

# Northeast Trawl Advisory Panel

## Bigelow Contingency Plan Working Group Meeting- Virtual

Thursday, February 29, 2024

9:00 AM - 12:00 PM

-- NOTES --

**Working Group Attendees:** Anna Mercer, Daniel Salerno, David Goethel, Eric Reid, Jameson Gregg, Kathryn Ford, Philip Politis, Sam Novello, Tim Miller, Vito Giacalone, Wes Townsend.

**Other Attendees:** Dave McElroy, Gareth Lawson, Katie Burchard, Hannah Hart, Will Poston.

**Meeting purpose:** Discuss next steps for Industry based survey.

**Meeting minutes:**

### 9:00-9:15 a.m. Welcome, Recap

#### Timeline of events

July 2023: NTAP formed Bigelow Contingencies Working Group (WG).

Sept 2023: Working group kickoff, 4 contingency options:

- Pisces
- NEFSC vessel
- Industry Based Survey (IBS) calibrated to Bigelow
- IBS not calibrated to Bigelow (parallel, separate survey)

Sep/Oct 2023: Council motions to develop Option #4 as a white paper.

Jan 2024:

- Working group meeting (Jan 12).
- White paper delivered to the Atlantic States Marine Fisheries Commission (ASMFC), MAFMC, NEFMC (Jan 18).
- Presentations to ASMFC (Jan 25), NEFMC (Jan 30), and MAFMC (Feb 7).
- Jan/Feb Council/ASMFC motions made to develop an IBS pilot project.

Feb 8, 2024: NTAP Full Panel meeting

- Discussion around supporting Pisces development and developing IBS pilot project.

Feb 29, 2024: WG meeting to discuss IBS and next steps.

April 2024: Progress report at MAFMC and NEFMC Council meetings.

### 9:15-9:45 a.m. Options 1-3

#### Status updates

1. Pisces
  - a. Proposal with needed improvements submitted to OMAO.
  - b. SEFSC agreement that Pisces can be primary backup to Bigelow.

- c. Next steps
  - i. Specific plan and funding for improvements.
  - ii. Discussion needed of when to “trigger” Pisces.
2. NEFSC vessel calibrated to Bigelow
  - a. Proposal provided to NEFSC Director, being discussed at NMFS HQ.
3. Industry vessel calibrated to Bigelow
  - a. No progress.
4. Industry-based survey
  - a. White paper completed, submitted and presented to Councils.

Lots of energy on 1 and 4, options 2 and 3 still need to be fleshed out. However, it may be wise to continue to put our effort into developing options 1 and 4.

**Councils’ February 2024 Motion:** *Move to recommend to task the NTAP Bigelow Contingency Plan working group to develop an outline detailing a plan to conduct a multi-vessel IBS pilot program to test the viability of the program presented in the “Draft Proposed Plan for a Novel Industry-Based Multispecies Bottom Trawl Survey on the Northeast U.S. Continental Shelf” white paper with a particular focus on refining section 2 “Survey Design Elements”, considering NEAMAP protocols and current industry platform capabilities. A progress report on the draft plan should be presented in time for further discussion at the April 2024 meetings of the NEFMC and MAFMC, and the spring 2024 meeting of ASMFC.*

#### Discussion/comments:

Where is the Pisces home ported?

**A:** *Mississippi, would take multiple days to get up to New England*

Need to be on standby right from the get-go. Would be two weeks best case minimum to get the boat up here from Mississippi.

Another thing that is concerning is that this vessel doesn’t trawl often, should be exploring having the vessel ready.

After white paper we have a lot of support for moving forward with the pilot. Today we need to put more meat on the bones to really start developing how this survey would run. New time series for the science center in addition to Bigelow and NEAMAP.

#### **9:45- 10:45 a.m. Industry Based Survey (option 4)**

- What are the key goals for a pilot?
  - Should it operate inside wind farms? Can we replicate survey tows inside of a wind farm?
  - Questions to address in a pilot: 12/24-hour day, vessel size, crew size, ops protocol, bio sampling protocol, gear incl. use of restrictor rope, towing across cables/proximity to fixed structures.

#### Discussion/comments:

- Context from NEFSC: Next biggest threat is wind farms. Assumption that the Bigelow will not be able to be in or tow within a wind farm. If we are losing those windfarm

stations, especially since wind farms are going to cause a change in habitat this is a big problem.

