NEAMAP Operations Committee
Notes for Report to NEAMAP Board on 2/5/2014

Overview

The NEAMAP Operations Committee developed 14 objectives/tasks during a conference call in January 2013, and subsequently presented these to the NEAMAP Board at the February 2013 meeting in Alexandria, VA as recommendations for approval. The list included several action items for the NEAMAP Board, Operations Committee, and Trawl Technical Committee. The Board approved all of these items, and they were incorporated into the 2013 NEAMAP Operations Plan.

Following the Operations meeting in January and Board meeting in February, members of the NEAMAP Trawl Technical Committee convened via conference call in June 2013 to begin to discuss the tasks with which they were charged. It is worth noting that this was the first meeting of this committee since 2007. The Operations Committee followed-up on this call with a conference call of its own in July 2013. The purpose of the Operations call was to discuss the progress of the Trawl Technical committee and also to begin to address the items for which it is responsible.

While another round of conference calls was planned for both Operations and Trawl Technical for late 2013 to track progress and maintain momentum, these did not occur due to a combination of committee member field schedules and staff turnover. Since field schedules typically ease during the winter/early spring months, and committee chairs since have had the opportunity to work with new staff, it is anticipated that these calls will occur in the near future.

The following provides an update on each of the Operations and Trawl Technical tasks recommended to and approved by the Board in 2013. Keep in mind that several of these were relatively large in scale and/or meant to be ongoing items, so completion of all of these tasks in 2013 was not entirely feasible.

Operations Tasks

- **Update the pool of survey staff and add this listing to the neamap.net website. (*from Task 1*)**
    - This list was updated by several organizations (including NH Fish & Game, RI Division of Fish & Wildlife, NY Department of Environmental Conservation, VIMS Multispecies Research Group (NEAMAP M-A/SNE), MA Department of Marine

Fisheries, and the NEFSC Ecosystems Surveys Branch) during the July 2013 conference call and was subsequently posted on www.neamap.net.

- **Initiate efforts to generate coordinated outreach through presentations of the accomplishments of the NEAMAP surveys. (*from Task 3*)**
    - Staff from NEAMAP M-A/SNE, NEAMAP MA DMF, and NEAMAP ME/NH provided information for the 2013 NEAMAP Board presentation to the ISMFP Policy Board.
    - Committee members reviewed the NEAMAP M-A/SNE brochure that was generated by ASMFC and VIMS staff, and made several recommendations for expansion to include all NEAMAP surveys. These recommendations will be incorporated into a new brochure to be developed in the near future (2014) by Madsen/Gartland. Those recommendations include:
        - Expand map to cover range of all surveys (i.e., three NEAMAPs)
        - Add more pictures from all surveys
        - Include stock assessment use of all surveys
        - Under survey facts, add listing of states to survey range

- **Update inventory of fishery-independent survey efforts occurring from Maine to North Carolina (i.e., NEAMAP Area). (*Leftover from multiple 2012 committee meetings*)**
    - Committee members reviewed the most recent version of the "Survey_of_Surveys.xls" document during the July 2013 conference call and made several suggestions to improve the format (categories to add/remove, whether to include surveys that were no longer in existence, etc.)
    - Committee members are currently reviewing and populating the document, which we expect will be near-finalized on our upcoming call. This task is deceptively large, given the number of agencies & institutions that conduct surveys in each state.
    - As an aside, Operations is working to compile information on fixed-gear surveys for a review to be conducted by the Analytical Committee. This effort, along with the inventory work, will likely serve to identify gaps and possible solution related to survey coverage.

- **Create a location on the neamap.net website that will provide schedules & timelines for upcoming stock assessments, both at the ASMFC & NMFS. (*from Task 5*)**
    - Committee members decided to begin by posting NMFS and ASMFC stock assessment schedules on the site, and then expand that in coming years to include data types needed for each assessment. The latter should facilitate greater incorporation of the NEAMAPs into assessments and perhaps also survey coordination.

- Madsen/Gartland will develop this list and post on the site in the near future (2014). The addition of necessary data elements could be handled by either the Operations or Analytical Committees, or both.

- **Identify, through the use of the ASMFC Research Priorities document and Stock Assessment reports, areas where a modest expansion of collection effort on the current surveys would serve to address these data needs. (*from Task 10*)**
  - Staff of the NEAMAP M-A/SNE, NEAMAP MA DMF, and NEAMAP ME/NH trawl surveys are currently reviewing the Research Priorities document and will discuss options for adding to their collection efforts on the next conference call.

