



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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37th SANCTUARY ADVISORY COUNCIL
16 October 2012 9:30 am – 3:00 pm
Plymouth Yacht Club, Plymouth MA
MINUTES of MEETING

Present:

Bill Adler	Member:	Fixed Gear Commercial Fishing
Irit Altman	Alternate:	Research
Jennifer Anderson	Federal:	National Marine Fisheries Service
Priscilla Brooks	Member:	Conservation
Deborah Cramer	Member:	At-Large
CPT Peter DeCola	Federal:	USCG
Rich Delaney	Member:	Education (Executive Committee Chair)
John Galluzzo	Alternate:	Maritime Heritage
Vito Giacalone	Member:	Mobile Gear Commercial Fishing
Jonathan Grant	Alternate:	At Large
Jessica Freedman	Member:	Youth
Heather Knowles	Member:	Diving (Executive Committee Vice-Chair)
Judy Laster	Alternate:	At-Large
Whit Manter	Member:	At-Large
Bob McCabe	Alternate:	Marine Transportation
Steve Milliken	Member:	Whale Watching
Rob Moir	Member:	Conservation
Tim Moll	Member:	Business/Industry
Michael Moore	Alternate:	Research
Pat Moran	Federal:	Mass Environmental Police
Rick Murray	Member:	Research
Wayne Petersen	Alternate:	Conservation
Daniel Pingaro	Alternate:	At Large
David Robinson	Member:	Maritime Heritage
Robert Rocha	Alternate:	Education
Brad White	Alternate:	Recreational Fishing

SBNMS Staff:

Craig MacDonald	Deborah Marx	Mike Thompson
Ben Cowie-Haskell	Matthew Lawrence	Elizabeth Stokes
Brad Cabe	Anne-Marie Runfola	Rydell Welch
Paul Ticco (ONMS, Northeast and Great Lakes Region)		

I. Welcome, Review of Agenda and Approval of SAC Minutes (Rich Delaney)

The Agenda was reviewed and approved. The 36th SAC Minutes were reviewed and accepted (unanimous).

II. Discussion Topics (Craig MacDonald)

i. New Members – Introduction

Craig MacDonald introduced the new SAC members and alternates from the June recruitment: Irit Altman and Michael Moore, Education Alternates; and Whit Manter, At Large Member. From the July recruitment: Susan Farady is now an Education Member and Chad Smith is the new Diving Alternate. Incumbents who were reappointed are Rich Delaney, Education Member; Heather Knowles, Diving Member; Bill Adler, Fixed Gear Commercial Fishing Member; Dave Casoni, Fixed Gear Commercial Fishing Alternate; Tim Moll, Business/Industry Member; and Steve Milliken, Whale Watching Member. Craig thanked everyone -- new members and alternates who are volunteering for this job and those folks who are coming back for another tour of duty. He greatly appreciates everyone's service.

Craig announced the newly-established Youth Seat and its new Member, Jessica Freedman. Jessica has a very impressive application and her participation on the SAC is really appreciated. The Youth seat is a fully participating member of the SAC shy of voting; the SAC solicits her input and perspective on youth issues and any other matters discussed at the SAC meetings.

ii. Council Round Robin

SAC members and alternates introduced themselves and provided updates on their respective organizations and issues.

iii. Sister Sanctuary MOU with Bermuda

Craig MacDonald talked about the successful sister sanctuary relationships with the Dominican Republic, French Antilles, and now with Bermuda. The sister sanctuary concept is working with countries in the Caribbean that share humpback whales that feed in the SBNMS in summer then go south to the Caribbean in winter to reproduce. As brief background information, Bermuda was a big champion for the Sargasso Sea Alliance. They went out of their way to establish a marine mammal sanctuary within the context of the Sargasso Sea initiative so that they could team with SBNMS as a sister sanctuary member. The sanctuary program is very pleased that Bermuda has joined in this effort. It is anticipated that the Dutch Antilles will sign its sister sanctuary MOU in December. Once the MOU for the Dutch Antilles is officially in place, this region will become the first distributed network of marine mammal protected areas in the world that is cooperating to manage the same species of whales. This is quite a significant accomplishment.

iv. SAC Charter Renewal

The current SAC Charter expires in December 2012. Each Charter has to be renewed after 5 years. This is a perfunctory administrative duty that the Director of ONMS (Dan Basta) assumes; however, the policy has changed and there is now a condition on term limits that has to be incorporated within the Charter. An amendment was passed recently to make all seats 3-year terms. Seat terms are 3-consecutive terms for a total of 9 years. If members want to move to another seat for which they qualify during that time, then the term clock starts over. If members cannot move to another seat after 3 consecutive terms, then they will be asked to step down. But they could continue working with the SAC in working groups or on other SAC related issues. Terms are not retroactive, so members in a term seat with 2 years in, it can be that 1 year remaining

plus 2 3-year terms. This change will be made in the renewed Charter. This is standard protocol that is being established across all of the sanctuary advisory councils as their renewal date is reached.

v. New Agenda Format SAC Connections: Ways to Enhance SAC (Heather Knowles and Rich Delaney)

Heather Knowles reported that there was some restructuring done to the SAC Agenda. The SAC Agenda is pulled together by the SAC Executive Committee with the assistance of the Superintendent and sanctuary staff. The intent of the restructuring is to group topics a bit differently. The impression from previous meetings is that there are a lot of “status” updates presented and not a lot of discussion topics; that some topics may not be placed at the right time of the day; that there is not enough time allocated to have a balanced discussion; or there is too much time and no objective associated with the discussion. The SAC is here as an advisory body to help the sanctuary in the implementation of the Management Plan but also here to be aware of the SAC’s needs as a constituency. Heather and Rich solicited thoughts from members and posed the following questions to the SAC:

- What are we trying to accomplish when we attend a SAC meeting?
- How can we as a SAC enhance these meetings and make them more productive and focused to make sure we are all getting what we need.
- Are we moving in the right direction by restructuring agenda?

Comments:

Big improvement because a lot of time is spent listening to “data”, which doesn’t really pertain to or interest everyone.

This is a step in the right direction; for example, it’s good to see the Draft SERA II presentation on the mid-morning agenda because it obviously will lead to a large conversation. When these types of presentations are near the end of day, people are getting ready to leave.

Rich Delaney added that sanctuary staff programmatic briefings are now provided as a document rather than as individual oral presentations during the SAC meetings. The round table introductions of council members will continue because these are informative.

vi. SAC Leadership Award Subcommittee (John Galluzzo)

John Galluzzo reported that the Leadership Award Subcommittee received only one nomination: Bill Grafton, Treasurer and Clerk for *Stellwagen Alive!* -- friends of our sanctuary -- is the winner. The nomination reads: “Acting as treasurer and clerk for *Stellwagen Alive!* -- Friends of Our National Marine Sanctuary, Bill has been instrumental in putting the organization on a businesslike foundation. He has taken personal interest in guiding the Stellwagen Sweep program which will have disposed of 50 tons of derelict fishing gear in 2012 alone. Bill has also represented Stellwagen Alive at promotional events calling attention to the Sanctuary program.”

vii. Site Evaluation List (SEL) (Craig MacDonald)

The SEL is what the sanctuary program has historically used to identify news sites. The list needs to be reactivated and that requires the Secretary of Commerce and the Director of NOAA to concur. Dan Basta, Director ONMS, has asked that all of the SACs consider submitting a letter to the Secretary of Commerce and Dr. Lubchenco indicating interest in seeing the SEL reactivated. The sanctuary program is being petitioned by a number of States for new sanctuaries to be considered. The situation that exists right now is that until the SEL is reactivated and those sites added to it, there cannot be any consideration of those

additional sites. Craig shared with the SAC letters that were already submitted from some of the other sanctuary advisory councils. The main point in all of the letters is that there is a statement that each community must decide for itself whether a national marine sanctuary is right for its area. But without the reactivation of the SEL, local communities' ability to engage in this process is limited. It would go a long way to demonstrate that different regions are working for the establishment of new national marine sanctuaries. What sparked this is not just the petition by Governors in a number of States. The number of national marine sanctuaries has remained the same since about 1992, with the exception of Monument in the NWHI. There has been a tripling of number of national park entities over the same period of time, whereas the number of national marine sanctuaries has remained static.

Comments:

Tim Moll: A little confused – is there another area we feel that needs to be included?

Rich Delaney: We are not saying anything about our sanctuary. This is a national issue. We are talking about other regions and other States that have actively petitioned NOAA to be considered for sanctuaries or sanctuary boundary amendments but, because there is a cap or legislation that says that it's frozen, they can't move.

Rich Delaney suggested the following motion:

Motion: SAC members acknowledge by consensus that such a letter would be appropriate for the Chair to sign on behalf of the SAC encouraging NOAA to take action to allow opportunities for the SEL to be reactivated by removing the cap. Rob Moir motioned, Steve Milliken seconded. Passed unanimously.

III. Research Area Update (Vito Giacalone)

Rich Delaney: Interesting developments. We've gone around the issue for quite a while and sanctuary staff invested a lot of effort in science in developing a proposal. We've all discussed it at 2-3 meetings ago and recommended that such a concept should move forward. You'll remember that it didn't make it through HQ for a variety of reasons, partly as it was explained to us because there were a lot of other fishing issues on the plate of the NEFMC and another couple subcommittees of that group are looking at various closure areas that could relate to a sanctuary research area. So our proposal which is now called SERA I sort of hit a wall. But it's still got a lot of substance and a lot of good concepts and I think this group supported a lot of it. We weren't unanimous; some of the groups were a little bit antsy about exact locations and boundaries. So in the interim, what has happened and you'll hear Vito and Craig talk a little bit more about this, I guess the best way to describe as a non-official sanctuary, non-aligned adhoc group of interested people got together picked up the concept and made some adjustments and went back to their constituents and have had some very positive support in that they've taken that to the NEFMC process and have had some positive initial response as well. So we thought we as a group should hear about this and I think it's promising and I would be anxious to hear how you feel and if you are like-minded, we can't vote it up or down because it's not an official sanctuary proposal but we can certainly lend our support in general if we thought it was something that we would at least keep this process moving forward as opposed to where we stood two meetings ago when our SERA proposal kind of hit the wall. So Craig, unless it needs more introduction, we'll turn it over to Vito to give us the update and some of the details.

[Mike Thompson puts up comparison slides at this point in preparation for Vito Giacalone's presentation.]

Vito Giacalone: Basically just to let folks know the alternative was created for the purpose of the discussion for the benefit of the SAC. The two places that needed to hear about this alternative was the SAC and also the omnibus habitat amendment which were directly involved as a stakeholder and weigh in on what that committee is trying to do and it's actually a joint committee. This starts the process of more stakeholder

involvement. We have not had much discussion yet with party charter, with recreational fishing, with fixed gear- commercial fishing, but as the mobile seat representative and fisherman out of Gloucester, we knew that any loss of area west of the 70.15 especially those critical areas that are shown on A and C in the SERA 1 were going to have extreme negative consequences both economically and potentially even biologically and that is where our industry was at the time.. So following the Gloucester SAC meeting, I believe last spring or summer, Les Kaufman and I struck up a little causal conversation about feeling that when we look at the SERA one proposal's objectives are to study the impacts of fishing and have different treatments. And so it just seemed to make a lot of sense from that core objective to see if can start with an area that was closed 15-years already so that you a get a 15-year head start in the research of understanding the impacts of fishing. And I had hoped that we could find some areas where we could meet all of the objectives. SERA I of course was not well received by the inshore fleet that's dependent on it and also the Fishing Management Council didn't take it as something that seemed to be thinking along the lines of the omnibus, which the omnibus approach -- the reason they are calling it an omnibus because they want to provide groundfish mortality protection, they want to have one amendment that takes into consideration all of the groundfish needs, groundfish protection, we have current groundfish closures. Those need to be reconsidered before they can be opened. And then we have habitat consideration. So those two mandates have to merge at the omnibus. So what we were looking at was how do we get the SERA research objectives to overlap or blend with that and have it be one big consideration and process to move forward. So what we wanted to do was look at the Western Gulf of Maine closed area primarily because it's been closed for 15 years and I knew it would be a lot easier for our community and the fishing stakeholders to deal with something that's been closed for 15 years and figure out how much might get opened as opposed to what new areas will get closed. So following that SAC meeting, we had the discussion, and said why don't we form an adhoc unaligned group --just get some folks who want to get together in an informal manner and start to talk about what the objectives of SERA are, what our concerns are as industry stakeholders, and wouldn't it just be great if we could come up with something that satisfied everyone and we actually were pulling in the same direction at the Council. Having years of experience at the NEFMC level, if you don't have a unified voice, you end up leaving it up to the Council to make those determinations and usually everyone loses and it's usually what ends up happening. So the industry buy-in also at least, I'm talking from one person and all of us at that ad hoc committee made it clear that this is not intended to be the SAC's idea or PDT's idea, or industry's idea -- that we all had to walk away from there and say now have to see the reality of this and how it gets implemented at the Council process and then start to talk to our constituents to see if they just turn around and say "hey you're whacked man where did you come up with that idea" So we did go out at least on my end, I did go out and float it to quite a few of the mobile gear industry folks that I represent and can say basically all the folks that would be interested in western Gulf of Maine area being reopened or people who fish west of the 70.15 confident that that stakeholders' group is on board with this proposal and see it as a positive. We've also communicated this to the habitat committee members that I knew in advance -- sort of to get a feel for where would be the optimum time for a proposal like this to come forward so that they don't get their nose out of joint for a lack of a better term of saying "Where did you come up with this and do you realize that we have a process?". So we wanted to identify that, I think we did. We gave people a heads-up and the courtesy of knowing that something like this would be coming. So that the key objectives from the industry side was 1) to use the entire Sliver so that a big piece of it is inside Stellwagen delineation; and the other one is the habitat amendment that's been going for years but it's only been the last couple years they have been refining and using this new evaluation tool -- the SASI model -- you've probably heard of it -- the researchers have all heard it. They needed an analytical tool to rely on so that they could come up with a way to determine the hot spots that needed to be protected. So that's only gone on for a short period of time and the SASI model and the deliberations of the committees have come up with two major areas inside the western Gulf of Maine closed area that either one would satisfy potentially be an alternative to satisfy the habitat protection portions. *[Vito refers to slides displayed and describes the color coded alternative closure areas under consideration.]*

