

**North Atlantic Right Whale Recovery Plan  
Southeast U.S. Implementation Team Meeting, October 15-16, 2012  
Guana Tolomato Matanzas National Estuarine Research Reserve**

**KEY OUTCOMES MEMORANDUM**

**I. Overview**

The North Atlantic Right Whale Recovery Plan Southeast U.S. Implementation Team (SEIT) conducted a two-day meeting on October 15 and 16 at the Guana Tolomato Matanzas National Estuarine Research Reserve in Northeast Florida. The SEIT's public Forum was held on October 15<sup>th</sup>. The Forum agenda was planned with input from the SEIT in order to facilitate priority information updates and discussion with participants and SEIT members. Agendas from both days are attached. The Oct 16th SEIT meeting focused on the following primary objectives:

- SEIT business
- NOAA Fisheries update on aerial survey considerations
- Mid-Atlantic recovery concerns
- River incursion response planning

This Key Outcomes memorandum summarizes the primary results of the SEIT meeting on October 16<sup>th</sup>. In general, the synthesis integrates the main themes discussed at the meeting and are presented in five main sections: Overview, Participants, Meeting Materials, Key Outcomes, and Next Steps.

The Key Outcomes section is further segmented into the following six sections:

- Welcome and Meeting Kick Off. This section provides a brief overview of meeting, purpose, and agenda overview.
- SEIT business.
- Focused SEIT discussions.
- Consensus Actions. This section summarizes consensus actions to be taken by the Team.
- Consensus Recommendations. This section summarizes consensus recommendations of the SEIT.
- Other. This section summarizes other topics discussed during the meeting.

**II. Participants**

The SEIT meeting was attended by 11 of the 13 Team members and included: Nancy Allen, Lance Garrison, Clay George, Mike Getchell, Amy Knowlton, Bill McLellan, Katie Moore, Becky Shortland (replacing Cathy Sakas), Leslie Ward-Geiger, Tom Wright, and Sharon Young. Bill Kavanaugh (emergency-related) and David Harter were absent. Barb Zoodsma and Jim McLaughlin represented NOAA Fisheries.

**III. Meeting Materials**

The draft meeting agenda was distributed via email prior to the meeting -hard copies were provided at the meeting.

**IV. Key Outcomes**

Below is a summary of the main topics and items discussed during the meeting. This summary is not intended to be a meeting transcript. Rather, it provides an overview of the main topics covered, the primary points and options raised in the discussions, and areas of full or emerging consensus.

### **A. Welcome and Meeting Kick Off**

The meeting kicked off with a brief review of the meeting purpose and agenda. Becky Shortland was introduced as the new Grays Reef NMS representative –Becky replaces Cathy Sakas. The agenda was briefly reviewed and adjusted to accommodate member travel schedules.

### **B. SEIT Business**

It has been two years since the SEIT was re-organized. B. Zoodsma pointed out it was a good time to address a few business-related items.

SEIT Membership. In addition to the Grays Reef National Marine Sanctuary change, B. Zoodsma acknowledged that D. Harter, likely for a number of reasons, was not able to regularly attend meetings and the SERO PRD was discussing possible replacements. All other SEIT members would likely be re-appointed by the Regional Administrator.

Alternates. Alternates will not be utilized. The Team acknowledged that Bill Kavanaugh was the only member with a valid need for an alternate (not many pilots in Fernandina to pilot in ships while Bill is attending a meeting). Consequently, in the case of harbor pilots, one individual will be nominated by the primary team member and must be approved by the SERO Protected Resource Division (PRD).

Meeting Attendees. Subject matter experts may attend to support and inform SEIT deliberations.

Meeting Agendas. There was consensus that the SEIT Forum agenda development process could be enhanced by further developing Forum meeting discussion topics, etc. and circulating the final SEIT Forum agenda as well as a draft SEIT Day 2 agenda to participants earlier. The following schedule was agreed upon: at least eight weeks prior to SEIT meetings a general call for Forum agenda items will be distributed, following that and at least four weeks prior to SEIT meetings, a final Forum agenda and draft Day 2 agenda and other meeting materials will be distributed. (*topic further refined with members post-meeting*)

Contradictions. The team discussed occasions when individuals have implemented different methodological approaches or offered contradictory information. Suggestion: working groups should be developed to sift through differences and strengthen southeast recovery efforts. An SEIT member should chair each working group and consensus ideas be presented at the Forum.

Coordination Between the SEIT and SEIT's Public Forum. The Team discussed methods for enhancing coordination between SEIT members and Forum participants. Possibilities include: a) establishing a Forum working group, b) add the Forum coordinator to the SEIT (representing Forum participants), c) both "a" and "b", d) include Forum coordinator on meeting planning call, and e) asking specific questions of Forum participants during the SEIT's Public Forum. After some

discussion, the SEIT settled on recommending that the Forum coordinator be added as a member of the SEIT.