- **Establish liaison with SEAMAP for the Operations Committee. (*from Task 14*)**
  - The plan was to have the chair of the SEAMAP Board/Operations Committee and the chair of the NEAMAP Operations Committee serve as liaisons. Madsen/Gartland have begun to discuss the logistics associated with this arrangement and will likely make appropriate SEAMAP contacts and implement this plan in 2014.

Trawl Technical Tasks

- **Exploration and evaluation of technologies that would either increase or streamline data collection efforts (e.g., underwater cameras, current meters, bottom mapping equipment, etc.) (*from Task 6*)**
  - This is an ongoing task for the Trawl Technical Committee, as data needs and technologies available to meet those needs are constantly evolving.
  - The committee decided to begin by inventorying equipment used by fishery-independent surveys represented on that committee, with an eye toward exploring new technologies meant to meet data needs listed in the ASMFC Research Priorities Document. The inventory will include pros and cons of each item, along with approximate costs.

- **Develop standards for maturity stage determination for use by the NEAMAP surveys. (*from Task 7*)**
  - Committee members involved in fishery-independent survey efforts are going to begin to document their maturity stage classification systems in detail. This will be accomplished by photographing the various gonad stages that they encounter for a number of species and matching these photographs with their stage determinations. These products can then be compared across surveys.
  - Gartland will contact Mark Wuenschel at the NEFSC to discuss the possibility of conducting a maturity classification workshop that can be attended by both NEFSC staff and NEAMAP Committee Members.

- The Committee discussed developing a general guidance document meant to address data collection by fishery-independent surveys. The purpose will be to serve as a resource for researchers developing new surveys as well as to identify standards that may serve to coordinate existing surveys (reinforces Board policy to strive to collect data beyond length and count).

- **Begin to explore gaps in survey coverage (spatial, temporal, species-specific, etc.) and identify new or existing surveys to fill these gaps. (*from Task 8*)**
  - Committee members discussed the topic and agreed to keep thinking on it, and they plan to review the stock assessment schedule, data needs, and ASMFC Research Priorities Document, most likely in conjunction with the Operations Committee.

- **Initiate steps to develop policy and guiding documents for NEAMAPs with regard to quantifying within-survey changes in relative catchability (*from Task 9*)**
  - The committee discussed developing a general document meant to guide researchers dealing with survey changes that may impact relative catchability.
  - Members decided to begin by working to compile and review a bibliography of papers and gray literature on the topic (Operations Committee assisting).

Miscellaneous Tasks

- **Joint recommendation of the Analytical and Operations Committees regarding attendance of those familiar with the NEAMAP datasets at assessment data workshops. (*from Task 11*)**
  - While it is likely that staff from the three NEAMAP surveys did attend assessment data workshops in 2013, no formal mechanism to ensure or facilitate attendance has been established through the ASMFC NEAMAP Committees.
  - Operations will work with ASMFC staff to address this issue.

- **Conduct periodic reviews of stock assessment needs and NEAMAP data availability relative to these needs. (*from Task 10*)**
  - The Operations Committee discussed this topic and concluded that it would likely be sufficient if the Analytical Committee conducted these reviews every three years, while the Operations Committee will document the inclusion of NEAMAP data in the assessment process annually.
  - This proposal is included in the 2014 NEAMAP Operations Document for Board approval.

Field Code Changed

~~2013~~ 2014 Operations Plan

Northeast Area Monitoring and Assessment Program (NEAMAP)

Table of Contents

~~2013~~ 2014 Operations Plan for the Northeast Area Monitoring and Assessment Program (NEAMAP)

January 1, ~~2013~~ 2014 to December 31, ~~2013~~2014

I. INTRODUCTION

The Northeast Area Monitoring and Assessment Program (NEAMAP) is a cooperative state/federal fishery-independent research and data collection program implemented between the Gulf of Maine and Cape Hatteras, NC. The program is intended to maximize the effective capability of fishery-independent survey activities and maximize the usefulness of data collected by such surveys, through cooperative planning, innovative uses of statistical theory and design, and consolidation of appropriate data into a useful data management system. The overall approach of NEAMAP emphasizes the collection of fishery-independent data to fill specific short-term and long-term management needs.

