



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
**NATIONAL OCEAN SERVICE**  
**Office of National Marine Sanctuaries**  
**Stellwagen Bank National Marine Sanctuary**  
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**64<sup>th</sup> Sanctuary Advisory Council Virtual Meeting**  
**Wednesday, February 16, 2022**

**SAC Members Present:**

Bill Adler	Primary: Fixed Gear Commercial Fishing
Terri Birkeland	Alternate: At Large
Tim Brady	Alternate: Recreational Fishing
Jonathan Brink	Alternate: Whale Watch:
Andrea Bogomolni	Primary: At Large
Shelley Brown	Alternate: At Large
Todd Callaghan	State: MA Coastal Zone Management (Chair)
LCDR Lennie Day	Federal: First US Coast Guard District Boston
Randall Lyons	Alternate: Business Industry
Rich Delaney	Primary: Education
Susan Farady	Primary: Education (Vice Chair)
CAPT Jamie Frederick	Federal: First US Coast Guard District Boston
John Galluzzo	Primary: Maritime Heritage
Marc Gustafson	Primary: Mobile Gear Commercial Fishing
Les Kaufman	Alternate: Research
Martin Klein	Alternate: Maritime Heritage
Heather Knowles	Primary: Diving (Chair)
Chris McGuire	Primary: Conservation
Conor McManus	Alternate: Research
Eric Meschino	Alternate: Fixed Gear Commercial Fishing
Frank Mirarchi	Alternate: Mobile Gear Commercial Fishing
Iben Munck	Primary: Conservation
Tom Nies	Federal: New England Fishery Management Council
Kimberley Pearson	Alternate: Conservation
Monica Pepe	Alternate: Education
Wayne Petersen	Alternate: Conservation
Kevin Powers	Primary: At Large
Jeffrey Ray	Federal: NOAA Office of Law Enforcement
Jeff Rosen	Primary: Business Industry
Allison Rosner	Federal: NOAA GARFO
Dawn Stancavish	Alternate: Marine Transportation
Carol Voigt	Primary: Marine Transportation
Mason Weinrich	Primary: Research
Kelly Whitmore	State: MA Division of Marine Fisheries

**Stellwagen Bank National Marine Sanctuary (SBNMS) Staff:**

Pete DeCola	Tammy Silva	Alice Stratton
Ben Haskell	Anne Smrcina	Mike Thompson
Anne-Marie Runfola	Elizabeth Stokes	Dave Wiley
Hannah MacDonald (Intern)		



Jonelle Dilley, NOAA Legal Council

**I. Welcome (T. Callaghan)**

**II. SAC Business (AM Runfola, T. Callaghan)**

1. Review and motion to approve Draft 63rd SAC Minutes (T. Callaghan)

***Motion by Mason Weinrich to approve the 63rd SAC Minutes. Bill Adler seconded the motion.***

The 63<sup>rd</sup> SAC Minutes were approved by consensus with the following correction noted by Bill Adler:

Paragraph III, Sanctuary Business, section c, page 6, line 11: As reads: “*Additional measures effective 1 May 2002....*” is corrected to read, “*Additional measures effective May 1, 2022....*”.

2. Reminders

SAC Hours and Work Plan: Anne-Marie Runfola thanked SAC members for reporting their quarterly hours, and notes on activities that tie into the SAC Work Plan and forward the sanctuary mission. SAC members should look for quarterly emails requesting this information.

3. SAC Recruitment

Anne-Marie Runfola thanked SAC members for staying on the Council through the sanctuary’s Management Plan Review (MPR) process. The next recruitment will be held in summer or fall once the MPR is complete. Please contact Anne-Marie if members have any concerns about staying on through the summer and possibly fall.