The biggest update was that we did bring this to the habitat committee because of the timing. It was really the last opportunity to get this into the process and made this similar presentation to them. They were

already aware of it, there was already a little bit of preliminary work done by the PDT looking at it to see if it does meet the types of habitat amendment issues that we hoped to address and it was voted on, I think 8-0, in favor. They were very appreciative; they felt that this proposal is more advanced than any of the other habitat proposals that are out there. And certainly from my perspective I would love to see something that this SAC embraces and that we've shown a precedent that the sanctuary, commercial fishermen, recreational fishermen, recreational fishermen, all stakeholders can end up pulling in the same direction and one plan I think would be - it might be a big monumental task to achieve but we are willing to roll up our sleeves and do what we can to do to make that happen.

Comments/Discussion:

Craig MacDonald: Just to clarify what the sanctuary role was. We were invited along with Michelle Bachman from the NEFMC to participate as technical advisors since Michelle has a really good sense of the NEFMC process and we as sanctuary staff have a good sense of the sanctuary process. And we also stood by to offer any technical support in terms of spatial analysis which is what produced the images that Vito has shown. Just to reinforce that this has been an *unaligned* third party group that had worked to produce a proposal that as Vito indicated met with unanimous support of the Habitat Advisory Panel of the NEFMC which we spoke to in terms of, we felt that it could also address a lot of the goals and objectives of the sanctuary program. But again, this is not a sanctuary proposal. I just need to clarify that. But we think it's one that we would like to see move through the NEFMC process with the possibility of becoming one of the alternatives that comes out in the January-February time frame in their omnibus amendment for habitat.

Rich Delaney: So it is not an official sanctuary proposal, but it is a sanctuary research concept. He asked who else participated in the informal adhoc committee.

Ben Cowie-Haskell provides list of informal adhoc committee participants:

Vito Giacalone - SAC
Rob Moir - SAC
John Williamson - SAC
Peter Auster - U of CT
Les Kaufman - BU
Marta Rivera, BU
Erica Ross - BU
Jake Kritzer - Environmental Defense Fund
Sally McGee - Nature Conservancy
Jason Claremont - New England Aquarium
Meghan Jeans - New England Aquarium
Technical Advisors - Michelle Bachman, NEFMC, and sanctuary team.

Following comments directly generated from data presented on slides:

Rob Moir: (*Referring to four bottom-type percentages on slide*) This is not as good as 1/3, 1/3, 1/3 that we had in SERA. But it looks like the actual number of square kilometers is greater for each type.

Vito Giacalone: Don't know that it's greater for mud -- it's 1/2. But there's a lot more gravel and sand so that the proportions sort of. If you took out some sand and gravel, i.e., your proportion of mud goes up without increasing the area.

Rob Moir: Get a little more boulder which is really cool bottom ecology stuff.

Vito Giacalone: Haven't got the rest of the multibeam data. I think that will add something.

Irit Altman: Looking at the numbers -- 18% bigger overall but then there's a reduction of the mud area by about more than 15%.

Bob Rocha. Is there a plan to have the multibeam anytime soon to fill out the "blue" (color code image) Sliver.

Craig MacDonald: Ben has been working within NOAA seeking some. There has been multibeam of that area. Question is whether the backscatter derived from the multibeam is compatible with the backscatter version of what we have here. If that doesn't happen we are considering developing proposals to try to get that swath covered so that it is possible to pull all that together.

Brad White: My question is on VTRs -- vessel trip reports. It was an interesting read in the last meeting minutes that over a 12-year period there were about 118,000 VTRs I think collected. Vito, with your research, it indicated that because there weren't spotters on the recreational boats, were those VTRs waved off or were they still used?

Vito Giacalone: Honestly Brad, I did not get involved at all in the VTR stuff. I have been basically a diplomatic critic of using VTR data at all for anything other than maybe what it's used now for as to say where cod landings may have come from, but for as far as the use of the area, I'm not very confident at all on the VTR data for that.

Brad White: On the recreational side, if there is any way we can cooperate and invite an inspector, spotter or whatever you call that person to participate in any one of our trips to help validate our VTR data, we're happy to do it. Because we don't want all of the work we've done to be waved off because it is not official when in fact it is official because we have to do it. Everyone questions the validity of the data on the VTR whether it's a start, a stop or in the middle, or however you report your coordinates. But we were talking about this last week, saying that nobody has really said, "Hey can we come be a spotter on a boat for VTR". So I'm just here to say that we're happy to participate in any way we can.

Rick Murray: I have a few general comments. First, just to elaborate on my background and role: I am a professor at Boston University and you've heard the name Boston University obviously for a long time around here. But I do want to point out that my scientific research is actually nowhere near Stellwagen Bank; it's actually in the equatorial Pacific, so it's really far way. I don't work with Les Kaufman or any of those folks at all. So when I do speak, I just want people to realize that it's not sort of a piling-on approach coming from the same research group. I'm not even a biologist. I like to eat fish and my brother is a former commercial fisherman, and I'm involved in Scituate politics. So I have a vested interest in commercial fishing as well from a constituent basis. But I am here as a research seat and I am an oceanographer. I'm teaching a course right now on Stellwagen Bank in collaboration with NOAA in the BU Marine Program. But I wanted to put that out there just to establish my baseline with you folks. I strongly support a SERA, whether it's SERA I or II. I very much applaud the going off line approach, Vito's work and your folks' work for coming up with a workable compromise. I am very impressed at the lack of scientific data that's out there regarding the sanctuary. There is a lot of information on fishing and marine biology, and so on but there is a very surprising lack of baseline oceanographic data in the area regarding nutrient distributions, water flow -- these real basic core measurements that help define and help parameterize the system. There is a lot on the Gulf of Maine and the Stellwagen area is always sort of tucked in on the western edge of the Gulf of Maine. There is buoy up on the northwest corner and so on and so forth. But I very much like this approach of the SERA II as it's informally called here. I strongly support it because it's a way of moving forward. And I want to emphasize that there is of a lot of science that will be nonpartisan that can be gathered in the SERA II area and elsewhere on Stellwagen that is unrelated directly to the marine biota but that will contribute to the understanding of the system. So I think anything we do here to enhance the ability

to gather that basic scientific data is a step in the right direction. And this to me as a compromise route moving forward should be strongly supported.

Priscilla Brooks: I had a question about going forward what the research plan is for this area. The SERA I had different zones, so that the impacts of fishing could be studied and I think it included a no-take reserve of recreational fishing only, and then bottom mobile gear only area? So do you foresee a similar research design and how is this going to be truly a sanctuary reserve? How is Stellwagen going to be able to design that when so much of this area is outside of the sanctuary?

Craig MacDonald: The SERA II box is truly the first step. The joint habitat advisory panel and Plan Development Team (PDT) of the council met last Wednesday. The advisory panel, as Vito indicated, voted unanimously to recommend the SERA II proposal to the Habitat Committee so that the PDT could begin the task of identifying the treatment areas. So that's the next step. That task is going to become the responsibility of the PDT. In discussing the activities of the PDT with fishery management council staff, Michelle who isn't here today, we indicated here that we were standing by to assist with the analysis as much we did with this third party group and there was interest. So we fully anticipate that we will be engaged to some degree in this discussion of what the treatments are that the PDT would recommend to the habitat committee. The time frame of that is, there has not been a PDT scheduled yet. But the habitat committee, I believe, meets on December 4th and the intent is to have the PDT get together prior to that so that there is some advising the habitat committee in terms of treatment design.

Priscilla Brooks. Great. The other question I had for the adhoc folks, Vito, did you consider going out to the edge of the western Gulf of Maine closure to include that sliver of mortality closure?

Vito Giacalone: We considered three different variations and this was the one per (*inaudible*) (*refers to and describes areas on slides*) -- outside the habitat area. That's the first edge of all deep water and that's going to be the one area that people are hoping to see open. So we did not go out into the mortality area. This area is probably close to 40% even twice as big as what the habitat alternative itself is. So it is offering a lot of area that's outside the habitat that would be considered mortality.

Priscilla Brooks. I'm thinking about those different treatments. So if there is going to be an opening to mobile gear treatment that might be the best place to do it rather than a treatment in a habitat closed area.

Question: Is there a reason that the northwest corner isn't squared off?

Vito Giacalone: The sanctuary boundary is what we ended up following there. It's as simple as that. It was taking the Sliver, plus.

Priscilla Brooks: So also the habitat amendment is considering an area in the northern part of the western Gulf of Maine closure as a particularly vulnerable area that needs to be protected – the SASI model has highlighted it. So I don't know if this relates to that at all, Vito, you mentioned it. I just wondered if you could clarify what your thinking was there.

Vito Giacalone: The Habitat Omnibus Amendment has identified two distinct areas; there's the one in the southwest corner that includes the Sliver and then there's the Jeffreys Ledge one (*refers to green area on slide*). So those are two distinct and exclusive alternatives. Now the habitat omnibus process could select them both. We can't preclude that decision but we are saying as industry folks in order to move forward we would hope that people who are on board with the SERA and on board with the concept of SERA II would not be favoring both alternatives because then collectively you end up closing the entire western Gulf of Main again. We are moving forward saying that this would satisfy the habitat amendment omnibus mandates. Now if the habitat committee decides to select them both, then that's the way it goes. Just so you

know we are going to push very heavily for one or the other and that's basically where the committee is said they are likely going to go.

Priscilla Brooks. I just wanted to clarify that they have been selected independently on their merits.

Michael Moore: I'm new to this game and not necessarily really understanding the nature of these treatments. But to what extent will it be possible to address questions about marine mammal by-catch as part of this experiment research or whatever it is? The mean take of marine mammals in the Gulf of Maine by by-catch is just shy of 3000 animals a year just wonder whether there is an opportunity to ask some objective questions with regards to that side, which is obviously a much more complicated drive by fishing policies. There is a sort of a sleeper in the room in terms of the marine mammal piece there which I am interested into how that works.

Vito Giacalone. All management changes have to go through protected resources and the Marine Mammal Protection Act. So there is an entire component to NMFS that does that. There will be an impact to marine mammals' evaluation in the EIS that accompanies this amendment. The SAC won't have to worry about whether that's being evaluated.

Michael Moore: I understand and I know all of that. My question is whether or not there is an opportunity here with regards to the research you're doing to ask as a sort of a rider to the other treatments you're doing whether or not we can learn anything about mitigation or issues in terms of the impacts and which gear features are catching more marine mammals. I'm just asking a sort of a scientific question rather than a regulatory question.

Craig MacDonald. The treatments are going to be designed based on answering the habitat related questions. How fishing gear and different habitat types interact. Once those treatments are established, we can look at if there can be some additional research layered on top of those treatments. But it has to be understood that the driving force in developing the treatments is going to be pretty narrowly focused on habitat issues.

Michael Moore. So it's addressing mobile gear habitat damage questions?

Craig: Yes, fixed gear, mobile gear, recreational.

Rich Delaney refers back to treatments back in original SERA and asks Craig to describe color-coded research treatments.

Craig MacDonald: A: no-take control; B: hook and line only; C: all gear types except bottom mobile; then the rest of the sanctuary was all gear that was legal.

Rich Delaney: I can see that these variations of fishing gear being related directly to how much by-catch -- that could be added on pretty easily. Some similar treatment will be re-established in the next process by the PDT presumably. This is a timely question.