- Wind farm surveys not designed for a long-term solution with time series needed.
- Developing an IBS that can operate in wind farms, or determining now if it should, would be helpful.

### **Operating in wind farms**

The group discussed the need for the IBS to operate in wind farms and for a pilot to be designed to test operability of different sized vessels in wind farms. No clear consensus - some felt that existing fisheries monitoring work and commercial fishing activities once farms are built will tell us what we need to know about what kind of vessels can fish mobile gear inside of the wind farms. Others recommend determining vessel requirements and feasibility of operations within wind farms as a goal of the IBS. Other comments:

- We're having two different conversations: pilot that an industry or pair of industry vessels can sample in a complimentary way to the Bigelow. We are going to have a pretty good idea how different size vessels will operate in a wind farm development anecdotally via wind farm monitoring currently being conducted without having to incorporate this into the pilot.
- We're not going to bring someone in if they are not willing to go into a wind farm area.
- Not going to be a difference in ability between different sized trawlers (100-foot vs 50 foot) to fish in the fixed platforms. In the Gulf of Maine (GOM) all of them will be floating. Still don't know what the logistics are going to look like.
- Insurance coverage to tow in the wind farms could be a problem. Should check with insurance companies on coverage. Set up an IBS outside of the windfarms. For the pilot, insurance might be unique for the project; will be affected by the number of people on board the vessel.
- There could be value in knowing the capacity - operation on deck of different vessels. What level of catch volume can be handled; number of staff need.

### **24 vs 12-hour sampling**

- If the decision is to do 1 boat for 24-hour days, pool of capable vessel is going to be smaller.
- Two vessels operating a 12-hour day will require a smaller vessel/smaller crew, less insurance and more availability. Going to 24 hours per day is not a good idea as it will raise expenses and there are fewer capable/willing vessels.
- Catch handling and biological sampling requirements will be better managed on two smaller vessels working 12 hours per day. Will also provide more options on crew.
- Are there any cons to doing two smaller vessels with a 12-hour shifts that we aren't thinking of? Two vessels: one running during the daytime and one nights. Or overlap option: half-darkness, half day? The overlap option would have 24-hour day coverage but split duties. Getting more granularity is important.
- Under the overlap option, Vessel 1 would fish noon to midnight and vessel 2 fishing midnight to noon. Have the vessel not conducting the tow shift figuring out where the next two should be.
- More vessels will be able to bid on the contract if it's a 12-hour shift. Be more efficient with less people needed. Using a large vessel would be a sole source contract. If that vessel breaks down, we're in the same situation as the Bigelow.

- There are cons from a standardization standpoint and managing a survey that uses a fleet of vessels makes it more complicated.

## Gear

- Use the gear package that is currently being used on the VIMS NEAMAP survey (ground cable and ground gear)?
- Bigelow uses rockhopper, VIMS NEAMAP uses cookie. Bigelow has wider cod end to get additional length. Differences in mesh sizes in side panels.
- Two workgroup members emphasized that being similar to the Bigelow survey should take precedence and that the Bigelow gear should be used in the pilot. They pointed out that NTAP research has provided information comparing rockhopper and cookie.

## Communication needs?

The group discussed how to best plan for the pilot study. Should we conduct workshops similar to those conducted for the hook & line survey? Is an operations workshop needed and/or visiting vessels?

- Questions about solicitation for scallop vessels: What did that solicitation look like? How much interest did you get?  
*A: There were several vessel visits gauge folks interest in registering with the [System for Award Management](#) (SAMS). Fair amount of interest. The scallop solicitation was different because it's an existing survey. Pilot IBS study may need to follow a different process. But we don't currently have someone to lead this effort. The hook and line effort conducted a series of meetings down the coast to help with their design.*
- The hook and line meetings were very helpful. It was helpful to have predefined questions we wanted discussion on. Definitely suggest having a point person dedicated to this effort. The meetings were a good platform for recruiting vessels, giving them information about requirements, and for responding to solicitations. A mix of in-person and virtual scoping workshops would be beneficial.
- Having someone in the office help with registration so the vessel can bid on the project would be beneficial. Including answering questions related to inspections, insurance requirements, etc. Starting earlier is better. Would likely need 9-12 months lead time.
- Also need to keep in mind deadlines for large contracts too. That will impact the timing and timeframe for setting the schedule. **This year the \$250K- 5M deadline is May 13th.**