4. SAC Executive Committee elections for Secretary and Vice Chair will be held at the May SAC meeting. The Chair election will be held in October. The Chair and Vice Chair are 2-year appointments and the Secretary a 1-year appointment. SAC members can send nominations for themselves or others to Anne-Marie and Bibi prior to the May SAC meeting. They can also nominate someone at the meeting. Note: Susan Farady (Vice Chair) and Laura Howes (Secretary) are nominees - both are willing to continue serving another term.

5. Discussion, Public Comment and Vote on Ropeless Gear Working Group (T. Callaghan, D. Wiley)

SBNMS research ecologist Dr. David Wiley presented a summary of work being conducted by various governmental and non-governmental entities relating to the development of ropeless (buoyless) fishing techniques for use in bottom set, fixed gear fisheries (e.g., lobster and fish traps) to protect large whales from becoming entangled. The presentation included the many ways SBNMS is currently involved in the process.

Following Dr. Wiley's presentation, SAC members had the opportunity to provide their comments regarding the ropeless gear issue. As previously discussed at the October 2021 SAC meeting, a motion was brought forward to establish a SAC working group that would support the ropeless gear effort and concerns.

***Motion by Mason Weinrich to form a Ropeless Gear Working Group. Carol Voigt seconded the motion.***

*Motion failed: 4 yea, 10 nay, 3 abstain.*

*Abstentions:*

*Jeff Rosen: There are strong arguments made in both directions and he is just not sure what the right thing to do is here.*

*Iben Munck: Her reason is similar to Jeff Rosen's. She doesn't feel she understands sufficiently the benefits of a ropeless gear working group.*

*Jonathan Brink: He doesn't understand enough about the workings of the SAC subcommittees and working groups, and prefers to know more before using his Primary member's vote (Laura Howes).*

The SAC Chair encourages the SAC to continue to provide input to the Sanctuary superintendent at future SAC meetings. Dave Wiley added that people can also reach out to him directly for help and one-on-one conversations.

Dave Wiley will provide an update on his Corporate Responsibility Program at a future SAC meeting.

### **III. Sanctuary Business**

#### **1. SBNMS Management Plan Review (MPR) Status Update (A. Stratton, P. DeCola)**

Alice Stratton provided a summary of the comments received during the public review period (November 30, 2021 to January 21, 2022) for the Draft Management Plan/Environmental Assessment. During that time, SBNMS received 13 oral comments at the two public meetings and 56 written comments, together comprising about 180 comment topics and 50 line/technical edits. Staff are currently reviewing and analyzing all the input and creating grouped topics that summarize similar concerns. Alice provided a high-level overview of the types of issues raised; many were supportive of ongoing and proposed actions, while many provided recommendations of ways to improve the draft management plan through increased management actions and increased partnerships. Next steps for comment review will include identifying any issues which need to be addressed by ONMS, revising action plans as needed, and preparing responses to all comments. SBNMS plans to reconvene the SAC MPR subcommittees and working group once action plan revisions are drafted to further opportunity for SAC review/input for the final management plan.

Pete DeCola expressed his appreciation to the SAC, as well as the working groups and subcommittees for all of their hard work and input to get the MPR completed and on its way.

## 2. Update on NOAA-BOEM Sand Habitat Project (D. Wiley)

*Assessing the biological and oceanographic processes that drive fisheries productivity in New England sand shoals and the potential for dredging related disruption:*