This Operations Plan outlines the tasks to be conducted during ~~2013~~ 2014 to further develop and implement the NEAMAP.

II. MISSION

The mission of NEAMAP is to provide an integrated and cooperative state/federal program to facilitate collection and dissemination of fishery-independent information for use by government agencies, the fishing industry (commercial and recreational), researchers, and others requesting such information. To meet the needs of fishery management and fish stock assessment, NEAMAP provides the framework for collection and use of fishery-independent data. This includes coordination of existing programs, development and implementation of new programs where necessary, and dissemination of the data collected. NEAMAP will serve to coordinate fishery-independent data collection and data management activities among the states and federal Partners in the Northeast and mid-Atlantic regions, as well as between NEAMAP and other existing regional initiatives (e.g., SEAMAP, FIN). The intent of the program is not to change existing programs, but to coordinate and standardize procedures and improve data accessibility.

The NEAMAP Goals and Objectives are included in Appendix A.

III. OPERATIONS

A. Data Collection and Data Management

Data collection and data management procedures for individual surveys will be coordinated among participating agencies in order to enhance the usefulness of the data, minimize costs, and increase the accessibility of information to fishery managers, administrators, and researchers. NEAMAP Technical Committees will review these surveys and programs and make recommendations for their possible integration into the NEAMAP.

NEAMAP will build on, and coordinate with, current activities such as SEAMAP and individual data collection programs, to develop optimum resource sampling and assessment capabilities.

NEAMAP projects in the nearshore area are currently defined as waters bounded by the 6.1m and 18.3m depth contours between Montauk, NY and Cape Hatteras, NC and the 18.3m and 36.6m depth contours in Rhode Island Sound and Block Island Sound; waters of the Gulf of Maine bounded by the New Hampshire/Massachusetts border and the US/Canadian border from the 6m contour to the 12 mile territorial limit, excluding Cobscook Bay; and Massachusetts territorial waters including all of Cape Cod Bay and

Nantucket Sound.

B. NEAMAP Administration

At all levels, the NEAMAP is consensus driven. The NEAMAP Board will serve as the executive level committee for the program. The Board will oversee the design and implementation of the NEAMAP, establish policy to guide program and partner participation, and serve as the final decision making authority for the program.

Technical Committees will be assigned to develop technical details of individual surveys and perform relevant tasks assigned by the NEAMAP Board. The Technical Committees will report directly to the Board. Existing Atlantic States Marine Fisheries Commission (ASMFC) Species Advisory Panels and the Commission Advisory Board (or a combination of both, depending on the issue) will be utilized to obtain industry input into the development and implementation of the NEAMAP.

The NEAMAP Board will be comprised of one representative from each partner agency. Technical Committee members will be assigned by their respective Board members. Each committee will elect a chair and vice-chair to oversee the committee actions. The chair will serve a two-year term. At the conclusion of the chair's two-year term, the vice-chair will become chair and the committee will elect a new vice-chair.

All committees shall reach decisions by consensus, if possible. If consensus is not possible, the NEAMAP Board will reach a final decision by vote, with each partner agency casting one vote. If consensus is not possible at any other committee level, the committee shall identify options and present the benefits and drawbacks of each option. These options will be forwarded to the NEAMAP Board for review and development of a recommendation.

The ASMFC will provide staff support and other administrative functions.

IV. NEAMAP GOALS

The following tasks are required to develop and implement the NEAMAP during ~~2013~~2014.

Administrative Goals

Task 1: ***Support Continuation of the NEAMAP Nearshore Trawl Surveys***
(Goal 1)

Objective: Support continuation of the NEAMAP Nearshore Trawl Surveys through coordination with Principal Investigators and all NEAMAP Committees as needed. Develop options and strategies using planning documents as guidance. Discuss coordination amongst current NEAMAP partners and other existing programs. Establish standards for the admittance of additional surveys into the NEAMAP. Continue to document budget needs of each NEAMAP project. Maintain pool of staff to assist in surveys as needed between surveys and post this list on the NEAMAP website.

Team Members: NEAMAP Board and Committees

Resources: Administrative planning budget needed; Implementation costs.