## Design elements

- Be adaptable to potential loss of survey area. Incorporate any re-stratification of the survey done on the Bigelow.
- Do we want to do exactly as Bigelow does or incorporate some previous industry recommendations such as 30-minute tows and re-stratification of deep-water strata?
- Where would this pilot occur? Southern New England? At what depths?
- Three or four areas required to figure out. Mid-Atlantic, Southern New England (SNE), George's Bank (GB), GOM. Pilot should cover three areas for a proof of concept. Potentially SNE/Mid-Atlantic, GB, and GOM. The pilot doesn't have to occur in each region at the same time and vessels could share gear.
- Is sampling all the way to 200 fathoms worthwhile? Staying within 130-150 fathoms should be better. The deeper depths may be more important in different regions (e.g.,

monkfish, white hake). From one working group member: Gulf of Maine out to the 140's is solid American plaice, witch flounder and monkfish habitat. So, 150 fathoms would be safe maximum depth for final IBS design.

- How much money are we going to need? How much gear are we going to need? Spare nets if there is space on each vessel? We need to figure out basic things like that to determine cost. Everyone must have the same electronics and net menstruation systems and safety equipment.
- We're not trying to replicate an ecosystem survey we are trying to provide data for stock assessments. What is the maximum depth need before we lose data for stock assessment versus for ecosystem assessment?
- How far inshore would we want to go to overlap with other state and NEAMAP surveys? Some gaps in coverage in the 60-90 ft range. May be a good starting point in addition to some of the deeper areas where NEAMAP currently samples so there is some overlap.
- Recommend that for pilot there is a focus on overlap with the Bigelow to determine if the survey could work, should stick with where Bigelow goes, and then can modify from there. Post pilot need to determine what was done well vs. what needs to be fixed.
- For pilot target mid-depths, cut out deeper depths because they're more expensive to do (need larger wire, cost more comparatively). It's easier and less expensive to go shallower than deeper.
- Discussion about ratio of wire out; Bigelow and NEAMAP use depth-dependent ratio, NEAMAP also considers net geometry, commercial vessels operate similarly (shorter wire out in deeper water). Use pilot to determine scope for a longer-term survey. Gear needs to be on the bottom and fish with proper net geometry. If using a restrictor rope may not need to worry about this. With restrictor rope you'd use bigger doors, and the rope would be the restricting factor so that net geometry is held consistent. Would simplify entire question.
- Consider sampling water chemistry. Also, acoustics, plankton, etc. (where/if possible). At least to understand if these could be part of pilot/longer-term survey.
- Tow speed and tow time need to be defined.
- Don't require auto trawl (several working group members agreed, but others see value in auto trawl at least long term).
- Do we need to standardize net mensuration gear? Might need a separate meeting on this. Differences of opinion about value of net mensuration gear.
- Would be useful to survey vessels to get a sense of what electronics are already used/on industry vessels (depth).
- What are the costs of the sampling electronics/workstations? Can we build standard workstations that will work across multiple vessels? Portable FSCS is a good option, on boats would need servers, barcode scanners, etc. Talking about at least \$30K (other working group members estimated much more, a scale alone can cost \$9k). FSCS has been used in the past on industry vessels.
- Also need to define what needs to be supplied to these stations - hydraulic, mechanical, electrical? Darana R. only provides electricity (110V). Understanding the reality of moving these stations from boat to boat is a need. Need 110V inside too to run servers. Would need at least 2 scales, 1 fish board, 1 scanner, display(s), computer(s), calipers etc. per station.
- Would be beneficial to have a follow-up meeting with those that have used these systems to talk through all the different options and potential needs. Have this meeting

prior to a public workshop, so at the public workshops the message could be relayed and vessel owners/operators would have an understanding of what would be needed/required. At public workshops should already have a clear idea on specifics about set up, workstations, power requirements, space, and sampling equipment.