Michael Moore: Basically I am saying don't forget the marine mammals and how you look and interpret, and plan on how you are going to collect the data to the extent of this practice.

David Robinson: As part of the impacts to habitat, are submerged cultural resources going to be evaluated in terms of the impacts or treatments are for them?

Craig MacDonald: The immediate answer is that is not the priority of the PDT or habitat committee but is of interest of the sanctuary. So within the extent of the sanctuary jurisdiction in there, we would be very

cognizant of that. But outside of our jurisdiction we may be able to offer comment but we lack the jurisdiction.

Bill Adler: I'm not ready to take this to any level right now. I want to study it further. But I did want to ask again which one was which (i.e., original SERA research treatment areas)?

Craig MacDonald. A: no fishing. B: hook and line only. C: all gear types except bottom mobile.

Bill Adler: Some of the statistics show the uses and I did talk to Craig before the meeting about the fact that the lobster fishing – you don't have the statistics on lobster fishing because if you are taking them from VTRs, they are either not there or they are inaccurate. In discussing any of this stuff with regard to lobster fishing that you would have to involve some lobster fishermen particularly as I said early this is area one "lobster land" and they do have a group called the Lobster Conservation Management Team set up by the Atlantic Marine Fisheries Commission states made up of fishermen in that area and Massachusetts has a portion of that membership -- New Hampshire and Maine -- which you wouldn't need and that might be a group or part of that group that might be brought in to discuss this because they are right there. That might be a way to get the fixed lobster gear fishing input because that group is already there and could be used. But I'm fighting obviously to support a very big mandate from our association that there shall be nothing closed to lobster fishing in Stellwagen Bank. And that's the bottom line that they have. So therefore that group might be useful if these discussions continue on the SERA II.

Rich Delaney: Has that group typically participated in Council management decisions or had input in the past?

Bill Adler: Remember lobster is not under the Council but it's under the Atlantic States Marine Fisheries Commission and the Atlantic states have this system of LCMTs and they are lobster fishermen from that area that deal mostly in the management issue. But this is the group that would be cognizant of the situation and could be brought for discussion rather than looking around trying to find somebody else.

Deborah Cramer: Vito, with the SERA I proposal, there was a lot of objection because areas A and C were high fishing areas and you had talked about how there were 38 offshore vessels left – 6 in Gloucester. How many groundfish day boats are actually out in areas A and C?

Vito Giacalone: Just out of Gloucester, there are 72 vessels that would be under 50 feet that are fishing regularly for groundfish. Then you have South Shore – Scituate, Marshfield, I would guess another 20 or more.

Dave Robinson. If I could just come back to the submerged culture resources again -- As the Maritime Heritage representative, I feel I have an obligation to advocate for a silent resource. I hear what you're saying, Craig, that you are cognizant of the need to address submerged culture resources as you go forward with treatments for the area of the SERA for the sanctuary. I just request for the next meeting or at some time in the future before anything goes forward, if you could let me know what cognizant means and better define how you're going to basically address the resource. Are you going to include in the research design, any type of survey? I really think it's important for us, and in particular for me, to know how the sanctuary plans to address and evaluate the impacts from this program, if in fact it does move forward.

Craig MacDonald: We've adopted a number of protocols. When we get proposals from scientists who would impact the seafloor, either putting in a mooring or using some sort of dredge or something to extract a sample from the seafloor -- one of the things that we do is that the proposal is referred to the marine archaeologists who, with the available database that they have, can look and see is there any known historical resource within the area that has been identified for sampling. If there is, then there is generally a recommendation made for an alternative area. So as the PDT begins discussing the treatments that come

under consideration that fall within the sanctuary, we can apply that same standard, “Are there any known shipwrecks, there?” Then we can introduce that into the discussion because we need to maintain that standard across the entire sanctuary. The difficulty with maritime heritage resources is that there is a lot of them out there that we don’t know where they are, and we generally only find them if it’s reported to us or we find them in our own sampling. So, it will be an evolving understanding of where the shipwrecks are within the sanctuary but also further to the east. But you bring up a really good point and internally it’s something we need to give more thought to. But my immediate response is I don’t know what we can do to change it. We would have to use the existing protocol prior to approving any research that impacts the seafloor to direct that research away from known shipwrecks.

Dave Robinson: Direct it away from known shipwrecks? The research or the impacts?

Craig MacDonald: We want the research done. We are actually very desirous to have as much research as possible done in the sanctuary but we don’t want that research to conflict with our mandate to protect historic resources. We actually look to see at that site, do we have knowledge of shipwrecks within that area? In some instances, we also require that there be some surveying by the perspective permittee around it to be sure that there is sufficient buffer around it. That seems to have worked very well to avoid any scientific conflict with known historic resources.

Dave Robinson: I’m worried about the known ones but it’s the unknown ones that I’m equally worried about.

Craig MacDonald: But that is something that until we designate an area and begin doing research and find out what’s there, we are not going to know.

Dave Robinson: For the record I’d like it known that I am expressing a concern and that to the extent that it’s possible. I would certainly like there to be a multi-beam survey that’s being done or side-scan survey that is being done to characterize benthic communities. It would be good if that data is made available to the staff archaeologists, that they had the opportunity to help direct the research as it goes forward.

Jen Anderson. To follow up on that -- Craig, Ben, and I, and others talked about the research and trying to communicate better. NMFS actually permits the research that goes on in this area and should that come to be and that area exists, a lot of the research that comes through would be through exempted fishing permits. And if we know where something exists, and that was something we were talking about in the confines of the actual sanctuary, but the same thing would be true for outside the sanctuary. If we know there are areas where we want people to avoid, we obviously aren’t going to tell them exactly where it is, but we can set off a zone, and say you need to not go in here. And that is a stipulation that could be as part of our permitting process. Obviously it doesn’t speak to the things that you don’t know are out there, but we do have tools to use for the things that are known.

Rich Delaney summarizes: We’ve had a very clear presentation. We’ve had input that shows the sanctuary staff has contributed to it and are fairly comfortable with the direction this is heading in. With the history as a SAC and as a sanctuary of hoping, pushing, wanting, supporting an ecological research area to be designated of some sort. I think Rick said it well -- whether it’s a SERA I or a II, a sanctuary with a SERA of some sort -- this development seems to move it in that direction. I think it would be helpful if, we as a body, at least endorsed the process in that this SERA II be encouraged and supported to move to the next step in full consideration by the Habitat Committee and presumably on to the Development Committee of the officially ordained process which is conducted within the NEFMC. Would anyone like to put a motion on the table that suggests such a motion or make it a little bit more articulate than the one I did?

Rick Murray: So SERA I is still formally endorsed by this committee, is that correct? My only concern and I’m 100 percent in favor of moving forward with the SERA II in the sense that it’s gets something going in

this direction. I don't know your guys' inner workings or any of the politics, but if we endorse SERA II, which I am personally all in favor of doing, does that mean that SERA I is automatically withdrawn? What are the implications of that? Are they there on parallel tracks? It seems to me that reading between the lines SERA I is probably "DOA" anyway. So maybe there is not much difference *in toto* at the end of the day. I don't know the implications. If we make a motion and endorse this, does that mean that is now a SAC entity? Personally I'm fine with it. Just I want to make sure that this committee is aware of implications as we move forward with SERA II.

Craig MacDonald: I don't know that you have to surrender one for the other. What is probably helpful in the overall process, would be some support for further evaluation of the SERA II Proposal by the Habitat Committee and PDT. Essentially, you are not surrendering ownership of one for another, you're just encouraging and allowing the process as it's unfolding be allowed to go further.

Rob Moir: It's kind of bad Robert Rules of Order to introduce a concept like this and vote it at the same meeting. I also don't want to be too formal in our process of this. I think it would be more appropriate to get a sense of the meeting, is there a sense of support and not necessarily even call for a vote if people don't want to reveal how they feel. Maybe they do, but I think it should be done at that level as the sense of the meeting, as opposed to a formal motion by this body.

Vito Giacalone: I agree with Rob. I just want to lay out there some things that we need to think about as a group. There is a fully supportive letter out there but it's for a fully fleshed out SERA I proposal. You still have the research treatments that need to be resolved to make sure that it satisfies what the SERA research was. From an industry perspective I wasn't expecting that the SAC would have a discussion that would say "Toss out SERA I, take SERA II." But there is no question at this point, the path the SERA I took is not likely to get resurrected in the NEFMC omnibus process and this one is at least a live one front and center. So I think from an undeveloped alternative standpoint and the fact that this is working in a way where industry, Stellwagen, everyone could all be on the same page pulling forward for it. I think it has a lot of merit that way and if someone on the SAC could think of a way to encourage this effort going forward because I don't think it's a one or the other at the Council level. It's this or nothing I think right now at the Council level -- SERA II or nothing. Then the alternative is, if this doesn't work, then I don't know what the next move would be to try get SERA I going forward. The other thing too from a SAC perspective, from mobile gear perspective, we didn't want to say, "Well we weren't happy the way SERA I went, so we're not going to play anymore." We wanted to do the complete opposite. That wasn't the way we wanted to see SERA I proposed. Let's get this going in the right direction. Let's learn from that and move forward. So I think that there are a lot of reasons why SERA II is distinct from SERA I. I don't think it requires letting go of SERA I, but I do think it's important that everyone knows that the reason I'm working hard with industry to support this is because there is an assumption that there won't be a push for SERA II plus a hybrid of an extension west of SERA II. That would be a breach of at least a verbal understanding. That understanding hasn't been embraced by the SAC at least. I think to the extent that the SAC could say, "we understand that SERA II would be a replacement for SERA I, if it ends up meeting all the research and we do understand the industry support for this at this point is conditional SERA II not getting any bigger in size." Those are the frank discussions I wanted to have on the record because I am working hard with industry for them to support this knowing that we're going to move this. At least, Stellwagen is not going to come forward in this process and look to attach additional areas from a Stellwagen perspective. As Priscilla pointed out, this body can't influence any more than its voice wants. At the Council process, the omnibus could select this area, Jeffreys Ledge and maybe close the whole of the western Gulf of Maine closed area. That's on the table and the groundfish committee who is also weighing in -- that's why it's omnibus -- it's both of them -- they could enlarge the area even more. I realize that this deal or this understanding by the SAC is limited to what the concerns of Stellwagen are. I think that's the part that we can say as a group, is Stellwagen [i.e. SAC] would only want one area or the other, but it's too early to let go of SERA I because we don't know if SERA II meets the objectives of the research. I'm not ready to make a motion. I don't think it would be appropriate for me to make the motion.

Rich Delaney: I am pushing a little because I believe the timing is critical. We've been at this for a long time. We ran into a "no go" with our SERA I and it's not officially in the game now because of reasons we talked about before. So here's the new game in town and we can deliberate for another month (or longer until the next SAC meeting). I am assuming that maybe the habitat committee and PDT are both going to be meeting before we come back together and I don't know what they are going to say or think. But they are going to wonder where the does the SAC stand on this new SERA proposal. We know the SAC wanted SERA I but that's not here in front of us. They will wonder where the SAC stands. Do we want to weigh in generally? That's why I'm pushing us a little bit about this.

Priscilla Brooks: I am not prepared to make any kind of vote on this today. There's just too much uncertainty. I really applaud the adhoc committee for moving this forward and getting folks in the room to think critically about what the sanctuary needs and finding an area that included all the critical habitat types. That's good stuff. But there's a lot of uncertainty around what the research treatments are going to be. What the role of the sanctuary is going to be in determining that and having some control over what gets studied whether it's shipwrecks or marine mammals. I just don't understand exactly how it's going to work so it's hard to get behind this. The other piece is that this is a really important area -- the western Gulf of Maine habitat closure, the area to the north that's been identified on Jeffreys Ledge is boulder, cobble, ridge, bottom -- very, very important bottom -- spawning area for cod and other species. To the extent that there's some trading that's going to happen at the Council and this factors into that, that adds some additional uncertainty on my part. That's where I stand. I'm not ready to take any kind of official vote, or officially approve this.

Rich Delaney: If it's helpful I really didn't articulate well what we might say. But this other group, the advisory panel, in its discussions and in its recommendations to the habitat committee. Very simple, they recommend to the Habitat Committee that the SERA II proposal be further considered by PDT as a dedicated habitat research area, period. That was the 8-0 vote that supported moving a little bit further ahead. That's all I am suggesting we might even do at this time -- not pick and choose and not getting into any more detail but a very general statement saying "Let's keep this discussion". Because I think to echo what Priscilla said, a lot of people have weighed in on this so far -- a lot of our research colleagues; it's great to see the industry being proactive and, for me personally, that carries a lot of weight. But I am listening to more comments from everybody.

Jonathan Grant: Going back to what the Council might say about what the SAC thinks. Whether it's official, do we have any idea how the NEFMC will interpret the SAC having no sense or any opinion on SERA II?

Rich Delaney: I don't know how to answer that. I don't participate in that discussion. Vito do you?