Schedule: *Ongoing ~~2013~~2014*

Task 2: ***Identify and Secure Additional Program Funding***
(Goal 1, Objective 2)

Objective: To identify and evaluate potential funding sources to implement the NEAMAP Program Design. Continue to secure funding for the NEAMAP program. Identify sources for equipment funds to be shared amongst NEAMAP partners. Identify funds to assist surveys in gear characterization work, as well as efforts to characterize gear performance and quantify changes in relative catchability. Explore opportunities for acquiring funds to re-establish survey personnel exchanges.

Team Members: NEAMAP Board and ISFMP Policy Board

Resources: Conference call funds may be required to develop these issues.

Schedule: *Compile and Discuss Additional Funding Sources (Ongoing in ~~2013~~2014)*

Task 3: ***Develop coordinated objectives and approaches for outreach and education regarding the NEAMAP program to convey coordination among NEAMAP survey activities***
(Goal 4)

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Objective: Review ongoing outreach efforts by the NEAMAP Nearshore Surveys and continue to develop objectives and approaches for a coordinated message and effort. Expand presentation of NEAMAP activities to the Policy Board.

Team Members: NEAMAP Researchers and Staff

Resources: Funds may be required for travel.

Schedule: *Ongoing ~~2013~~2014*

Task 4: ***Develop ~~2014~~ 2015 Operations Plan***
(Goal 1, Objective 1)

Objective: Develop ~~2014~~ 2015 NEAMAP Operations Plan, utilizing the NEAMAP 2012-2016 Management Plan, Technical Committee recommendations, and other directions from the Operations Committee and the NEAMAP Board.

Team Members: NEAMAP Board, Operations Committee, and Staff

Resources: No additional funds required.

Schedule: *Draft Operations Plan (Fall ~~2013~~2014/Winter ~~2014~~2015)*
NEAMAP Board Approval (Winter ~~2013/2014~~2015)

Task 5: ***Maintain Website***
(Goal 3, Objective 1)

Objective: Maintain website to provide background information on NEAMAP. ~~Include~~ Update summary data (e.g., abundance indices, length frequencies, age-length matrices) currently ~~-~~on the NEAMAP website and add new data types (either from existing surveys or new surveys) as it becomes available. Add information regarding the survey staff pool and assessment scheduling.

Team Members: NEAMAP Data Management Committee and Staff

Resources: No additional funds required.

Schedule: *Ongoing ~~2013~~2014*

Data Collection Goals

Task 6: ***Research and evaluate new technologies for incorporation into the field, laboratory, & analysis components of NEAMAP Trawl Surveys.***
(Goal 2)

Objective: Explore and evaluate technologies that would either increase or streamline data collection efforts (e.g., underwater cameras, current meters, bottom mapping equipment, etc.). Look to other similar surveys to identify equipment and software that could potentially streamline the collection of existing data types, augment the types & amounts of useful data collected, and/or facilitate the handling and analysis of these data for the NEAMAP ~~Trawl~~ Surveys. Use other sources (e.g., internet, trade shows, etc.) to identify these technologies as well. Evaluate the equipment/software with respect to feasibility of implementation and benefit to the surveys in terms of additional data collected and efficiencies gained. Use documentation developed by other programs as well as contacts within these programs to guide the evaluation process. Provide reports to the NEAMAP Board regarding equipment acquisition priorities. Acquire and implement the desirable technologies as resources permit.

Comment [JG1]: Nothing says that just because all of the current NEAMAP surveys are trawl surveys, that is the way that it always will be.

Team Members: NEAMAP Trawl Technical & Data Management Committees

Resources: Funds are required for equipment purchase.

Schedule: *Ongoing ~~2013~~2014*

Task 7: ***Work to coordinate, and in some cases standardize, data collection approaches for those parameters which are of interest to multiple surveys (e.g., type of length measurements taken for a given species, type of ageing structures collected, etc.), and/or are somewhat subjective in their classification (e.g., maturity stage determination).***

Objective: Task the Trawl Technical committee with developing standards for maturity stage determination for use by the NEAMAP surveys. Work in collaboration with the NEFSC and other appropriate agencies. Hold workshops as needed to disseminate coordination efforts.

Team Members: NEAMAP Trawl Technical Committee

Resources: ~~No additional funds required~~Funds would be required for workshops,

once they are developed.