Next SEIT Meeting Date. The next meeting will be held during the first two weeks of May. Leslie will poll Team members for exact meeting dates and venue.

### **C. Focused Discussions**

#### **1. Forum Review**

The Team discussed items of interest that were presented or discussed during the SEIT's Public Forum (day 1). Highlights of the discussion included presentations on recently published papers and current events related to right whales, session discussions, and future of the MSR System. Some members noted the challenges associated with assessing proposed Navy activities (e.g. USWTR, SURTASS, etc.) as the result of several activities being wrapped together.

Recommendations to consider for future Public Forums include:

- Make citations/references available at end of presentations.
- Include regulatory and budget updates in SERO update.
- Updates from BOEM on schedule and where they are with East Coast alternative energy development.
- Update on the fates of whales that have been disentangled in the Southeast. This is relevant to determine if there are population level implications and if SERO resources are being expended wisely.
- Updates from NOAA Fisheries' Shipping Liaison.
- Update on genetics work from Trent University. This would also give an opportunity for local genetics people to talk to Brad.
- Update from Navy
- Climate change related topics

#### **2. NOAA Fisheries update on aerial survey considerations**

B. Zoodsma noted that the SERO had transmitted a memo to the SEFSC requesting analytical assistance in redesigning the aerial surveys per SEIT recommendations. SERO requested from the SEFSC a mid-December delivery date.

L. Garrison then facilitated a conversation on aerial survey re-design considerations. Based upon a discussion with R. Pace from the NEFSC, there are three demographic metrics of concern that rely upon photo-id data collected during aerial surveys in the SEUS:

*1. Minimum Number Alive.* This metric is used in the annual Stock Assessment Reports required under the Marine Mammal Protection Act. The minimum number alive reflects all whales known to be alive in a given year based upon photo-identification records. It does not include calves or other individuals that have not yet been cataloged. The minimum number alive may be dependent upon the level of survey effort in a given year. The metric will be sensitive to SEUS aerial survey effort since some animals are seen only in the SE.

*2. Annual Survival Rate Estimates.* Both crude survival rates and those derived from open population capture-mark-recapture models are used to evaluate trends in population status.

These tools rely upon annual resights of individual animals (i.e., one sighting in a given year). The average annual capture probability is 80-90%, but variable across space and individuals. The capture probability could be lower, but still provide sufficient probability of capture to support these models.

*3. Annual Calf Counts:* There is an ongoing desire to census the number of calves born in each winter. This is particularly important for providing aging of individuals when they enter the catalog, identifying productive females, examining inter-birth intervals, quantifying juvenile survival rates, and other parameters of interest. The majority of calf sightings are in the SEUS, though there are typically 1-2 additional sightings of calves each year that are made outside of the SEUS. Maintaining a near 100% sighting probability for new calves is an important goal.

Capture-mark-recapture estimates of survival and/or population size need to account for heterogeneity in individual sighting probabilities, so a high resighting probability for individuals is desired. An 80% resighting probability is probably higher than necessary, and a 50% resighting probability for a homogeneous population would likely be acceptable.

Take home message: Want high individual recapture probability (optimal), account for heterogeneity (individually and spatially) and have a near 100% capture probability for calves. Management is still going to happen for individual mortalities. Multiple resights within a given year or within a calving season do not add significant information from a demographic model perspective. However, multiple resights do provide the opportunity to detect entanglements and quantify the loss of calves during a season.

Survey Design Goal: quantify effort needed

Survey Design Constraints: 1) near daily EWS flights will take place in the original EWS area, 2) Detection probabilities are different between healthy, dead, and entangled whales, and 3) We desire a near 100% probability of capturing calves.

There are some geographic structure-related questions: How much movement of animals from South Carolina to FL? How many individuals are unique to SE in any given year? What is residence and detection probability of individuals within each SEUS Survey block and between SE and NE?

*Spatial Structure:* Define survey blocks (one day of flight lines based on past experience), examine residency duration and detection probabilities within each block. Scale effort in each block to achieve desired detection probabilities. Surveys can be optimized for animals with low capture probabilities outside of core calving area.

*Temporal Structure:* Theoretically, surveys could begin in January. Need to define starting/stopping rules.

SEIT discussed monitoring serious injury and mortality and information needed to meet this conservation objective.

Following the discussion, it was decided that L. Garrison would update the SEIT on his work. A November 27<sup>th</sup> webinar was proposed.

### 3. Mid-Atlantic recovery concerns

The SEIT has been concerned about right whale recovery in the mid-Atlantic. Specific recovery concerns include vessel strike reduction and to improve understanding of habitat use.