SBNMS Research Ecologist Dr. David Wiley provided the SAC with a summary of findings relating to funding from the Bureau of Ocean Energy Management (BOEM) for the investigation of sand habitats and sand dependent forage species (sand lance). A PDF of his presentation is attached. The full report is currently in internal review by BOEM. Coastal erosion and emersion threaten beach habitat, the species that depend on that habitat, and the recreational and economic activities that beach habitat and waterfront locations support. While coastal habitats and economies can be protected through beach nourishment using offshore sand deposits, when done poorly, it can harm offshore sand habitats that support a different set of fish and wildlife populations, ecosystem functions and economic activities. The goal of this work was to address knowledge gaps relative to the productivity and ecology of sand habitats, using sand lance forage fish as a proxy for what drives sand habitat ecological and economic value. We conducted field work, laboratory studies, data analysis and modeling to investigate the abundance and distribution of sand lance and dependent predators, sand lance ecology and life history characteristics, and the relationship between sand habitat and commercial fisheries. We used knowledge accumulated from these studies to produce sand lance and ecosystem services vulnerability matrices to describe associated risks from sand habitat disruption throughout the year. We found that important sand lance life history activities occurred in almost all months. Sand lance are likely least biologically vulnerable to disruption during August and September, however, because sand lance are buried in the sediment during much of that period, they might be extremely vulnerable to mechanically induced injury or mortality, such as that caused by dredging operations. Further, the time period where sand lance may be least vulnerable to disturbance (August-September) is the time of highest vulnerability for other ecosystem services dependent on sand habitat.

## 3. NOAA Office of National Marine Sanctuaries 50<sup>th</sup> Anniversary/SBNMS 30<sup>th</sup> Anniversary (50/30 Project) (P. DeCola, J. Galluzzo)

Stellwagen staff is looking for places to hold signature events to showcase and celebrate the artwork of Keith Ellenbogen, the Hollings Grant recipient who has been doing some amazing photography in the sanctuary as it ties into the 50/30 Project. The exhibit will run from June-November 2022 at the New England Aquarium (NEAq) in Boston, along with a couple of signature events to bookend the exhibit and some smaller events throughout summer 2022. As part of the exhibit and anniversary celebration, the New Bedford Symphony orchestra will hold a concert at the aquarium. John Galluzzo has also been very busy, undertaking several great projects in support of the 50/30 celebration. For example, *Bird Observer* magazine will publish an article he will write with support from staff on Stellwagen seabird research. A 3-D model of the *Portland* is also being built. Everything is being done to keep the exhibit project going with all its components in place, but funding is tight. Ben Haskell added that the National Marine Sanctuary Foundation is researching potential donors. If anyone has any potential donor leads, please pass them along to Ben Haskell.

## 4. SAC Work Plan (T. Callaghan)

The SAC chair reminded the team that the goal of the SAC Work Plan is to help the council focus its activities on priority management plan goals that will have the most impact and use the members' time most effectively. The plan is a living document, and will be updated by SAC and

staff leads prior to each meeting, reviewed by SAC at each meeting, and edited when needed to address shifts in priorities.

#### **IV. Discussion on Agency/Governmental Written Reports**

##### **1. Massachusetts Coastal Zone Management (MA CZM) (T. Callaghan)**

- CZM continues to work with the NOAA Office of Coast Management and the state coastal programs from Maine and New Hampshire on a comprehensive seafloor topography map of the entire Gulf of Maine (including Stellwagen Bank National Marine Sanctuary).
  - The first phase is complete: a map out to 24 nautical miles (nm) of geomorphological features (bank, crest, depression, flat, mound, pock mark, rise, rocky zone, slope, scar, and sediment wave field).
  - Areas of low data quality will be prioritized for future data acquisition.
  - Discussions are occurring regarding mapping out to 50 nm and/or mapping south of MA.
- CZM published the 2021 MA ocean plan
  - A priority for the Secretary of the MA Executive of Energy and Environmental Affairs is to map “presumably permissible” pathways north and south of Stellwagen Bank NMS to assist offshore floating wind developers in accessing the electrical grid in MA.
- CZM continues to work with offshore wind developers
  - Ensuring that routes and methods will minimize impacts.
  - Informing research programs for Highly Migratory Fish species, North Atlantic right whales, lobster, sharks/rays, migrating birds.
  - Establishing compensation for losses to fishermen due to the construction and operation of the wind farms.