Schedule: *Ongoing ~~2013~~2014*

Task 8: ***Identify and recommend how to fill gaps in sampling, either through the expansion of existing surveys or the development of new surveys. Gaps could be spatial, temporal, species-specific, etc.***

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Objective: Begin to explore critical data needs resulting from gaps in survey coverage and identify new or existing surveys that could be used to fill these gaps. NEAMAP committees are to collaborate to identify the most pressing data needs, and from there Trawl Technical and Operations Committees should identify new surveys and/or expansions of existing surveys needed to address these deficiencies, and prioritize their value. One avenue through which this could be accomplished is by communicating with other regional fisheries research programs that are also addressing data/survey gaps, and perhaps by sending NEAMAP representatives to their workshops. Once identified, these options for new surveys/expansion of existing are to be presented to the Board, who in turn will direct the Trawl Technical Committee to begin design work for those identified by the Board as top candidate(s). Implementation will occur as funding permits.

For expansion of existing surveys, work closely with project Principal Investigators immediately upon identification of a potential expansion to identify willingness and feasibility of implementation. If favorable, present to the Board prior to beginning any design work and implement as practicable following completion of design work and once funding becomes available.

Team Members: All NEAMAP Committees, Survey PIs

Resources: No additional funds at this time. Implementation funds may be necessary in the future.

Schedule: *Ongoing ~~2013~~2014, to be done subsequent to Task 10*

Task 9: ***Develop approaches for research to better understand catchability processes for the various NEAMAP surveys. Initiate steps to develop policy, approaches, and guiding documents for NEAMAP with regard to quantifying within-survey changes in relative catchability, particularly following intentional changes in survey operations.***

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Objective: To begin, encourage/direct participation, either of Trawl Technical Committee members and/or survey staff, in any upcoming catchability workshops hosted by the NEFSC, as well as directing the Trawl Technical Committee (perhaps in conjunction with Operations Committee) to explore and document current accepted approaches and methods for quantifying changes in relative catchability.

Team Members: NEAMAP Trawl Technical and Operations Committees

Resources: Funds are required to attend workshops and convene members.

Schedule: *Ongoing ~~2013~~2014*

Data Management Goals

Task 10: ***Evaluate NEAMAP data to ensure data collected by surveys continues to be responsive to and addresses management needs.***
(Goal 3)

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Objective: Analytical Committee to conduct review of stock assessment needs relative to NEAMAP data collection efforts every three years; Operations Committee to conduct annual review of how NEAMAP data have been used in stock assessments; Trawl Technical and Operations Committees to use annual Operations review to assess opportunities for NEAMAP surveys to address needs.~~Analytical Committee to conduct periodic reviews of stock assessment needs and NEAMAP data availability relative to these needs. Operations Committee to evaluate and add data elements as needs arise. Trawl Technical Committee to continue to evaluate opportunities to expand data collection on existing surveys~~.

Team Members: Analytical, Operations, Trawl Technical Committees

Resources: Administrative budget.

Schedule: *Ongoing ~~2013~~2014, completion leads to initiation of Task 8*

Task 11: ***Provide data in support of research and fisheries management.***
(Goal 3)

Objective: Provide data and metadata for stock assessments and other analyses supporting fisheries management. Develop an online open-access data portal for NEAMAP data survey indices. Have representatives familiar with the NEAMAP datasets attend stock assessment data workshops.

Team Members: NEAMAP Data Management Committee and staff

Resources: No additional funds required.

Schedule: *Ongoing ~~2013~~2014*

Task 12: ***NEAMAP Survey Partners share current data management practices (depending on funding situation) or plan for ~~2014~~2015.***

Objective: Survey leaders demonstrate and share actual hardware and software currently in use. Data Management personnel from each survey will prepare detailed descriptions of their data warehousing systems.

Team Members: NEAMAP Data Management Committee and staff

Resources: Additional funds required for a workshop.

Schedule: *Ongoing ~~2013~~2014*

Task 13: ***Develop NEAMAP Data Management Action Plan ~~2014~~2015***
(Goal 3)

Objective: Keep action plan for NEAMAP data management updated with latest plans.. Include content, data flow, metadata, standard operating procedures, data management roles and responsibilities, and timeline for development.

Team Members: NEAMAP Data Management Committee and staff

Resources: No additional funds required.