Vito Giacalone: It's certainly is a valid concern. There is at least one member that is very vocal who is going to ask that. Where does the SAC stand on this because there will be a concern about this additive effort that happens after. At least from the SAC perspective, I don't think what the SAC says necessarily precludes a group, for instance like Priscilla's group, from advocating for something more than this at the Council level. That's an entirely separate place. If we are going to try to reach a consensus from this group, I don't think it's conflicting to do that. I'm just going to put it out there -- for mobile gear guys, they are going to ask honest questions to me or the industry is going to ask honest questions, and say if the SAC is not going to give us a clear direction that they would embrace this as a replacement? We don't know if they are going to come forward and say the SAC later on is going to favor Jeffreys Ledge plus the bulge out west, just as an example. Why would industry put forward such a large area now that the omnibus habitat committee isn't looking at? This large area is unique to the SERA II Proposal. The purple area is one habitat area that may end up being the only area or that area might not get closed at all in the habitat amendment. It may be just Jeffreys Ledge. So that discussion is going to happen outside this group. Now if industry doesn't have the comfort level to know that this larger area is only -- by embracing this larger area pushing it at the

Council level, not knowing where the SAC stands, there may be industry people pushing me to say, “Why are we proposing something larger? You’re offering it to the SAC and they haven’t even said that they would go for it as a SAC. So why are we offering this additional area? Let’s just take our chances and go to the omnibus.” SERA I, I don’t believe is moving anywhere in this process. So, the possibility of the SAC being weak on this is that we end up with nothing. There’s no mandate in the current omnibus habitat amendment process that says that a SERA II needs to be included. We’re putting it front and center. The purpose of this is for SERA II. We’re also inviting them to use this as a DHRA which they do need to do. But a DHRA can be a lot more they don’t necessarily need to be this big of an area. DHRAs can be very small discrete areas and they can be sprinkled around in the Gulf of Maine. So it’s sort of a gamble for us to not at least send some type of message.

Deborah Cramer: Maybe I am misunderstanding our role, but as a member of the SAC I don’t see how we would ever be in the position of going to the NEFMC and asking for this research area to be expanded to include Jeffreys Ledge because Jeffreys Ledge isn’t in the sanctuary. So I don’t think we have any platform to even comment on something like that. But I can certainly see that, for somebody else doing that, I can certainly see that as an industry fear and as a legitimate industry fear. From my point of view, my fear is that I don’t want to go on the record supporting this when I don’t know what the substance of it is. I know the boundaries, but I don’t know the designation of the different areas. I guess what I would like, but the phrase that you (Rich) read didn’t really imply support one way or the other. I would like to support is the process to go forward, and to be able to support the process without endorsing the final substance because we haven’t been presented with the final substance. Perhaps that phrase that you (Rich Delaney) read would do that.

Rich Delaney: That we would recommend that the SERA II Proposal be further considered as the process part of it by the next group that has some authority over it, which would be the PDT and it would be considered as a dedicated habitat research area. Details to follow in their area of jurisdiction, that we can feed into but we don’t have jurisdiction over.

Rick Murray. I completely support that statement. I think that statement is excellent and directly applies here, and it addresses very valid concerns from Priscilla and Deborah, and various other questions that have been raised. We can’t answer those questions unless the process moves forward. So, if we don’t want to move this process forward, we’re never going to be able to address those questions and then, we’re just left holding a big empty bag. I think in order to specifically address those and other questions, we should be very much come out and say exactly what that statement says is, let’s let this process move forward, go up the chain, or down the chain or sideways along the chain to take advantage of this potential opportunity. I also agree with what Rob said earlier, and Vito echoed, is that I don’t think we need to have a formal motion endorsing SERA II or anything like that because it’s inappropriate. Also, I wouldn’t want to compromise the still quiet way this is moving forward successfully. If we can keep moving this upward in gathering the information so at some point in the future we can make an informed decision when we break out the resource areas than this is great. So, I strongly support wording like that or closely akin to it.

Rob Moir: I would like to do it as a “yea or nay” voice vote so that you can convey the feeling of the group.

Steve Milliken: I don’t have to agree with what Deborah was saying about the letter in particular. Just looking at the diagram there, we have a tiny little section there that we have to deal with. Fisheries and the fishing industry is working in an area so much larger and, for me, the general sense is the fishermen out there know what’s going on -- usually more so than a lot of the researchers. They are out there every day. So I quite often tend to bend an ear towards the guys out there. They know what’s going on. They are working with other organizations well. I think if we go with a letter, it covers enough for our little corner of the world there to support what’s going forward.

Vito Giacalone: I support the same concept. If there is any way that something could be added to the motion that talks about the objective. The rationale behind supporting this to move forward to be as an alternative is

to find a way to not have areas that are already currently open to fishing and important to the inshore fleets be replaced with areas that are inside the closed area. That's the objective. Until the details come out, we won't know whether it satisfies -- that's the reason we're behind this. May I ask the question: If you flip it around, Deborah, and you look at this, why would industry support the larger area? If there is even the slightest hint by this motion that the SAC understands that the reason this big area and the closed area is being supported is because we're trying to avoid those areas A and C that are in the west. The reason for industry support behind this is to find an alternative to that - find an alternative to the western bulges (*in SERA I*). So if there is anyway it can be incorporated into the motion that I can point to say that we're all pulling in the same direction on this because they don't want to see those areas west closed if replacement areas are shown through analysis to exist in the western Gulf of Maine closed area. Otherwise this isn't doing anything. It's just saying we're supporting this as an alternative, but it's not talking about what's happening with the areas bulging west.

Rich Delaney: I understand that. But as soon as we start to get to this level, we're going to start to lose some of the consensus around this general statement. One solace might be that our record of this discussion will be accompanied with a single sentence statement we make so people can get the flavor of what this discussion has been about, ranging from archeological sites to marine mammals to the industry's concerns. There are a lot of different perspectives here that will all be part of the Minutes. So you know how, in a congressional record, you've got the law and then you've got a lot of narrative that helps explain what our discussion was, rather than try to capture all of that in the recommendation. That's one point to consider if we start going to another level of detail, but let me put that on hold.

Peter Auster: A couple of selling points: One is perhaps we're ascribing too much to the detail in the SERA I proposal to what the Council might ultimately do. The SERA I proposal was in fact that, and what we were asking was that it be transmitted to the Habitat PDT for analysis and evaluation. Things could change there as well. The proposal presented the ideal framework from the perspective of the sanctuary. But there was certainly going to be in the discussion some give and take. Essentially that's what would be going on with SERA II is although more of the discussion about the treatments and how they were going to be distributed, etc., would happen in collaboration with the sanctuary at the PDT level for transmission through the normal Council process. The other part is that, in regards to the larger area, is at the last habitat committee meeting, Michelle and I gave a presentation about DHRAs, and currently the adverse effects areas -- those smaller boxes -- the purple and green -- are focused on areas of hard substrate -- hard bottom. That was the target for the SASI model and the additional information that went into developing the boundaries of those areas. We pointed out at the last habitat committee meeting that DHRAs, the broad concept, is to understand processes that affect the dynamics of managed species and that, based on the constraints of adverse effects areas, we're leaving out a broad swath of habitats on consolidated sediments that are important for a large number of managed species in the northeast region. This proposal, SERA II, embraces that and adds those additional elements so it fits nicely within the DHRA concept at large and we can essentially translate all those same questions that were in the SERA I proposal to this. They can all be addressed within this broader region albeit with a different bit of geography and with some adaption with different experimental designs. The other thing that we talked about at the last DHRA subgroup meeting and at the last habitat committee meeting was not necessarily having discrete treatments, but having individual replicates distributed where they need to be within the matrix of habitats that are out there because habitats don't align themselves necessarily to hard borders. That's not been fully embraced and it's unclear how those things would end up in any DHRA segment of the larger omnibus proposal. So there is some uncertainty about that so blocking immediately with broad treatments sets the stage but isn't necessarily any final set of boundaries for how these might play out.

Priscilla Brooks: One thing I haven't heard from Craig is how you see the benefits for Stellwagen of the DHRA that encompasses a piece of Stellwagen but then the majority of it is outside Stellwagen. How is that going to benefit Stellwagen Bank National Marine Sanctuary?

Craig MacDonald: If you go back to the original SERA I proposal, we made that proposal based on the jurisdiction that we have. We did not go beyond the boundaries because we didn't have jurisdiction out there. Now this alternative process, the Fisheries Management Council is not bound by that constraint. They are looking at a larger area to consider for DHRAs. If we can achieve the same goals for the sanctuary in an area that is outside as well as within, then we're all for that. If you may remember there were three goals that we had in identifying the SERA I: one was we wanted to minimize the impact on fishing and that actually was number 1. And we thought we had done that to the extent that we could within the box coming up with treatments that were sufficiently large. We thought we had achieved that but upon public comment the sense was that we hadn't. We also wanted to look at do we have sufficient representation of the four major habitat types that would allow treatment and controls to look at can we do the job? Our sense is that with the SERA II that that is going to be possible particularly with some additional mud that would be identified by multibeam work, so we think that is captured. The third goal was that we wanted to be sure that the oceanographic regime – the biogeographic component that affects biodiversity – within the ecological research area was broadly representative of what we find within the sanctuary as a whole. I showed that SERA II does do that (refers to slide). We get the principal oceanographic regimes. We get the intermediate water type which is the major water type within the sanctuary as whole which is indeed the major oceanographic regime within the SERA II. So we think that in all respects the SERA II meets the three goals of the sanctuary. In fact the first goal to minimize the impact on fishing is amplified greatly by the alternative. So we're encouraged by the development. We are anticipating and looking forward to working with the NEFMC on exploring this as the alternative -- as a preferred alternative within their draft EIS. I don't know how else to say it, is that we are no longer constrained by boundary. We have every expectation that we will be able to participate with the PDT and continue to design the treatments and we are hopeful that if this were established, we would have the ability to work with NOAA Fisheries in ascribing what sorts of research is done there. We feel this is a positive development and we want continue to see it evaluated because I think it's going in the right direction.

Rich Delaney: Let me just take preliminary poll to see if SAC get to a statement. How many people would like to see us get to a statement today and how many people are not prepared to get to this today. I think we are almost 2-1 in favor of at least trying to get a little further along. So maybe it's going to take one more step and a little bit more of an elaborate statement.

Proposed statement prepared by Rich Delaney:

SAC recommends to the habitat committee that the SERA II Proposal be further considered by the Plan Development Team as a dedicated habitat research area with the understanding that research zones be developed that reflect the scientific objectives of SERA I and take every precaution to minimize further impacts on fisheries.

Discussion/Comments concerning the wording of the proposed motion:

Rich Delaney: I've heard Vito talk about how we don't want to have you guys come back later and the industry bargain, let's call it, and Peter just articulated well the next steps. We can't do it so the PDT will eventually do sub-designations that will get to our research objectives. So our support for moving this forward would say, we're assuming that all those things are going to happen. There will be research zones or treatments that reflect all of the work that the sanctuary has done in terms of looking at the scientific needs, and by the way we're mindful of the fact that industry is here to help lead the charge and we understand their needs too. So that's the language. If this doesn't get us there, then maybe we wait and revisit this at another meeting. Does it sound good enough to discuss at least or make into a motion?

Heather Knowles: It's really critical that the SAC make a statement. Our credibility is at stake and as we talked about earlier, we have to ask ourselves, "Why are we here?" If we are not going to be part of the bigger picture, then we have to be relevant in the bigger picture. I just ask that you consider that perspective.

This thing is much bigger than what we're discussing in our own individual viewpoints. I just really encourage us to be a relevant voice and a stakeholder in the bigger picture by making a statement. It doesn't have to sign us up for anything or commit us when we still don't know a lot of details. But remaining silent would be detrimental to our credibility.

Irit Altman: This has been said to some extent but just wanted to echo and also from the perspective of a new Alternate Member. The process of the development of SERA I and SERA II is really encouraging to come back to the table and bring in industry and stakeholders to come up with a new plan. I would hate to not support that process by remaining silent on this because I think that the effort has really led to a strong advance in not throwing away a research area at all. So it seems to me that some support of this process whereby we brought a number of people to the table in the adhoc working group to find a solution is really an important thing to support at some level.

Rob Moir: It's closing areas to fishing already so that's an impact.

Deborah Cramer: Further than what? It's really vague. But we don't know what the treatments are going forward. You don't need a unanimous vote. I'm perfectly happy to support the first phrase without the conditions on it. But I'm still not prepared to support the second. But I am a minority here, so you can have this go forward with me abstaining and it will still be fine. I am completely in support of this process. It's been an amazing thing that Vito, Les, and everybody has gotten together to move this forward, but it's very difficult to support something when the substance of what was in the first proposal is not there yet. It's not that I wouldn't support it in the future. I support the process going forward. But it's unfair to ask me to support something where the substance isn't there. And you don't need a unanimous vote.