- Consider a follow-up discussion on the data management process.
- Consider length of time required for a pilot - 10 day vs. 5 days, etc.
- *Reminder: there are currently no funds available for this work, capacity of Center funding is limited and is currently struggling to fund the surveys that already exist.*

**Summary of recommendations:**

- Ensure survey can operate in wind farms.
- Develop a list of data elements collected in the trawl survey, identify which elements are sensitive to standardization.
- Develop a biological sampling protocol for the pilot that targets sampling needs. (Point made that survey-specific age-length keys are useful.)
- Address who will process biological samples. (For the pilot it is likely this can be done by the NEFSC. For a shelf-wide survey the volume of sampling will need to be addressed.)
- When there are multiple indices and data sources it is best to make sure there is overlap so that the model can better address the multiple surveys/data sources.
- Use a restrictor rope in the pilot study.
- Use the same gear as the Bigelow.
- Host meetings like done for hook and line survey.
- Have someone ready to help with SAMS registration so the vessel can bid.
- Incorporate any re-stratification of the survey done on the Bigelow.
- Use same electronics, mensuration gear across vessels.
- Sample in more than one of the 4 major areas for proof of concept.
- Reduce depth limit to 130-150m - look at how deep we go before we lose data for stock assessment versus for ecosystem assessment.
- Meet about net mensuration value, need, similarity of different systems.
- Meet with existing survey programs to discuss sampling stations.
- Have workshop with vessel owners to discuss feasibility, limitations.

**Notes from the slides as edited during the working group meeting:**

Should it operate inside of (fixed foundation) wind farms?	Yes (ideally)
Questions to address in a pilot: 12/24-hour day, vessel size, crew size, ops protocol, bio sampling protocol, gear incl. use of restrictor rope, towing across cables/proximity to fixed structures	<p>2 boats sampling 12-hour periods over a 24-hour day (noon-midnight/midnight-noon); use restrictor rope.</p> <p>For the pilot, bio sample as much as possible, consider processing needs (who is doing it, what is their capacity); how/if CTD and plankton sampling is done, acoustics.</p> <p>Learn from other wind farm monitoring surveys and commercial activity in wind farms.</p>

	Use pilot to develop a scope table for optimal spread; consider impact of using restrictor rope (spread won't be dependent on scope).
Workshops like hook & line survey? Operations workshop?	Workshops useful - Confirm the gear we're moving forward with (gear used on Bigelow for consistency); make sure they're structured; describe process clearly (i.e. scallop survey; include specs as early as possible); fall better.
Connection to wind farm trawl surveys, will that answer questions around towing across cables/proximity to fixed structures?	(Skipped this - covered under 1 and 2)
What are key stat design questions - how does that matter for a pilot?	<p>Spatial overlap with other surveys.</p> <p>Future-proof survey designs, being adaptable to potential loss of survey area.</p> <p>Incorporate any re-stratification of the survey done on the Bigelow.</p> <p>More discussion of key elements of the survey design - consider if there is anything the pilot should examine - 20/30 min tow time, for example, tow speed.</p>
Where will the pilot occur?	<p>The 3 areas: MA-SNE, Georges, GOM. Include multiple areas ideally.</p> <p>Pilot doesn't have to occur in each region at the same time, vessels could share gear.</p> <p>Depth: using wire on the vessels will be less expensive; what would we miss stock assessment-wise 130-200 fathom (e.g., white hake); pilot focus on same strata as Bigelow, but truncate depth if needed to accommodate existing wire lengths; future need: overlap with NEAMAP/state surveys - include 60-90 ft range gap between NEAMAP and Bigelow.</p>

- Auto trawl - do not require this for the pilot.
- Mensuration - identify specific measurements needed; not necessarily a specific unit (keep data management complications in mind, though)
- Electronics - can use what is on the vessels (needs more exploration based on data management needs)
- Horsepower - 20 min tow at 3 kt.
- Sampling workstations - portable FSCS; costs are >\$30k; need to specify space and electrical needs.

### **10:45-11:30 a.m. Next Steps**

- Develop cost estimates - back of the envelope we're in the \$750K to \$2M range.
  - Also need to consider how to handle the funds (maybe ASMFC).
- Co-chairs will provide an update at Councils' upcoming April 2024 meetings.
  - NEFSC staff will provide briefing materials to support Council meeting updates.
  - MAFMC briefing book is due March 29.
  - NEFMC briefing book is due April 5.
- Plan for a follow-up Working Group meeting following the April Council meetings prior to June meetings.
- Provide NTAP full panel meeting minutes and WG meeting summary. Prior to summer NTAP meeting, prepare any memos or background info required and share slides with MAFMC staff a day ahead of meeting.