 50.00	2	$ 100	
Overhead:				
AOLA Overhead (10%)			$ 928	
MEDMR Overhead (30%)			$ 4,558	
PROJECT TOTAL: $29,956				

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MEMORANDUM

TO: Executive Committee

FROM: Tina Berger, Director of Communications

DATE: January 30, 2020

SUBJECT: Overview of Advisory Panel Attendance

As a follow-up to the Executive Committee's recent discussions regarding a lack of engagement in the Commission's public input process, at both the advisory panel (AP) level and solicited public comment, following is a brief overview of attendance/participation in our APs.

Overall, attendance and participation is generally poor across all APs. There are 2-3 very active panels, which meet fairly frequently and have an engaged membership. They include Atlantic menhaden, Atlantic striped bass, and summer flounder/scup/black sea bass. Even within those panels, only half of the membership is actively involved on a continuing basis, and those that are involved tend to be the same people.

There are several APs that are largely inactive due to a lack of management activity (sharks, northern shrimp, shad & river herring, weakfish and winter flounder) or the need for coastwide input (as with the American Lobster AP). Largely, these members are not engaged at all.

The remaining panels have met inconsistently and have poor attendance throughout. Below is a breakdown of attendance history by species AP for the past few years.

AP Attendance

American eel (17 members)

- There have been 5 meetings since 2014 (Jul 14, Jan 16, Dec 17, Jun 18, Dec 19)
- Attendance is low and dwindling across the years (6 attendees /17 total membership, 5/17, 4/17, 3/17, 5/17)
- PA shows the best attendance followed by Maine

American lobster (16 members)

- There have been 3 meetings since 2014 (Jul 16, Mar 17, Apr 17), there has not been a meeting in 2 years
- Attendance is low (2/16, 6/16, 6/16)
- MA shows the best attendance, followed by ME/CT/NJ

Atlantic herring (16 members)

- There have been 4 meetings since 2014 (Jan 15, Oct 15, Apr 17, Jan 19)
- Attendance is moderate (6/16, 8/16, 6/16, 9/15)

- ME, MA, and NJ show the best attendance, followed by RI

Atlantic menhaden (24 members)

- There have been 6 meetings since 2014 (Apr 15, Jul 16, Sept 16, Jan 17, Jun 17, Oct 17), there has not been a meeting in 2 years
- Attendance is better in later years (6/25, 5/24, 14/24, 14/24, 11/24, 13/24)
- NH, RI, MA, NY, NJ, MD, VA, GA show the best representation

Bluefish (20 members)

- There have been 4 meetings since 2014 (Jun 16, Jun 17, Aug 19, Nov 19)
- Attendance is low (1/20, 1/20, 4/20, 3/20)
- MA and FL showed up to both 2019 meetings
- Jointly managed by ASMFC & MAFMC, which further complicates things

Coastal sharks (19 members)

- There have been 4 meetings since 2014 (Jul 16, Jul 17, Oct 18, Oct 19)
- Attendance is low (5/16, 6/19, 3/19, 4/19)

Horseshoe crabs (16 members)

- There have been 5 meetings since 2014 (Apr 16, July 16, Sept 17, Sept 18, July 19)
- Attendance is low to moderate (7/15, 8/15, 6/15, 8/17, 7/16)
- MA, NJ, MD have the best representation

Jonah crabs (5 members)

- There have been 3 meetings since 2014 (Jul 15, Apr 14, Jan 18)
- Attendance is decent (4/4, 3/5, 1/5)
- MD, RI, NH have the best attendance

Northern shrimp (9 members)

- Since pre-2014, there was only one meeting in Nov 2017
- Attendance at this meeting was good (7/9)

Summer flounder, scup, black sea bass (43 members)

- There have been 20 meetings since 2014 (Jan, Jun, Jul, Nov 15; Jan, Jun, Jul, Nov 16; Jan, Apr, Jun, Nov 17; Jan, Jun, Nov 18; Mar, Apr, Aug, Sept, Nov 19)
- Attendance is usually low: 8/43 , 10/43 , 13/43 , 10/43 , 7/43 , 7/43 , 4/43 , 5/43 , 6/43 , 4/43 , 8/43 , 16/44 , 12/44 , 8/43 , 1/43 , 11/43 , 12/43 , 5/43 , 11/43 , 13/43
- Jointly managed by ASMFC & MAFMC, which further complicates things

Shad and river herring (13 members)

- The only meeting since 2012 was Sept 2017
- Attendance was low in 2017 (4/10)
- There have since been several new members

South Atlantic (13 members)

- There have been 6 meetings since 2014
- Attendance is low (4/13, 3/13, 2/13, 1/13, 3/13, 4/13)
- VA and NC probably have the best attendance

Spiny dogfish (11 members)

- There have been 4 meetings since 2014 (Aug 15, Sept 16, Aug 17, Aug 19)
- Attendance is low (3/11, 3/11, 0, 3/11)

Striped bass (22 members)

- There have been 6 meetings since 2014 (Apr, Jul, Oct 2014; Apr 16; Jan 18; Oct 19)
- Attendance is moderate (9/19, 10/21, 14/20, 9/20, 10/21, 10/22)
- RI, NY, NJ, PA, VA, MD had best attendance

Tautog (12 members)

- There have been 3 meetings since 2014 (Oct 15, Jun 17, Jul 19)
- Recent attendance has been low (7/12, 5/12, 3/12, 3/12)
- CT and NY probably have best attendance

Weakfish (16 members)

- There has not been a meeting since 2009

Winter flounder (6 members)

- The last meeting was Jan 2014
- Attendance was 4/12