Schedule: ~~*2013*~~*2014*

Regional Program Coordination Goals

Task 14: ***Promote Consistency and Compatibility among Regional Programs***
(Goal 2, Objective 2; Goal 3, Objective 5)

Objective: Coordinate with existing regional fisheries statistics initiatives (SEAMAP, ASMFC Lobster Database, FIN, etc.) to promote consistency and compatibility between the programs. Provide liaison from the NEAMAP to these programs.

Team Members: NEAMAP Board and/or NEAMAP Staff

Resources: No additional funds required.

Schedule: *Ongoing* ~~*2013*~~*2014*

Task 15: ***Investigate Potential for Regional Processing Centers for Biological Samples***
(Goal 2, Objective 2)

Objective: Coordinate with ongoing activities of other organizations. Identify the location and scope of current processing activity. Convene ageing workshops as necessary and with available funds.

Team Members: Staff

Resources: No additional funds required.

Schedule: *Ongoing* ~~*2013*~~*2014*

V. NEAMAP ~~2012~~ 2013 ACCOMPLISHMENTS

NEAMAP Mid-Atlantic/Southern New England Nearshore Trawl Survey

Comment [SM2]: Gartland updated for 2013.

The Virginia Institute of Marine Science (VIMS) completed full-scale spring and fall cruises (150 tows for each cruise – Martha's Vineyard, MA to Cape Hatteras, NC) for the NEAMAP Mid-Atlantic/Southern New England (M-A/SNE) Nearshore Trawl Survey in 2013. Catches were somewhat smaller than in previous years; 281,000 specimens representing approximately 90 species were collected in the spring, while 864,000 specimens/123 species were caught in the fall. During the spring cruise, 6,418 fishes were sampled for ageing and 4,466 for diet, while the fall yielded 4,866 for ageing and 2,850 for diet.

With respect to 2014 operations, VIMS project PIs and staff were successful in securing an allocation of Research-Set Aside (RSA) quotas believed to be sufficient to generate funds necessary to support spring and fall sampling. These quotas have yet to be auctioned, however, so exact funding status of this survey remains unknown at this time. As in previous years, funding via RSA quotas has been provided by the Mid-Atlantic Fishery Management Council, Multispecies RSA Program.

This survey continued to add new elements to its field sampling efforts in 2013. Personnel began recording sex and maturity data, in addition to individual length and weight, for Longfin squid. Further, since the catchability of these squid is thought to be related to light availability, equipment was acquired that allowed the measurement of photosynthetically active radiation (PAR) in the water column. PAR measurements were recorded, along with other water quality parameters, at 2 m intervals throughout the water column at each sampling site. It is expected that survey personnel will continue to take these measurements on future cruises. Gastric mills were removed and preserved from a subsample of American lobster for each tow in which they were collected, and these structures will be processed in the near future with the intent of generating age data for this species. It is anticipated that these additional data will increase the utility of the M-A/SNE Trawl Survey in the assessment and management of these two species.

The survey also engaged in some new sample collection / data acquisition efforts as a result of collaborations with other programs. Gonad samples were collected from female Atlantic menhaden, at the request of the ASMFC Atlantic Menhaden Technical Committee, to support efforts meant to quantify fecundity. Samples also were taken from both male and female specimens for colleagues at Seton Hall University attempting to characterize contaminant levels in Atlantic and Gulf of Mexico stocks following the 2010 Gulf Oil Spill. Other collections primarily involved the acquisition of tissue samples to support genetic studies for a variety of species (tautog, little skate, butterfly rays, silver hake, etc.).

Survey staff participated in the ASMFC-sponsored black sea bass ageing exchange in 2013. While this exchange primarily included VIMS (NEAMAP M-A/SNE Survey), NEFSC (Bottom Trawl Survey), North Carolina Division of Marine Fisheries, and the South Carolina Department of Natural Resources, other organizations participated so as to learn the protocols associated with sea bass ageing. A full report of this work is available at www.asmfc.org, and it is worth noting that personnel from VIMS and the NEFSC are consistent in the assignment of ages to black sea bass samples. Staff also attended the ASMFC-sponsored river herring ageing exchange in December 2013. Given that questions have arisen about the consistency of ageing of summer flounder, both between structures (scales vs. otoliths) and across labs for a given

structure, NEAMAP M-A/SNE began collecting scale samples from summer flounder, in addition to otoliths as has been protocol since this survey's inception, to support a summer flounder ageing exchange for 2014.