*Vessel Strike Reduction.* An elevated number of carcasses with evidence of vessel collision have been recovered in the region from Cape Hatteras to Chesapeake Bay -suggestive of elevated threats from vessel collisions. SEIT questions/comments/observations include:

- Ocean/wind currents may/may not be influencing carcass detections
- Confluence of vessels and whales off Hatteras (look at AIS data)
- Mortalities still continue in post SMA era (no ship struck carcass has been found w/in SMA to date)
- What is seasonal distribution of carcasses?
- Migrating whales move through the area twice.

The Team discussed possible methods for addressing vessel strikes:

- Use VanderHoop paper to identify modified SMA
- Engage industry in that region. Attend industry meetings give presentations on compliance, collaborative effort with CG, describe the problem.
- Assess education and outreach in that area –mariner survey to determine what they know.
- Use VanderHoop paper, whale distribution, habitat model, and AIS data to identify areas of concern (using existing information) and PAM info. Enforcement effort sufficient?
- Compliance studies? Such studies have been conducted in SE and NE.
- Aerial surveys in the “McLellan’s Slot”. When and where are MAUS surveys being conducted now?
- ATBA or routing measure in “McLellan’s Slot” (need to be sure that whales are there).
- Working group. White paper approach- data summary.

*Habitat Use and Movements.* More information needed about right whale use of the mid-Atlantic region . The Team briefly discussed methods for investigating habitat use and animal movements:

1. Detection surveys using PAM, aerial surveys, or both.
2. Short term tagging studies
  - a. Need to look at the cost-benefit ratio. For example, points raised in Moore paper. Also, sample size will likely be low, is that more or less as valuable as 20 visual sightings?
  - b. Limpet tag may be a suitable tag for this purpose (see “Other” section).
3. Integrated approach (PAM, visual, Tagging, etc.)
4. Solicit opportunistic sightings

Finally, the SEIT’s demarcation line came up for discussion. Can the SEIT consider the midAtlantic north of North Carolina, if not, who will? Where is the area of responsibility? Can we work in Chesapeake Bay region? The SEIT requests guidance on this point.

### 4. River Incursion Response Planning

The Team discussed a variety of methods to track a whale in a river (from visual to telemetry methods) and supported the idea of a response plan that outlines what options will be considered

during various stages of a response. B. Zoodsma will develop a response plan and share with the SEIT.

#### **D. Consensus Actions**

1. Forum agenda development process to be enhanced as follows: at least eight weeks prior to SEIT meetings a general call for SEIT Forum agenda items will be distributed, following that and at least four weeks prior to SEIT meetings, draft agendas and other meeting materials will be distributed. (*lead times modified after meeting per subsequent SEIT member discussion on the topic*)

#### **E. Consensus Recommendations**

1. Forum coordinator be added as a member to the SEIT
2. Use working groups to sift through apparent differences in research findings and strengthen southeast recovery efforts. An SEIT member should chair each working group.
3. Regarding future SEIT Forum meetings:
  - a. Make citations/references available at end of presentations.
  - b. Include regulatory and budget updates in SERO update.
  - c. Updates from BOEM on schedule and where they are with East Coast alternative energy development.
  - d. Update on the fates of whales that have been disentangled in the Southeast. This is relevant to determine if there are population level implications and if SERO resources are being expended wisely.
  - e. Updates from NOAA Fisheries' Shipping Liaison.
  - f. Update on genetics work from Trent University. This would also give an opportunity for local genetics people to talk to Brad.
4. Undertake a management-driven collaborative process between federal, state, non-governmental organizations for the purpose of determining and implementing an analytical strategy for assessing population status and trends. Publish in peer review publication.

#### **F. Other**

The concept of tagging has come up during several SEIT discussions, including this meeting as the SEIT deliberated habitat use and movements of right whales in the mid-Atlantic. The SEIT supports investigating the use of Limpet-type peri-cutaneous attachment tags (shallow attachment) to learn more about right whale use of the mid-Atlantic (migration corridor). Such and investigation might include:

- When/timeframe for appropriate use of tags (time of year).
- The appropriate internal components/sensor/transmitter characteristics, etc.
- Battery duration and limitations
- Housing characteristics including shape and size

#### **V. Next Steps**

In late November, L. Garrison to update and obtain feedback from the SEIT (webinar?) on progress of his aerial survey-related work.

L. Ward will poll SEIT members for the date and location of the next SEIT meeting.

B. Zoodsma will investigate whether the agency considers it appropriate for the SEIT to consider right whale recovery in the Cape Hatteras to Chesapeake Bay area. If the area is beyond the SEIT's purview, what is the best way to address recovery concerns in this area?