##### **2. Massachusetts Division of Marine Fisheries (MA DMF) (K. Whitmore)**

###### DMF general

- 2021 Q3/Q4 Newsletter published in Jan: <https://www.mass.gov/service-details/dmf-news>. Highlights include MA seafood values at all-time highs, research on striped bass fidelity to MA, and low Dissolved Oxygen in Cape Cod Bay and its relation to a new dinoflagellate.
- In a position new to DMF, our 'Offshore Wind Specialist' will review water-dependent renewable energy projects with a focus on MA fishing industry and marine habitat impacts.
- Virtual seminars on Tuesdays; archived on [‘MA Marine Fisheries’ YouTube page](#). On March 1, 2022, D. Mattila will present “Responding to and learning from large whale entanglement: A global initiative of the International Whaling Commission in partnership with the Center for Coastal Studies.” Contact [gary.nelson@mass.gov](mailto:gary.nelson@mass.gov) to receive updates.

###### Atlantic herring/mackerel

- DMF will conduct pilot projects with Gloucester Marine Genomics Institute (GMGI) focused on Atlantic herring; projects will use genomics to 1) describe the mixing rate of herring from Georges Bank and Gulf of Maine, and 2) detect presence of herring eggs in haddock stomachs to determine if recent poor herring recruitment may be connected to expansion of the haddock stock. Data collection to begin in 2022.

- The Mid-Atlantic Fishery Management Council is working on a revised rebuilding plan for Atlantic mackerel; as part of this effort, the states of Massachusetts (MA), Maine (ME), and New Hampshire (NH) have been requested to reduce recreational catches. Mackerel recreational catch is often used as striped bass/Highly Migratory Species bait in New England. DMF is reviewing data to form an appropriate management response.

#### Right whale

- DMF has received a request from up to five lobstermen who seek to deploy ropeless fishing methods (on-demand buoy line retrieval systems) in three discrete areas of MA Bay that are closed as part of the state and federal MA Restricted Area. DMF held a January 12th public hearing on the issue and is expected to make a decision in the next few weeks.
- DMF has continued work on a ropeless fishing gear feasibility scoping project. Our contractor is analyzing information gathered during interviews and a fall stakeholder workshop. The final report and recommendations are expected in March 2022. More information at: <https://www.mass.gov/service-details/ropeless-fishing-gear-feasibility-study>
- During the summer of 2021, DMF adopted new state buoy line marking rules for commercial lobster trap fishermen that became effective February 1, 2022. More recently, DMF modified these regulations to have state buoy line marking requirements apply to all commercial trap fisheries—including the commercial lobster trap fishery but also the scup pot, black sea bass pot, and whelk pot fisheries; these modifications go into effect February 18, 2022.
- DMF expanded the spatial extent of the January 1 – May 15 seasonal sink gillnet closure to protect right whales. Whereas this closure previously only applied in Cape Cod Bay, it now applies throughout all MA state waters; the extended closure is effective for this calendar year.
- DMF is again offering free buoy line marking materials and additional weak rope at gear distribution events in Feb and Mar 2022, to assist commercial trap fishermen in complying with new buoy line marking regulations. See DMF's Trap Gear Modifications webpage: <https://www.mass.gov/service-details/buoy-line-trap-gear-modifications>.

### 3. Enforcement Reports:

#### a. First US Coast Guard (USCG) (CAPT J. Frederick, LCDR Lennie Day)

CAPT Jamie Frederick, Federal: U.S. Coast Guard First District - Chief of Enforcement  
 LCDR Lennie Day, Federal: U.S. Coast Guard First District - Living Marine Resources