Rich Delaney: This is a sense of the SAC. We are not voting officially on a SAC recommendation. This is a non-aligned informal process that we can certainly care about moving forward. We care about these things. We want to make sure they don't get lost in the process. The process being one that we don't do, but one that the Council does. We put a lot of work in the SERA. We're happy that a SERA concept is still alive. We would like to see the SERA ultimately reflect our scientific sanctuary needs, and are mindful of the fact that our industry partners have certain objectives that they need to achieve as well.

Rob Moir: Craig outlined the criteria and your motion reflects that. I don't think we need to do further wordsmithing. Expect some opposition votes because it's a step away from SERA I.

Dave Robinson. Disagree – we need to wordsmith it more.

Vito Giacalone. Put the time into wordsmithing it. I understand Deborah's concern. Somehow it needs to be worded that we understand that the objectives of the research need to be met and have to be satisfied, and it's too early to know that that's going to happen. On our end, we're all hoping that there won't be further impacts to fishing. So how we end up wording that, I don't know, but if it takes a little more time to make sure that everyone is happy and we end up with a unanimous vote as opposed to two dissenters, I think that's worthwhile because the timing is being dictated by the omnibus amendment not by the SAC or by anyone's wishes. The ideal thing to do would be to deliberate over this for the next two meetings until everyone is happy -- we just don't have that luxury of time. But I don't want someone to walk away dissatisfied because we didn't take enough time to think about the language because there's still a gray zone for us work with.

Bob Rocha: Do we know who chooses the research zones?

Tim Moll: Who ultimately breaks this up into its little pieces?

Craig MacDonald: Understanding is that the treatments will be identified by the Plan Development Team. They will then make their recommendation to the Habitat Committee. Then the Habitat Committee will

decide whether or not to adopt it. If they do decide to adopt it, then it is referred to the NEFMC as a whole to vote to include it in the habitat amendment and then there's a public process full NEPA [National Environmental Policy Act] process that then ensues. When that information comes back, there could be some additional tweaking.

Tim Moll. The habitat committee is part of which group?

Craig MacDonald: A subcommittee of the NEFMC as a whole.

Tim Moll. Ultimately after that's all decided, can NOAA come in or NMFS come in and say, "We don't like this?"

Jen Anderson: The Magnuson process works that NMFS can vote basically up or down or throw it out for a technical reason -- if it doesn't comply with the law kind of reason. So if the full Council puts it forward and it's the recommended motion, and it comes to in NMFS and there's not a technicality reason -- that it doesn't break the law. So typically NMFS would vote it in. I think by the time it would get to that kind of stage, it would be fairly vetted and we would know if there were any problems. I think that sort of thing would be coming out right now and I'm not aware of anything like that.

Rich Delaney summarizes the motion:

Motion: SAC recommends to the habitat committee that the SERA II Proposal be further considered by the Plan Development Team as a dedicated research area with the understanding that research zones be developed that reflect the scientific objectives of SERA I while making every effort to minimize impacts on the fishing industry.

Rob Moir motions; Rick Murray seconds. Passed 11 yeas, 0 neas, 5 abstains.

Yea:

Irit Altman

Vito Giacalone

Heather Knowles

Whit Manter

Bob McCabe

Rob Moir

Tim Moll

Steve Milliken

Rick Murray

Daniel Pingaro

Bob Rocha

Abstain:

Bill Adler

Priscilla Brooks

Deborah Cramer

David Robinson

Brad White

IV. Volunteer Programs - NMSF Volunteer of the Year (Anne-Marie Runfola)

Volunteer Program Coordinator, Anne-Marie Runfola, highlighted the important contributions of sanctuary volunteers in three ways during her presentation. Firstly, SBNMS and National Volunteer of the Year Ron

Armonath was presented with a plaque to honor his work leading the Coast Guard Auxiliary in collecting whale watch vessel traffic data. Secondly, Teen Ambassador, Caitlin Fitzmaurice, gave a presentation on the two *Child's Sanctuary: Go Green for Marine Life* events she produced focusing on sanctuary whales and entanglement issues and solutions. She ran two events, garnered a full page photo essay in the local paper and will also give a final presentation to the Administration and Science Staff at Gates Intermediate School in Scituate, reaching hundreds of parents, children and teachers in the process. When she completes the final tasks this winter, she will be honored with the Gold Award, the highest level of achievement for a Girl Scout.

Thirdly, Anne-Marie invited her volunteer corps to attend the meeting to learn more about SAC operations and the importance of their work in sanctuary management. She and the SBNMS staff used the opportunity to thank all the volunteers, including the SAC. The group enjoyed an NMS-themed cake to celebrate our volunteers and the 40th Anniversary of the National Marine Sanctuaries program.

V. Working Luncheon: Update on Regional Ocean Planning Efforts in NE (Betsy Nicholson)

Betsy Nicholson provided an update on regional ocean planning efforts in New England, covering drivers, potential benefits, and a portfolio of projects led by the Northeast Regional Ocean Council (NROC), including commercial fishing mapping, recreational boating survey, northeast regional data portal (northeastoceandata.org), habitat classification work, marine industry engagement and natural resource/conservation engagement projects. All of this data gathering and engagement work lays the foundation for the region to respond to President Obama's Executive Order, establishing a National Ocean Policy and the formation of Regional Planning Bodies of federal, state, tribal and FMC members in nine regions to design regional ocean plans over the next several years. Nicholson will serve as the Federal lead on that new body and considers SBNMS a microcosm of ocean planning with many lessons learned, similar challenges, and valuable science to be applied at this regional scale. She welcomes opportunities to keep the SAC informed and engaged.

Rich Delaney: It's encouraging that NMFS and SBNMS to get involved. Get staff and some SAC members involved. He welcomes Betsy to come back and keep the SAC updated on the process.

VI. Programmatic Reports

i. Programmatic Updates

Craig MacDonald provided an overview of the programmatic updates compiled by SBNMS staff. This report is sent to SAC members before each SAC meeting. It summarizes progress and future steps in the various programmatic areas and is sent by email rather than having staff provide oral briefings at each SAC meeting. (See Appendix for a summary of programmatic updates for this reporting period).

ii. D-Tagging Summer 2012 (Mike Thompson)

Michael Thompson gave a brief overview of some research the he and the research team conducted during the summer of 2012 field season. He briefly mentioned some of the research the team worked on this summer, starting with the release of the WhaleALERT iPad application, internal wave research with Woods Hole Oceanographic Institution (WHOI), right whale Seasonal Management Area report cards to ships, AIS testing and maintenance, seabird surveys, SERA analysis and supporting the Boston University Marine Program courses. Due to time constraints, he focused on bird and whale tagging.

The sanctuary partnered with the US Fish & Wildlife Service (Linda Welch of Maine) as a pilot test to satellite tag great shearwaters to learn where they migrate, feed and breed. Utilizing the Auk and their RHIB they captured and weighed 18 great shearwaters, took blood, feather clippings, banded and released all of

them without satellite tags due to their small size. The tag requires the seabirds to weigh 950 grams, the largest captured was 780, which means next year they will be using smaller/lighter tags.

This year's whale tagging was a hugely successful field season that included over 30 scientists aboard NOAA's *R/V Nancy Foster*, the International Fund for Animal Welfare's *R/V Song of the Whale*, the *R/V Auk*, and a handful of support vessels. The team put 27 tags on 21 different humpback whales over the course of the summer, utilizing WHOI's DTags and National Geographic's critter cams. Some animals were dual-tagged with both tags to record never before seen underwater footage of whales feeding with high accuracy data loggers.

VII. Constituent Reports (SAC)

i. Diving and Moorings in SBNMS (Heather Knowles)

Heather Knowles presented on her ongoing collaborative project with the sanctuary to install SCUBA diving moorings on sanctuary shipwrecks. In 2012, she and archaeologist Matthew Lawrence received a \$2,000 grant from the PADI Foundation to document derelict fishing gear entanglement on sanctuary shipwreck dive sites and to install a dive mooring on the *F/V North Star* shipwreck. SBNMS staff installed the subsea mooring system purchased and designed by Ms. Knowles in July. Ms. Knowles' mooring system facilitates access to sanctuary shipwreck dive sites while protecting them from anchoring damage. Unlike most mooring systems, it has minimal maintenance costs and does not conflict with other sanctuary users.

ii. The Ocean Declaration – Rio +20 Summit (Rich Delaney)

Rich Delaney provided an update on the “Rio plus 20” earth summit that he attended in Rio de Janeiro this past June. There have been three earth summits to-date: the first one in 1992 was convened by the United Nations and brought together for the first time about 150 world leaders to adopt what was called the “Agenda 21” and over 400 recommendations were developed over what the world regions must do to develop programs to save the earth. Over 100 countries were involved in developing such plans; however there was little or no focus on the ocean during the summit. The next summit happened in Johannesburg in 2002 and the focus shifted from saving the earth to saving communities through education and health. Again no focus was placed on the ocean. At that point an international group formed (including Rich) called “The Global Ocean Forum” with a mission to get the oceans back on the international agenda. The group has been working on these issues for the past 10 years. At the third summit, “Rio + 20”, in Rio de Janeiro this past June, the focus and concept evolved a little bit further which was, in order to save the earth there needs to be healthy sustainable communities through adopting green technology. The whole concept has been evolving. “Rio +20” was an opportunity to look back to see how much progress was made as an international community. Unfortunately Rich reported that not much has changed. The only good news is some of the indicators and recommendations for oceans seemed to be moving up in importance. At the Rio summit, the Global Ocean Forum group presented 20 specific recommendations that the whole international community embraced and adopted. The specific section, Number #177, in the final document that the United Nations published, known as the “Outcomes” document, endorses what is done within the sanctuary program. Oceans fare well in the global forum but need a lot more work and world leaders need to focus a lot more attention on these issues. All of this information in more detail can be found at the Global Ocean Forum website: <http://www.globaloceans.org>.

VIII. Agency/Governmental Reports (Jen Anderson)

NOAA Fisheries Regional Report and Whale Sense. Jen Anderson presented the NMFS report and provided the following summary:

Gulf of Maine (GOM) Cod Update

- Recall that at the June SAC meeting it was reported that GOM cod is overfished and overfishing is occurring. In response to this finding, a quota of 6,700 mt for fishing year 2012 was set by NMFS through Emergency Action.
- The Northeast Fishery Science Center is scheduled to perform a GOM cod benchmark assessment the week of December 3rd.
- Based on the findings of the assessment, allowable catch limits for fishing year 2013 will be recommended by the Council in January and included as part of Framework 48 to the Northeast Multispecies Fishery Management Plan (FMP).
- Framework 48 is scheduled to be implemented on May 1, 2013, and would also include annual catch limit specifications for several other groundfish stocks, monitoring measures, and revised accountability measures.

Atlantic Herring Specifications

- As part of the 2013-2015 specifications for Atlantic herring, at its September meeting the Council approved several measures for the draft specifications package including: (1) allowable biological catch rates; (2) adjustments to accountability measures; and (3) to account for management uncertainty, a deduction of 6,200 mt for Canadian herring catch from the New Brunswick weir fishery.
- Final action will be taken by the Council at its January 2012 meeting with implementation expected in summer 2013.

Atlantic Sea Scallop Update

- At its September meeting, the Council agreed to request that emergency action be taken by the National Marine Fisheries Service (NMFS) to close the Elephant Trunk Scallop Access Area as soon as possible to protect the high level of scallop recruitment that is now occurring there. This request is under consideration by NMFS.
- The Council is also finishing up work on Framework 24 to the Atlantic Sea Scallop FMP. This action covers several issues including specifications to adjust the DAS, general category permit allocations, and area rotation schedule and allocations for 2013 through 2015. It would also set specific measures to minimize impacts of incidental take of sea turtles pursuant the Endangered Species Act.

Omnibus Habitat Amendment

- Work on the Omnibus Habitat Amendment is ongoing. The Habitat Plan Development Team (PDT) continues to refine habitat management area and dedicated habitat research area options. Further, the groundfish closed area options are being developed by the Closed Area Technical Team comprised of Multispecies and Habitat PDT members and others from the Regional Office and Science Center.
- At the September Council meeting, the Council agreed to move the deep-sea coral alternatives that are part of the Omnibus Amendment into a separate action with the hope of fast-tracking the Amendment.
- The Council expressed a desire to complete the Habitat Omnibus Amendment as soon as possible and directed staff to schedule a one-day Council meeting, or add a day to the January 2013 Council meeting. The goal is to approve area management alternatives as soon as possible and schedule public hearings.

Harbor Porpoise Take Reduction Plan (HPTRP)

- In April 2012, we issued a notice announcing the implementation of the Coastal Gulf of Maine Closure Area beginning October 1, 2012 under the Harbor Porpoise Take Reduction Plan regulations.