With respect to routine laboratory processing, ageing efforts have continued to keep pace with field collections. Age data are available for nearly all of the priority species through 2012, and all summer flounder and bluefish samples collected in 2013 have already been processed. As noted in past updates, there currently exists a backlog of both river herring and elasmobranch (skates and dogfish) ageing samples. It is expected that all of the river herring samples collected since the survey's inception will be processed shortly, as the purpose of attending the ASMFC river herring ageing workshop was to learn proper processing/ageing techniques from experts in other groups. Protocols have been developed, and processing of these samples is slated for 2014. One of the main impediments to processing the elasmobranch samples is the time associated with cleaning and preparing the samples collected from the field. Students were employed on a part-time basis in 2013 to complete this portion of the processing, and they were able to make appreciable progress. As such, age data for skates and dogfish from this survey will be available in the near future. All stomach samples collected through the spring 2013 survey cruise have been processed, and it is expected that those collected during the fall cruise last year will be completed sometime during the summer of 2014.

As noted in past updates, this survey makes its data available on the web via a number of links. In total, these were accessed by approximately 100 different researchers in 2013. The main website for the M-A/SNE Trawl Survey is www.vims.edu/fisheries/neamap, while the various data links are:

- Fishery Analyst Online – A GIS-based way to retrieve almost raw data. http://fluke.vims.edu/fishgis/faovims/index.htm
- Food Habits Data – Make customized queries to an online database of pre-calculated diet indices based on selectable criteria. http://www.vims.edu/research/departments/fisheries/programs/multispecies_fisheries_research/fish_food_habits/fishfoodhabitdata
- Abundance Indices – Clickable and downloadable copies of overall and age-specific (where appropriate) relative abundance indices based on both counts and biomass. Although many are not quite ready for prime time, many are close enough that users can get an idea of where the project is going. http://www.vims.edu/research/departments/fisheries/programs/multispecies_fisheries_research/abundance_indices/index.php

To date, NEAMAP M-A/SNE Trawl Survey data have been used in stock assessments for Atlantic menhaden (included data collected by the survey on this species, as well as diet data of its most common predators) Atlantic sturgeon (ESA evaluation), longfin squid, river herring, summer flounder, and winter flounder. This survey has also supplied data for assessments of: American lobster, Atlantic croaker, Atlantic sea scallop, black drum, black sea bass, bluefish, butterfish, horseshoe crab, scup, skates (clearnose, little, and winter), smooth dogfish, spiny dogfish, spot, striped bass, tautog, and weakfish. The results of some of these assessments are currently pending. In each case where the data were requested for an assessment but not

incorporated, survey PIs were informed that it was due to the short time series of the data available, and not because of poor data quality. It is anticipated that NEAMAP M-A/SNE data for a number of the species will be incorporated in the next "round" of assessments, when the time-series of abundance data from this survey is somewhat more robust. For a full accounting of where the data from this survey have been used, both from a stock assessment and a general fisheries science standpoint, visit

http://www.vims.edu/research/departments/fisheries/programs/multispecies_fisheries_research/data_uses/index

The list is updated approximately quarterly.

NEAMAP Maine-New Hampshire Inshore Trawl Survey

Comment [SM3]: Sherman/Stepanek updated for 2013

The Maine Department of Marine Resources completed a full spring and fall survey of the Maine-New Hampshire (MENH) Inshore Trawl Survey area (Massachusetts border to the Canadian border). During the spring survey 113 tows were completed over 25 sea days from 6 May to 6 June, 2013. The fall survey was conducted from 23 September through October 25th completing 96 tows on 25 sampling days. Roughly 1350 otoliths were collected from winter flounder, American plaice, witch flounder, Atlantic cod, haddock, , and white hake. Sex and maturity determinations were collected for yellowtail flounder, cod, haddock, plaice, winter flounder, witch flounder, monkfish, and white hake. Food habits data was also collected from monkfish in the fall survey.

Funds were secured for 2014 MENH Inshore Trawl Survey obtained through the NMFS Cooperative Research Partners Program.