- Sector Boston has conducted 29 Living Marine Resource boardings in the vicinity of the sanctuary since October 2021 resulting in 28 commercial fishing vessel safety violations across 15 vessels. No fisheries violations were recorded resulting in a 100% fleet observed compliance rate.
- Two operations concerning Stellwagen Bank are currently in effect:
  - Operation Tangled Up in Blue coincides with recent changes to the Atlantic Large Whale Take Reduction Plan (ALWTRP) that include the Massachusetts Restricted Area North (Feb-Apr) in the vicinity of Stellwagen Bank. The additional restrictions on traditional trap/pot gear go into effect on May 1, 2022. The Coast Guard First District has directed units to inspect trap/pot buoy lines for marking and weak link requirements (current and future ALWTRP requirements) when units are in the vicinity of offshore lobster gear. No trap/pots will be pulled to the surface and will only focus on visible portions of the gear accessible to inspection.
  - Operation Right Speed is an operation developed to inform vessels 65 feet or larger on practices required to reduce whale strikes. Coast Guard Sectors are directed to communicate

advisories via Local Notice to Mariners, Broadcast Notice to Mariners, and Navigational TELEX (NAVTEX). Vessel speed restrictions are communicated as well as regulations concerning the approach of Right Whales closer than 500 yards. Vessels observed by radar or Automatic Identification System (AIS) that are in violation are hailed and requested to reduce speed to comply with the Right Whale Ship Strike Reduction Rule. Sightings are entered into our database and also communicated to NOAA. This operation is a result of cooperation between NOAA and the Coast Guard First District in a Right Whale Protection working group.

- Due to increased pressure internationally concerning the interdiction of alien migrants, particularly in the Windward Pass off the coast of Haiti, Coast Guard Medium Endurance Cutter (210'/270') availability has been reduced for Domestic Fisheries Law Enforcement in New England. The First District continues to employ Fast Response Cutters from District Five in support of the Living Marine Resource mission in the First District. The First District will receive its first of six Fast Response Cutters in October of 2022. They will be centrally based out of Boston, MA and will provide significant upgrades in seakeeping and endurance that will support a more active presence on the water.

b. NOAA Office of Law Enforcement (OLE) (J. Ray)

NOAA OLE Fisheries' Northeast Division (NED) conducted essential operations last fall and will continue those operations into 2022. NED Enforcement Officers (EOs) and Special Agents (SAs) conduct investigations and maintain a presence in our crucial fishing ports while our Administrative and Investigative Support Teams provide mission and operational support. While some in person activity is still on hold due to COVID-19 this report reveals the work our group conducts to protect marine wildlife and habitat in and around the Stellwagen Bank National Marine Sanctuary. All of us at NED work hard every day to ensure not only our nation's precious marine resources, but our global living marine resources are available for future generations.

Staff Changes

OLE added two Investigative Support Technicians since the last report. Investigative Support Technicians monitor fishing activity and create reports detailing violation trends and patterns.

Enforcement Highlights

- Our report system shows no new Stellwagen Bank National Marine Sanctuary related incidents since the last SAC meeting.
- In September 2021, OLE prepared an investigation report concerning a violation of the North Atlantic right whale ship strike reduction rules near Race Point. The Danish-flagged Motor Vessel *Torm Stellar* had exceeded the speed rule. In January the vessel's owners settled the case for \$6,750.00.
- NED staff are developing training and operation plans to help enforce Atlantic Large Whale Take Reduction Plan changes including those that could affect fishermen utilizing the Sanctuary through June 2022.
- Six OLE personnel received Remote Operated Vehicle (ROV) operator training at Sanctuary Headquarters in December. OLE and partner agencies will use the ROV for subsurface, fixed gear inspections in support of Atlantic Large Whale Take Reduction Plan enforcement.
- OLE staff and GARFO Protected Resources Division are training state and Coast Guard partners to enforce Atlantic Large Whale Take Reduction Plan regulations that go into effect on May 1, 2022.
- OLE issued 60 compliance letters to owners of vessels that violated the North Atlantic right whale ship strike reduction rules in Northeast ports.

### Patrols

- An EO and SA conducted a multi-day operation to inspect lobster gear in the offshore areas and part of the Sanctuary. OLE identified multiple gear related violations outside of the Sanctuary. No violations were identified inside the Sanctuary.
- OLE partnered with the Massachusetts Environmental Police and the Coast Guard to focus enforcement of Limited Access General Category scallop regulations in and adjacent to the Sanctuary. Officers documented 17 violations during the operation. None of these occurred in the Sanctuary.