- After reviewing a request to analyze updated harbor porpoise bycatch and fishing information, we have decided to temporarily shift, for one year, the dates of the Coastal Gulf of Maine Closure Area to February and March of 2013.
- In August 2012, we received a request from a fishing industry representative to temporarily shift the dates of the Coastal Gulf of Maine Closure from October and November of 2012 to February 15 through March 31 of 2013, citing conservation benefits to harbor porpoises and economic benefits to the struggling groundfish industry.
- After careful review and consideration of the request and updated harbor porpoise bycatch and fishing effort data, we conclude that there is a benefit to harbor porpoises by shifting the timing of the closure to the entire month of February and March, and there may be economic benefits to the groundfish industry by allowing fishing to occur during October and November.
- This is a temporary shift that is only applicable to February and March of 2013.
- We plan to convene the Harbor Porpoise Take Reduction Team in late October to review the most recent harbor porpoise abundance and bycatch information, as well as information related to changes in fishing effort and practices that may have resulted from the implementation of groundfish sectors in 2010.
- At that time, the Team may recommend an alternative conservation strategy for effectively reducing harbor porpoise bycatch in gillnet fisheries.

Whale SENSE

- Whale SENSE is a voluntary education and recognition program for commercial whale watching companies from Maine through Virginia sponsored by NOAA Fisheries, SBNMS, and the Whale and Dolphin Conservation Society.
- Participating Companies engage in responsible whale watching practices, receive annual training, promote ocean stewardship, and are evaluated annually.
- The third season was completed in September with nine participating companies. This summer/fall SENSE partnered with the North American Association for Environmental Education to host a workshop for whale watching naturalists on guidelines for informal education programs in August.
- Program partners are hoping to reconvene workshop in winter/spring to engage more whale watching companies.
- Whale SENSE was promoted at the America's Cup Race in Newport, RI in July, on the NOAA Fisheries Marine Mammal Protection Act Anniversary website, and on NOAA Fisheries Facebook page.
- Next year hope to implement media strategy to promote the program to the public, and work with PlanetWhale.com (an international responsible whale watching advisory website) to feature Whale SENSE in their Northeast U.S. searches.
- Program partners are working with Ocean Today to develop informational videos on Whale SENSE that will be displayed at national kiosks at the Smithsonian and other museums and aquariums (potential viewership of 30 million people a year).
- If SAC members have opportunities where it would be appropriate to publicly promote the SENSE program to their constituents, please contact Allison Rosner at NOAA Fisheries.

IX. New SAC Issues (Craig MacDonald)

i. New SAC Recruitment

Two rounds of recruitment were completed. Vacant seats remaining are the Education Alternate seat (to Rich Delaney); Business/Industry Alternate seat; and Youth Seat Alternate seat. Once these seats are filled, the SAC will have a complete roster of Members and Alternates.

ii. SAC Letterhead

Brief discussion ensued amongst some SAC members about creating an SBNMS SAC letterhead.

Motion: That SAC adopt a SAC letterhead. Bill Adler motions; Priscilla Brooks seconds. Motion adopted unanimously.

Suggestion was made to have a SAC email address created and added to the letterhead. Anne Smrcina will seek guidance from ONMS HQ and have it added to the letterhead if cleared. Any incoming emails to the account will go directly to the SAC Chair.

X. New Business. None.

XI. Public Comment. None.

XII. Adjourn: 2:35 p.m.

SBNMS PROGRAMMATIC UPDATE - 2012

EDUCATION AND OUTREACH (Anne Smrcina):

EDUCATION

Boston Harbor Educators Conference – This year, the Boston Harbor Educators Conference (an annual event sponsored by Massachusetts Marine Educators and co-sponsored by MWRA, Boston Harbor Islands NPA and UMass/Boston), had as its theme “Celebrating 20 Years of Discovery at New England’s National Marine Sanctuary – Stellwagen Bank.” Approximately 150 individuals attended at least some portion of the conference, which included morning science talks and afternoon education workshops. Sanctuary staff contributed as speakers and workshop leaders, along with several representatives from NOAA Fisheries and a number of other marine research, conservation and educational institutions. The sanctuary’s education coordinator served as co-chair and program director (also editor of the program book and associated printed materials). Feedback from participants was highly favorable, with one attendee emailing (an hour after the conference) that this was “a perfect conference.” Attendance at conferences has been dropping over the past few years, but this event brought many new participants into the MME fold. Conference evaluation forms are being compiled by the NE Aquarium and we should see the results within a few weeks. Several of the workshops may evolve into formal education programs with this potential education partners.

2012 Student Marine Art Exhibit – The collected winning artwork from this year’s Marine Art Contest, sponsored by MA Marine Educators, the sanctuary and four other organizations, has begun its 2012-2013 tour. First stop was the Provincetown Center for Coastal Studies where it was displayed over the summer. Other locations for the tour will include the JFK Federal Building, Cape Cod National Seashore, Salem National Historic Site, and NOAA Fisheries. An official schedule will be finalized soon and posted to the sanctuary website. The 2013 contest will be announced in November.

Undergraduate Course with Massasoit Community College – A three credit introductory science course, being offered through Massasoit Community College, focuses on sanctuary resources and research. The course has been organized by the sanctuary’s education coordinator and MCC biology professor Marc Simmons. Specialists from various science disciplines provide basic introductions to their fields and detail links to the sanctuary and local research. The course is intended to introduce students to a wide range of studies, such as geology, oceanography, meteorology, invertebrate zoology, marine mammalogy, ichthyology, ornithology, environmental legislation and marine technology. It is hoped that this science snapshots may generate more far-ranging interests in one or more of these fields. The primary goal of the course is to produce ocean-literate individuals, each of whom will gain a reasonable level of understanding about local marine issues, with the sanctuary serving as the primary case study area, such that he or she can become an informed voter and resource user. The course is being offered for credit (17 students), full-time audit (7 students) and on a lecture-by-lecture basis (numbers vary for these individual sign-ups). The sanctuary education coordinator has been talking to the college about developing an online course, based on this first program, that would be offered on a regular periodic basis (and advertised regionally). The course textbook is the 2010 SBNMS Management Plan, with additional readings suggested by the guest lecturers or the course instructors and culled from the scientific literature, websites and other freely-available sources (to keep costs to the students at minimal levels). This course builds upon the growing partnership between the sanctuary and Massasoit Community College and the UMass system.

Human/Whale Curriculum – A new education product, a joint effort of the sanctuary and the Cape Cod Lighthouse Charter School (Orleans), was previewed at the Boston Harbor Educators Conference. Funding for this project has come from the sanctuary and a Toyota Tapestry Grant from the National Science Teachers Association. Authors of the curriculum are Anne Smrcina and Peter Trull, with technical content on whale biology provided by Melissa Patrician (WHOI). The curriculum looks at similarities and differences between humans and whales, reaches many state and national biology standards, offers a variety of middle-school reading comprehension units (many based on sanctuary research and resources) and could play a significant role as an exchange product with our sister sanctuaries. The curriculum was tested last year in the Cape Cod Lighthouse school and further classroom use continues this year, including the development of supplementary short videos. The curriculum will be web-published and made available for free via the sanctuary’s website in the future.

PUBLICATIONS

Stellwagen Bank E-Notes – The sanctuary’s new online publication, E-Notes, has been produced and disseminated bimonthly since March (March, May, July, Sept). Each new issue is posted to the SBNMS website, and email notices sent to a distribution list announcing the publication’s availability (with links). Our email list of newsletter subscribers is growing steadily. The publication increases its reach through postings of notices on a number of electronic bulletin boards and listserves. SAC assistance in distributing this publication is appreciated. Contact anne.smrcina@noaa.gov to provide any group contacts or individual readers.

Map/Poster Reprinting – The well-loved sanctuary map is being reprinted. As in the past, we will try to distribute bulk quantities to “distribution centers” around the region (education partners, tourism offices and other locations) in an effort to reduce our mailing costs and to make it easier for the public to acquire personal copies. If you would like your organization to serve as a distribution center, contact Anne Smrcina.

Fact Sheets – The sanctuary continues to produce fact sheets on an as-needed basis (the newest one is on the Bermuda Sister Sanctuary Agreement). If there is a topic you would like to see covered in a fact sheet, please see Anne Smrcina.

EXHIBITS

Cape Cod Museum of Natural History -- “*Animals without Passports,*” a temporary exhibit about humpback whales, our sister sanctuaries, and threats to this shared population of endangered animals, opened on June 1 (actually, one week early). Feedback on the exhibit has been very positive. The exhibit uses the four main display cases in the first floor back hallway, and includes quick fact call-outs, video units in each case, and attractive photography. The exhibit will remain in the museum through the end of December. Plans are now being made to move the unit to a longer-term location for 2013 and beyond, and to construct a traveling exhibit based on this material. Contact Anne Smrcina or Deborah Marx for more information about this program.

Provincetown MacMillan Wharf Kiosk – After almost two decades of display, the kiosk on MacMillan Wharf has been replaced with a new, colorful and timely model. The four panels of the new exhibit feature – Whaling to Watching (what you can see on a whale watch today); Whale Research and Conservation Issues; a sanctuary map and display of key species; and Fish and Fishing (and historic use). The content in the panels reflects interests expressed by Provincetown wharf users and visitors. The unit was installed in late summer – we may schedule some sort of “opening” at the start of the whale watch season in the spring.

New England Aquarium Signage – The sanctuary is now working with the New England Aquarium to rewrite/redesign the backlit panels near the sanctuary tanks on the upper Cold Water Gallery level. This project was made possible by funding from the National Marine Sanctuary Foundation.

Seacoast Science Center/NERACOOS/SBNMS Exhibit – Funding from the Northeast Ocean Science Education Collaborative (NEOSEC) will lead to a new exhibit on sanctuary whale research at the Seacoast Science Center in New Hampshire. The exhibit will be placed near the Tofu skeleton (humpback whale exhibit). This exhibit will look at Dtags, acoustic buoys and other technology and the results that are allowing scientists to better understand conditions in the whales environment and the animals' behaviors. A flow chart of the exhibit and draft text for the computer kiosk have been completed and images are now being collected.

OUTREACH AND MEDIA

Stellwagen Revealed – The sanctuary's three-day 20th anniversary celebration in Woods Hole was successful, culminating in the Graham Nash Award Presentation/Performance on Saturday, July 21. Program brochures and flyers were produced and distributed around Woods Hole and the Upper Cape, and a special hand-out was printed for the Nash ceremony. WBZ-Radio promoted the event with a long public service announcement detailing the Saturday public programs and evening award ceremony, and the Boston Globe covered the ceremony with a photo and story on the Names/Faces page (back page of metro section where all the celebrity stories are placed). Woods Hole's NPR station aired a pre-event interview with Ben and Nathalie and broadcast its own PSA.

Acoustics and Whale Communication Story – A Conservation Biology journal article about the loss of right whale communication due to the increase in human produced noise (lead author – Leila Hatch) led to a NOAA press release that generated considerable attention. Articles appeared in the Boston Globe, Cape Cod Times, LiveScience, technology publications, online newsletters and shipping magazines. The story appeared on the NOAA home page.

Press Releases/Media Advisories/Feature Stories – During the third quarter, the sanctuary produced products that highlighted the volunteer of the year (Ron Armonath), the announcement of sanctuary celebration events, and the Sister Sanctuary Agreement with Bermuda. Earlier in the summer, a press release announced the listing of the wreck of the granite schooner Lamartine on the National Register of Historic Places and a notice went out about the winners of the annual marine art contest. A number of reporters have developed feature stories about work in the sanctuary (NY Times on Wiley's whale tagging work, Scituate Mariner on marine debris).

Canadian TV – The Canadian Wildlife Federation is developing a show on humpback whales. The show's producer (CWF's director of the Teaching and Research Unit) interviewed Anne Smrcina about the sanctuary's education and outreach projects related to whales. Ben Haskell was also interviewed.

Stellwagen Bank Film Festival – We are still in discussion with the Woods Hole Film Festival folks about the possibility of a one-day film festival for the sanctuary's true anniversary (Nov. 4). Possible programs include: Ocean Frontiers, In the Wake of Giants (whale disentanglement—although in Hawaii), Marine Debris, student-produced videos from our whale curriculum and more. Stay tuned!

Fathom That! Audio Cell Phone Tour – The sanctuary and Stellwagen Alive are actively working to finalize the audio cell phone tour, which may potentially reach large numbers of listeners throughout the sanctuary region. Tailored messages are being crafted for specific locations with links to the sanctuary (museums/aquariums, vessel departure points, conservation groups, government facilities). Some of the messages will be stories with a long shelf-life. Other messages can have timely information that can be

updated within a day. The tour (publicized via signage, media advisories, printed materials) will be accessible via standard cell phones. A QR codes will allow smartphone users to access a mobile website for additional audio-visual materials, including maps, videos, photos and background information. It's a new way of exploring the sanctuary – fathom that! Come talk to us about having your group become a Sea Spot on the cell phone tour.