### Investigations

- OLE agents are investigating six violations of the North Atlantic right whale ship strike reduction rules. None of these violations occurred in or adjacent to the Sanctuary.

### Northeast VMS Program

- Currently, there are 942 fishing vessels with operational Vessel Monitoring Units in OLE's Northeast Division. NED's Investigative Support Program monitors vessel activity within a "wrecks box" established in coordination with Sanctuary staff. OLE's VMS sends automated messages to vessels that enter "wreck boxes", alerting them to the presence of shipwrecks.
- In October 2021 18 VMS positions traveling at fishing speed occurred in the "wrecks box". In November 2021, there were 31 positions, in December there were 480, and in January there were 1,404 positions. The increase in December and January is due to increased scallop fishing in and around the Sanctuary. A similar increase has occurred in the last three years and was the driver of the Limited Access General Category enforcement operation discussed in the patrol section of this report.

#### 4. New England Fishery Management Council (NEFMC) (T. Nies)

The NEFMC met in December, 2021, and February, 2022.

In December, the Council approved 2022 specifications for the scallop fishery (see scallop specs). This includes measures for the Northern Gulf of Maine (NGOM) fishery that overlaps the SBNMS. This action removes the SBNMS closure, in place during 2021, and scallop fishing can be expected in the area. The NGOM quota/set-aside will be 621,307 pounds, generally limited to smaller vessels; this is an increase from previous quotas, and is based on resource surveys. Observer coverage will be provided to this fleet, a change from previous years.

The Council also approved 2022 specifications for the Northeast Multispecies fishery (see groundfish). The Council did not change the GOM cod quota, and it is the same as in 2021. NMFS must review and approve the groundfish and scallop specifications before they are effective.

In February, the Council recommended recreational measures for GOM cod and haddock. They include limited fishing activity for cod, and increased opportunities for haddock. The NMFS will consider the recommendations and may implement them.

Also, a stock assessment for GOM haddock was reviewed at the end of January and will be published soon. In addition to its management actions, the Council continues to comment on offshore wind and aquaculture proposals, and replied to two requests for information on the America the Beautiful (30X30) program.



### Scallop specs

<https://s3.amazonaws.com/nefmc.org/NEFMC-Signs-Off-on-2022-Scallop-Fishing-Year-Specifications-in-Framework-34-Folding-in-Approved-Amendment-21-Measures.pdf>

### Groundfish

<https://s3.amazonaws.com/nefmc.org/NEFMC-Picks-Groundfish-Framework-63-Measures-Specs-Include-2022-Catch-Limits-for-Georges-Bank-Cod.pdf>

## 5. NOAA GARFO (A. Rosner)

### New Study Seeks to Improve Outreach Methods to Help Boaters and Whales

This is a voluntary survey effort of vessel operators to evaluate their ability and willingness to: (1) Comply with North Atlantic right whale mandatory speed restrictions, and (2) cooperate with voluntary speed reduction efforts to protect North Atlantic right whales, which are promoted through NMFS outreach efforts. We will collect information from two types of vessels (pleasure yachts and large ocean-going vessels) in two different areas of the North Atlantic right whales' range using voluntary online surveys and small focus groups. The surveys will collect information about vessel operators' time spent on the water, experience and knowledge about large whales, knowledge of North Atlantic vessel strike reduction efforts, opinions about these whales and conservation efforts, and their preferred means of receiving information. Results from this information collection will be used to develop effective outreach to these vessel communities, with the long-term goal of improving the communities' compliance with mandatory measures and cooperation with voluntary measures that support North Atlantic right whale vessel strike reduction conservation efforts. The survey began in mid-January.