MARITIME HERITAGE (Deborah Marx and Matthew Lawrence):

In March 2012, the National Park Service listed the shipwreck of the *Lamartine* on the National Register of Historic Places. The *Lamartine* rests within the Stellwagen Bank National Marine Sanctuary. Built by a Camden, Maine shipbuilder, the 79-foot long, two-masted schooner was launched in 1848. During the vessel's forty-five year career, it took part in the U. S. coasting trade carrying a variety of cargos along the Eastern Seaboard. While sailing from Stonington, Maine to New York City, the *Lamartine* encountered a storm off Gloucester, Mass. on 17 May 1893. Heavy seas caused the schooner's cargo of granite sewer catch basin heads to shift, capsizing it. One crewmember drowned as the schooner settled beneath the waves and the captain and mate were forced to swim for their lives. Fortunately, a fishing schooner returning to Gloucester saw the *Lamartine* sink and rescued the swimming men. "*Lamartine*'s cargo of cut granite reveals fascinating details about the utilization of granite to meet the demands of this nation's increasing urbanization," said the Stellwagen Bank National Marine Sanctuary's Superintendent Craig MacDonald, PhD. "The shipwreck is a physical link to our ancestors who moved the stone and whose hands chiseled the stone blocks that built our great American cities." Scientists from NOAA and the University of Connecticut's Northeast Underwater Research Technology and Education Center (NURTEC) documented the shipwreck with the University's remotely operated vehicle. The fieldwork recorded the vessel's features including portions of its wooden hull, rigging, and granite cargo. This information allowed sanctuary maritime archaeologists, with help from a local maritime historian, to identify the shipwreck and connect it with New England's cultural landscape that is dotted with the granite quarries on coastal headlands and islands. NOAA and NURTEC scientists have located and documented more than forty historic shipwrecks in the sanctuary. The *Lamartine* is the sanctuary's sixth shipwreck site to be included on the National Register of Historic Places. NOAA issued a press release about the listing in May 2012. It was featured in over 35 media outlets including the Scituate Mariner, NPR, and WBZ radio. Just through social media channels alone, the news reached over 50,000 people. For more information visit: <http://stellwagen.noaa.gov/maritime/granite.html>

FIELDWORK

Matthew Lawrence joined Stellwagen Alive!'s derelict fishing gear (DFG) retrieval cruise on the Scituate F/V *Barbara L. Peters* in September 2012. Matthew provided the DFG target locations from previously conducted synthetic aperture sonar and side scan sonar surveys. These data sources were imported into navigation software and used to position the retrieval vessel for the deployment of an ROV. Utilizing methodology developed by the Monterey Bay National Marine Sanctuary, the ROV hooked a line onto the DFG, which was then winched aboard the recovery vessel. Over two days, 29 lobster traps and over 1,000 feet of synthetic trap line were pulled from the seafloor 200 feet down. Prior to the cruise, Matthew conducted the National Historic Preservation Act Section 106 review required for issuance of a SBNMS permit for the recovery activities.

SAC diving member and Northern Atlantic Dive Expeditions president Heather Knowles, in partnership with the Stellwagen Bank Sanctuary, received a grant from the PADI Foundation to install a dive mooring on the shipwreck of the fishing vessel *North Star*. The grant also provided funding for the photo documentation of marine debris on sanctuary shipwrecks to help educate the public about the effects marine debris have on the environment and maritime heritage resources. In July 2012 sanctuary staff

installed the sub surface dive mooring on the *North Star* which lies in 100 feet of water on top of Stellwagen Bank. The mooring will facilitate safe diver access to sanctuary shipwrecks and minimize damage to the site and the surrounding environment from repeated anchoring. This is the second dive mooring installed in the sanctuary. Information on the *North Star* can be found at:

<http://stellwagen.noaa.gov/maritime/northstar.html>

Sanctuary archaeologists conducted several days of ROV, side scan sonar, and diving operations off the R/V *Auk* during the summer 2012 to locate, assess, and monitor the sanctuary's archaeological resources. Additionally, surveys located derelict fishing gear for Stellwagen Alive!'s derelict fishing gear retrieval cruise and investigated possible recreational dive sites on Sanctuary Hill, Stellwagen Bank, and Jeffreys Ledge.

In partnership with the Northeast Underwater Research Technology and Education Center at the University of Connecticut (NURTEC-UConn), sanctuary and UConn divers installed a commemorative plaque at the Helgoland saturation diving habitat site on Jeffrey's Ledge. The bronze plaque has a raised relief image of the habitat and recognizes the contribution of Richard Cooper, noted UConn and NOAA scientist, to undersea research. In the process of installing the plaque, sanctuary archaeologists located additional physical remains from the FISSHH Project (First International Study of Spawning Herring and Hydroacoustics) that the sanctuary will interpret as a recreational dive site.

PUBLICATIONS

To celebrate the Sanctuary's 20th anniversary this year, staff maritime archaeologists wrote several articles highlighting the maritime heritage research conducted over the past 20 years. Matthew Lawrence and Deborah Marx co-authored an article entitled "Patrolling the Liquor Line: Coast Guard Efforts to Enforce Prohibition on Boston's Rum Row" in the April 2012 edition of *Wreck and Rescue*, the Journal of the U. S. Life-Saving Service Heritage Association. The publication also featured additional articles on Stellwagen Bank Sanctuary's anniversary and Henry Stellwagen written by SAC maritime heritage alternate member John Galluzzo (John is also the journal's editor). Deborah Marx published an article entitled "Stellwagen Bank Celebrated its 20th Anniversary" in the summer 2012 edition of *Sea History*, the magazine of the National Maritime Historical Society. *Sea History* is recognized as the pre-eminent journal of advocacy and education in the maritime heritage field. It covers the world of maritime museums, sail training, art, literature, lore, and learning of the sea with a national focus and an international scope. The society distributes 15,000 copies of its journal worldwide. Matthew Lawrence published an article on diving in Stellwagen Bank National Marine Sanctuary in the August 2012 edition of *Northeast Dive News* magazine. An online version of the article can be found at:

<http://www.divenetwork.com/index.php/divesites/destinations/usdivesites/156-neusdivesites/483-massachusetts-stellwagen-bank-new-england-s-only-national-marine-sanctuary>

OUTREACH

In June 2012, Matthew Lawrence traveled to the Isles of Shoals to present on the sanctuary's maritime heritage to the annual meeting of the Isles of Shoals Historical Research Association. The maritime heritage of these islands that lie just north of the sanctuary is intimately connected with the shipping routes that connected Boston to Down East Maine. That same month, Matthew presented on the War of 1812 battle between the USS *Chesapeake* and HMS *Shannon* at the Cape Cod Maritime Research Symposium. The famous battle took place on the sanctuary's western boundary in June 1813. The loss of the *Chesapeake* was a serious blow to American morale after earlier ship vs. ship battles all ended in American victories. The deathbed utterance of the *Chesapeake*'s Captain James Lawrence, "Don't give up the ship" became a U. S. Naval rallying cry that is still held in high esteem today.

Sanctuary maritime archaeologists exhibited at Maritime Gloucester's 9th annual Heritage Day in September 2012. The celebration coincided with the annual Gloucester schooner races and drew a very large crowd down to Maritime Gloucester's waterfront campus. The public learned about the sanctuary's resources and maritime heritage activities through a display set up in the classroom that included handouts and videos as well as hands on activities such as trying on dive gear or a survival suit and mapping a mock shipwreck. The Science Channel production "The Wreck of the *Portland*" was also looping throughout the day for interested visitors to sit down and watch.

SOCIAL MEDIA

SBNMS actively uses social media to connect with its constituents. In 2012, virtual visitors from across the United States and the world learned about the sanctuary and NOAA's ocean conservation efforts through visits to SBNMS Facebook and YouTube social media sites. SBNMS established its Facebook page (<http://www.facebook.com/SBNMS>) in April 2009. To date it has over 1,000 "Friends" i.e. subscribers to the sanctuary's posts. New posts are added to the page at least once a week by Deborah Marx with content input from SBNMS staff. Unlike the SBNMS website, Facebook Friends receive notice when new content is added. SBNMS established its YouTube page (<http://www.youtube.com/user/SBNMS>) in May 2007. To date it has over 83,000 video views and 300 subscribers. All video production is done in house by Matthew Lawrence and Deborah Marx. In 2012, staff increased its social media presence with a Twitter account (<http://twitter.com/noaasbnms>). The sanctuary's Twitter name is NOAASBNMS. To date we have 60 followers.

OPERATIONS AND SPECIAL PROJECTS (Ben Cowie-Haskell and Dave Slocum):

VESSEL OPERATIONS

Numbers At A Glance (June-Sept)

- 36 days at sea completed on RV *AUK* without incident
- Completed missions included: Internal Waves, Seabird Stewards, numerous dives and ROV ops, Seabird Tagging, Whale Tagging, Seabird migration research, derelict fishing gear detection, ARU deployment and recovery for cod spawning acoustic research, Discovery Canada filming, and sanctuary tour by NOS Deputy Assistant Administrator Dr. Holly Bamford.
- Partners included: WHOI, NEFSC, MA Audubon, Stellwagen Alive, Boston Univ., Duke, National Geographic, NOAA Fisheries, Whale Center of New England, Univ. of Vermont, Harvard, Univ. of New Hampshire, International Fund for Animal Welfare, US Fish and Wildlife Service

SPECIAL PROJECTS

Ocean Acidification (OA) Pilot Study. As part of the NOAA Ocean and Great Lakes Acidification Research Plan (ARP), SBNMS has been designated as a sentinel site for ocean acidification research in the northeast region. In late 2011, we deployed a suite of sensors as a pilot project to study acid dynamics near the ocean floor, and to evaluate the feasibility of incorporating ocean acidification monitoring sensors on passive acoustic monitoring moorings already in place in SBNMS. To this end, we deployed calibrated instruments designed to measure CO₂, pH, oxygen, temperature, salinity and beam attenuation on the Traffic Separation Scheme Test Auto Buoy (TSS Test AB) located in a depth of approximately 85m. The deployment was initiated on December 22nd, 2011 and recovered on June 7th, 2012. The test deployment was very successful. So successful in fact that the collaborators (SBNMS, UNH, Univ. of Mass. at Dartmouth, WHOI) will do another 6 month deployment (Oct-April) to catch the fall plankton blooms. In a nutshell, results from the first deployment are:

- This pilot study represents the only high resolution, extended time series measurement of deepwater OA components currently in the GoM.
- At present, the lack of carbonate system measurements down through the entire water column, particularly at or near the bottom, limit our ability to even begin to assess the effects of regional ocean acidification on zooplankton and the endangered marine mammals that feed on them in the sanctuary and greater GoM.
- The derived measurement of omega aragonite (an index of carbonate ion availability) is below 1.6 which is a level known to be deleterious for calcification in the larvae of commercially important species.
- High latitude, cold-water calcifiers producing aragonitic skeletons and shells are already at the fringe of their range and thus will be the first to respond to changes in pH driven by increasing levels of atmospheric pCO₂.
- Because of this interesting variability, proximity to existing fixed assets (whale acoustic buoys) and ongoing maintenance of said buoys, we recommend an enhanced study of coastal benthic acid variability at SBNMS.

RESEARCH (Leila Hatch and Dave Wiley):

CHARACTERIZATION OF UNDERWATER NOISE IN THE SBNMS

(Funded by award to L Hatch, S Van Parijs and C Clark from Exxon Mobil Corp via the National Fish and Wildlife Foundation 2010-2012)

As a continuation of previous three-year funding awarded to the same PIs under the National Oceanographic Partnership Program (NOPP), low frequency acoustic data was analyzed by researchers from SBNMS, NOAA's Northeast Fisheries Science Center and Cornell University's Bioacoustics Research Program during the summer of 2012. These data are being used to address multiple questions regarding the locations, behaviors, and potentials for communication masking among several vocally-active species in the sanctuary, including fin, humpback, right and minke whales. Large commercial ship tracking data were collected via the Automatic Identification System (AIS) and analyzed by the SBNMS, and vessel tracks collected from fishing and whale-watching vessels were used to describe the distribution and densities of these additional non-AIS tracked vessel types. Vessel tracking data were integrated with acoustic data to assess their noise contributions to sanctuary waters and used to inform models that quantify impacts of this noise to whales' communication capabilities.

Quantifying loss of communication space for right whales in and around a U. S. National Marine Sanctuary **L.T. Hatch**, C.W. Clark, S.M. Van Parijs, A.Frankel, and D. Ponirakis. 2012. Conservation Biology.