## **V. Round Robin, Discussion on SAC Member Written Reports (T. Callaghan)**

### Bill Adler

Question to Pete DeCola: Is the sanctuary monitoring the discharge of radioactive water from the Plymouth nuclear plant in Cape Cod Bay?

Pete DeCola replied there are a lot of concerns and he is working on this as it may affect sanctuary resources. Todd Callaghan added the State is working on this issue as well.

Anne-Marie Runfola will connect Pete DeCola with Ken Buesseler, a marine radiochemist with the Woods Hole Oceanographic Institution who worked on the Fukushima nuclear disaster.

Rich Delaney added that Dr. Sarah Oktay, his successor and CEO for the Center for Coastal Studies, is a chemical oceanographer and one of her specialties for years has been nuclear discharge from power plants. She understands the science and will be a big asset for anyone who wants to talk about the physical, environmental and chemical impacts of nuclear waste discharge. Rich will link Dr. Oktay with Pete DeCola to share information on this issue.

### Frank Mirarchi

Fishing continues to be one of the most dangerous occupations. A few weeks ago, a fishing vessel capsized with three fishermen aboard and sank off of Humarock Beach by Scituate. Pamela Hart, a Marshfield resident, noticed what happened and dialed 911. She was able to provide the vessel's coordinates and bearings. All three fishermen were rescued. Pamela Hart is the daughter of a Scituate fisherman and a personal friend of Frank's with whom he has worked

for years. Pamela epitomizes the culture of community fishing. She acted fast, decisively, and did it right. A shout out to Pamela Hart and thank you.

#### John Galluzzo

Relating to Stellwagen's Business and Tourism outreach initiative, Pete DeCola and John Galluzzo met Lea Filson, Head of the Plymouth County Visitors Bureau and State Representative Matt Muratore of Plymouth to talk tourism. Pete and John also met with Representative Joan Meschino and her staff. These meetings are all part of the outreach that's being done around tourism.

#### Monica Pepe

See a Spout Program. Through the See A Spout program on which SBNMS is a partner, WDC is leading an effort to build and launch a self-guided, online course for recreational boaters on how to operate safely around whales. We are currently working with a focus group to test a draft of the course and provide feedback and would appreciate the support of SAC members with connections to recreational boating communities to help distribute the course when it's completed (hopefully before the end of March).

#### Hannah MacDonald

- The Shipwreck Avoidance Program (SAP)

The SAP Report for 2021 was finalized and is being converted to a publication within the Office of National Marine Sanctuaries Conservation Series. Key findings from the report include

- Communications such as vessel captains recommending strategies to improve communication methods and expressing a desire for more information about the importance of shipwrecks.
- How vessel captain responses to shipwreck avoidance guidelines vary based on gear type.
- How vessel captains prefer voluntary guidelines.

- New Bedford Symphony Orchestra Sound Exploration with Stellwagen Bank National Marine Sanctuary

- SBNMS is working with Sound Explorations, a group within the New Bedford Symphony Orchestra, to design and create two outreach materials that explore the relationship and interconnectedness among the sanctuary's ecosystem through music. Sound Explorations will create musical representations which demonstrate through sound, the impact of changing environmental aspects on these species' populations, habitats, and availability of food resources. A narrated, animated video lesson incorporating an original musical composition that explores the relationships and interconnectedness among various marine species will be included. Additionally, we will create an interactive web-based game in which players can manipulate and vary species populations, and environmental factors to hear the impact of these changes represented through musical parts.

- In addition to this interactive virtual experience, a live collaboration with Sound Explorations is being planned to take place during the fall for the anniversary celebration with the New England Aquarium.

**VI. Old and New Business:** None

**VII. Public Comment.** None.

**VIII. Adjourn:**

***Motion by Mason Weinrich to adjourn the 64<sup>th</sup> SAC Meeting. Tim Brady seconded the motion.***

The meeting adjourned at 1 pm by consensus.