NOAA OCEAN NOISE STRATEGY

(Co-chaired by L. Hatch, SBNMS, J. Harrison, NOAA Fisheries Office of Protected Resources, Sofie Van Parijs, NOAA Fisheries Northeast Fisheries Science Center, Jason Gedamke, NOAA Fisheries Office of Science and Technology)

In a January 19, 2010 letter to the Council on Environmental Quality, NOAA Administrator Dr. Jane Lubchenco committed to convening two workshops to develop a comprehensive noise budget for the oceans and model marine mammal distributions and densities. This effort subsequently led to the development a new cross line office strategy to promote more comprehensive management of underwater noise in US waters, and to continue to direct science tool development to support NOAA's noise management objectives. L. Hatch is co-chairing this overall effort and the Underwater Sound-field

Working Group with ongoing analyses through the summer 2012 following a 200 person stakeholder symposium in May in Washington, D.C.. See <http://noaa.cetsound.gov> for more information and access to the mapping tools developed through this initiative. Data from SBNMS are playing important ground-truthing roles in the sound-field modeling effort as well as providing a high-resolution case study for the symposium integration.

PASSIVE ACOUSTIC IDENTIFICATION AND CHARACTERIZATION OF COD SPAWNING ACTIVITIES

(Funded by award to L Hatch and S Van Parijs via NOAA Fisheries Office of Science & Technology)
In spring-summer 2012, the sanctuary expanded its successful collaboration with Northeast Fisheries Science Center, Cornell University and Massachusetts Division of Marine Fisheries scientists using Marine Autonomous Recording Units (MARUs) placed near predictable aggregation areas for spawning cod in Massachusetts Bay to identify and characterize the sound profiles of these events. Results of last year's deployment documented proposed cod spawning sounds as well as their diurnal seasonal periodicity. This year, a more extensive 10 unit array of recorders was used, in conjunction with information from DMF's ongoing cod tagging work, to further link cod movements in the area surrounding the cod spawning site with their acoustic behavior.

UNDERWATER BEHAVIOR OF ENDANGERED WHALES

The project places synchronous motion, acoustic recording tags (DTAG & Acousonde) and National Geographic CritterCams on humpback whales while concurrently measuring prey field size, shape and composition (SIMRAD EK60). The goal is to understand water column use by endangered whales and how prey patch characteristics influence whale behavior.

Cruise Dates:

06/15/2012 to 06/29/2012

Platforms:

- NOAA R/V Nancy Foster
- NOAA R/V Auk
- M/V Song of the Whale (IFAW)

32 scientists and technicians from:

- SBNMS
- Duke University
- UNH
- SWFSC
- PCCS
- WCNE
- Ocean Acoustics Laboratory; Naval Postgraduate School
- Syracuse Univ
- National Geographic
- IFAW

Project summary:

Tags were attached to 27 animals:

- Dtag; n= 16
- Crittercam; n=9
- Acousonde; n=2

Media:

Front page coverage in New York Times Science Section and NYT's Science web page

ECOLOGY OF SEABIRDS IN THE SBNMS

Seabirds are top predators in marine systems, yet little information is available relative to patterns of habitat use and food habits. The objectives of this project are to:

- Quantify the amount of time various species of seabirds spend within the SBNMS relative to other areas.
- identify geographic hot spots of seabird use
- Use stable isotope analysis derived from feather clippings to understand foraging habits of seabirds in and around the SBNMS
- Trace migratory pathways of seabirds departing from the SBNMS

Focus Species: G. Shearwaters

Funding: Volgenau Foundation

Partners:

- USF&WS
- Boston University
- UMASS-Amherst

Platform: R/V Auk

Project Summary:

11 G. shearwaters were captured, weighed and blood and feather samples taken (stable isotope). PTT tags were supplied by USF&WS. Birds needed to be 950g wt. to carry tags and animals ranged from 650 to 850g. Therefore no birds were tagged. Funding from the Volgenau Foundation will be used to purchase lighter tags for the 2013 season. In addition, G. shearwaters will be captured and weighed over multiple months//year to build a long-term database on body condition that will allow the sanctuary to understand how changes in ecological conditions (e.g., climate change, prey species and abundance) influences top predators.

WHALES AND WAVES: ZOOPLANKTON ACCUMULATION, FISH AND HUMPBACK WHALE FORAGING RESPONSE, AND THE SHOALING OF INTERNAL WAVES AT STELLWAGEN BANK

The projects seek to establish whether internal waves determine location and local abundance of zooplankton, fish and humpback whales

Partners:

- Woods Hole Oceanographic Institution
- University of Lisbon, Portugal

Platform: R/V Auk

Funding: Sea Grant

Project Summary:

Profiles of water column stratification, to assess conditions where internal waves (IW) propagate, are obtained with an RBR CTD. IWs are observed with echosounder (Biosonics DTX, 120 and 200 kHz), and with a string of temperature loggers (RBR 1060) spaced 4 m, sampling every 20 s, and hanging from a large float tethered to the anchored boat. IW speed c and direction of propagation are computed from measurements made with a 600 kHz looking-down Doppler current meter (RDI ADCP). Individual ADCP beams are used as “an antenna” and the arrival time of IWs (e.g., depressions) at a given depth is recorded. From the time lags and trigonometry, wave speed and direction are calculated. Sand lance and shark distribution are measured with the echosounder used in tandem with a cabled video-camera, with live and archived video used to identify organisms in the acoustic patches of backscatter. Sand lance and dogfish behavior are inferred from the timing of changes of distribution relative to the timing of the IWs, and from the distribution of fish and sharks relative to the IWs.

VOLUNTEER PROGRAM (Anne-Marie Runfola):

Numbers At a Glance:

- 6 programs: Ambassadors, *A Child's Sanctuary*, Seabird Stewards, Internships, Sister Sanctuary Exchange, Marine Mammal Observers
- 6,800 service hours in 1.5 yrs. (not including SAC hours)
- 45,000 community members reached
- 300 total volunteers engaged - current, alumni, interviewed/trained
- 60 regular volunteers
- 7 Volunteer Program Interns - 1400+ hrs; Additional interns placed in Operations, Research, Education
- 3 grants: \$28,000
- \$224,182 Economic Value*

*Estimate uses MA State rate for unskilled volunteer service @ \$22.46/hr (AARP - source) and an average skilled rate of \$75/hr. Conservative estimate of 1/5th volunteer services at skilled rate.)

Volunteer of the Year: Ron Armonath, of the Coast Guard Auxiliary, was named both SBNMS Volunteer of the Year 2012, as well as the National Marine Sanctuaries Volunteer of the Year. Ron has been working on the sanctuary's Whale Watch Data Collection program for a number of years with Dave Wiley and Mike Thompson. In his tenure as program lead, he has recruited more auxiliary members, secured funds to keep the program running, and initiated new resource protection services provided by the group. Ron was honored in D.C. earlier this year, and was thanked directly by former president Bill Clinton in a video address. Ron will be recognized again at the October 2012 SAC meeting.

Volunteer Ambassadors Key to Success of 20th Anniversary Celebrations and Beyond

19 volunteers helped Stellwagen Sanctuary celebrate their 20th Anniversary during *Stellwagen Revealed*, a 3-day gala in Woods Hole, MA from July 19-21, 2012. Hailing from towns along the North and South Shores of Massachusetts and Cape Cod, the volunteers represented a wide swath of sanctuary constituents. They spent 196 hours creating props, running educational activities, distributing literature, giving boat tours, greeting concert-goers, taking photos and anything else needed to host a successful weekend. As part of the festivities, a group of six volunteers helped Volunteer Program Coordinator, Anne-Marie Runfola, run *A Child's Sanctuary*, engaging 300 young children and their parents in activities related to sanctuary creatures, research and management strategies.

Volunteers have contributed to a host of 20th anniversary and other outreach events, such as the Ocean Frontiers film premier and World Ocean Day at the New England Aquarium, Heritage Days in Scituate, Cape Cod Wildlife Festival, and Boston's Museum of Science Biodiversity Day (in November). The Ambassador Program has enabled the sanctuary to participate in more than double the number of events possible for staff alone, exponentially increasing our reach and public engagement.

Seabird Stewards Program Makes Inroads in the Scientific Community

As a direct result of the Seabird Stewards Program, the sanctuary was invited to join the Atlantic Marine Bird Cooperative, a consortium of government agencies, non-profit organizations, and research universities that focus on marine bird work along the Atlantic coast. The goals of the cooperative are to share information, set research priorities, collaborate on projects and funding strategies, and work with government regulators and industry to set policy regarding wind turbine siting and other projects with potential impact on marine birds. SBNMS Research Coordinator, Dave Wiley, and Volunteer

Coordinator, Anne-Marie Runfola, participated in the Atlantic Marine Bird Cooperative Meeting on Feb. 28-29, 2012 in Sturbridge, MA. Participants represented government agencies (US Fish and Wildlife Service, Massachusetts State Department of Wildlife, NOAA NMFS and SBNMS, Navy), universities (Univ. of Rhode Island, City Univ. of New York, Staten Island, UMass), and non-profits (Biodiversity Research Institute, Massachusetts Audubon). Dave Wiley presented to the group on the sanctuary's marine mammal research and how data from those studies could inform bird research and vice versa, to help build our understanding of the complete sanctuary ecosystem. Anne-Marie Runfola presented on the Stellwagen Sanctuary Seabird Stewards program, a long-term citizen science research project, piloted in Fall 2011 and running its first full season now, to collect baseline data on seabirds in the sanctuary.

The significance of participation in the Cooperative is more visibility for the sanctuary, its research, and research collaboration that would provide the sanctuary with more data than it could gather on its own. By joining the group and presenting at the meeting, SBNMS projects are more visible and will be considered for collaboration. Data collected in the sanctuary can be useful for larger databases used in policy decision-making, such as the USFWS Atlantic bird map and the USGS database. One of the CUNY Staten Island PhD candidates is interested in using the Stewards data in her research. Finally, we had the opportunity to invite Cooperative members to visit the sanctuary and perform research using the R/V Auk. Networking at the meeting also resulted in USFWS staff joining Dave Wiley and team to tag shearwaters this summer and compare their location to that of the sanctuary's whales.

Seabird Stewards Program Helps Make Sanctuary More of a Household Name

The Stellwagen Sanctuary Seabird Stewards program (S4) has helped spark public interest in our birds. Since S4's inception, Anne-Marie Runfola has been invited to present at numerous events, and has talked to at least 600 people about seabirds and the Stellwagen Sanctuary Seabird Stewards program (S4). Venues have included the Mass Audubon 20th Annual Birders Meeting, the Boston Harbor Educators Conference, and the Maritime Gloucester Lecture Series "Stellwagen at 20." Anne-Marie and her volunteer team have also developed a suite of seabird activities, offering them to teachers at the Boston Harbor Educators Conference and to parents and young children during A Child's Sanctuary: Seabirds in the Sanctuary programming.

These programs have increased visibility for the sanctuary, public understanding of the sanctuary's role as an Important Bird Area, and awareness of sanctuary research and volunteer programs. A number of people at the events have applied to become volunteers, asked for information for their children and schools, and invited us to speak at other organizations.

Teen Volunteers Deploy NOAA Drifters and Track Ocean Currents and Sea Temperature

In celebration of Earth Day, six U.S. locations were chosen to co-adopt and track NOAA drifting buoys. On April 17th, 2012, teen volunteers from the Gates Intermediate School in Scituate, MA, deployed two drifters in the sanctuary, including one built by Jim Manning at the NOAA/Northeast Fisheries Science Center. The teens joined sanctuary staff, Dr. Katherine Sullivan, NOAA's Deputy Administrator and former astronaut, and Dr. Diane Stanitski, climatologist and director of the Adopt a Drifter Program for a celebration at the New England Aquarium. The group then traveled to sanctuary waters and deployed the drifters off the R/V *Auk*. We invited Boston Latin High School students to join the deployment and partnered with a school in Samana, DR, the gateway to the humpback sanctuary in the Dominican Republic. Students and the public can track these special drifters as they journey in the ocean currents, transmitting sea surface temperature and latitude/longitude to help scientists track marine debris, predict the path of hurricanes and calibrate observations from satellites.

NOAA's Adopt a Drifter Website (home page features photo of Stellwagen Volunteers)

<http://www.adp.noaa.gov/earthday/>

Track our drifter: <http://www.adp.noaa.gov/earthday/boston.html>

Locations of the 1,250 drifters in the program on map: <http://www.aoml.noaa.gov/phod/dac/dacdata.php>

The SBNMS drifter deployment generated more than ten news stories, blogs, and other media posts. Anne-Marie Runfola can provide a full list of media upon request.

Upcoming Volunteer Events

- Late Oct or Early November: Celebrate Our Volunteers - Pot Luck, SBNMS HQ. All welcome. Date to be announced.
- Nov. 2nd: NEOSEC (NE Ocean Science Education Collaborative) Conference, University of Rhode Island: Joint Presentation on Sanctuary Research and Education, including through volunteerism: Ben Cowie-Haskell and Anne-Marie Runfola
- Nov. 18th: Museum of Science, Boston's Biodiversity Day (booth)