On the spring survey, Christine Lipsky, Julie Nieland, and Michael O'Malley from NOAA's NMFS salmon and endangered species branch, came along on the second and third weeks to continue a groundfish stomach sampling survey looking for alosines as prey. Michael O'Malley came along for 1 week on the fall survey for the same purpose. Samples were collected for the University of Maine to track occurrence of sea lice in selected species. Alewife samples were collected in the fall survey from Penobscot Bay for Karen Wilson, a USM researcher looking at genetics. Winter flounder were tagged on the spring and fall survey this fall in conjunction with a Northeast Consortium project lead by Keri Stepanek at MEDMR.

Trawl survey staff provided data to MEDMR co-workers for Northern shrimp assessment and management, Atlantic herring management, scallop research, American lobster, river herring research, winter flounder, and Atlantic halibut. Data was provided to New Hampshire Fish and Game on that portion of the survey.

MENH Trawl data were provided to ASMFC, NEFMC, MAFMC technical committees and NMFS personnel for assessments butterfish and lobster. Winter flounder otoliths were digitized for spring 2013. We are expanding our aging with Atlantic cod, haddock, and white hake otoliths currently being processed.
Additional data requests were filled from NMFS regional Office in Gloucester, University of New Brunswick, University of Maine, University of New Hampshire, Audubon Society,

Penobscot East Research Center, and other independent researchers.

http://www.maine.gov/dmr/rm/trawl/index.htm

NEAMAP Massachusetts Division of Marine Fisheries Inshore Bottom Trawl Survey

Comment [SM4]: King updated for 2013.

The 36th spring and fall surveys were accomplished in 2013. 100 stations were completed during the May survey, all of which are considered acceptable for assessment purposes. 98 stations were completed on the fall survey to acceptable standards for all purposes. Two additional fall stations are considered representative for spiny dogfish only.

Nearly 2,700 scale/otolith samples, as well as sex and maturity observations, were taken from Atlantic cod, haddock, summer flounder, yellowtail flounder, winter flounder, windowpane flounder, black sea bass and scup. Winter flounder and black sea bass age samples were processed at the Division of Marine Fisheries age and growth lab in Gloucester, MA. Additional collections included over 350 river herring for a study on cohort identification, 39 live spawning condition winter flounder for a study of acidification effects on spawning success, and 85 winter and yellowtail flounder for a study on egg production.

In 2013, survey data was provided in support of regional assessment efforts on American lobster, black sea bass, tautog, and horseshoe crab. Numerous data requests were filled in support of nearshore fish community research, habitat usage, and state and regional management guidance.

http://www.mass.gov/dfwele/dmf/programsandprojects/resource.htm#resource

APPENDIX A – NEAMAP Goals and Objectives

Goal 1 - Cooperatively plan, evaluate, and administer fisheries independent data collection programs, including a state/federal near shore trawl survey and other NEAMAP-sponsored activities.

Objectives:

1. Develop an annual operations plan consistent with budget and operational constraints;

2. Develop an annual budget allocation plan, which considers program needs, annual operations plans, and participant capabilities;

3. Sponsor meetings to cooperatively plan and evaluate activities;

4. Sponsor special workshops and symposia to help evaluate or plan sampling strategies, designs, or methods;

5. Establish working groups, as needed, under the auspices of the NEAMAP committees with appropriate expertise, to assist in planning and evaluating NEAMAP activities;

6. Conduct annual internal reviews of program activities;

7. Conduct periodic coordinated external reviews of specific management, administrative, and technical elements of the program;

8. Coordinate and document NEAMAP activities, and disseminate programmatic information.

Goal 2 - Establish a coordinated, long-term, fisheries independent data collection program of Atlantic coast living marine resources from Cape Hatteras to Maine for the purpose of resource and habitat assessment and management.

Objectives:

1. Conduct routine surveys and special studies, as needed, of regional resources and their environments;

2. Coordinate data collection activities with ongoing surveys and data collection programs;

3. Collect data on species composition, biomass, relative abundance, distribution, and seasonality of living marine resources;

4. Record biological information to include size, age, sex, and reproductive condition for target species;

5. Identify and monitor essential fish habitat;

6. Collect environmental data coincident with living marine resource monitoring activities;

7. Provide biological specimens to cooperating agencies and other investigators upon request, subject to certain limitations (time, space, funding).

Goal 3 - Operate the NEAMAP data management system for efficient management and timely dissemination of fishery independent data and information

Objectives:

1. Design, implement, and maintain a NEAMAP data management support system that can be used to assess and monitor selected living marine resources and associated environmental and habitat factors;

2. Establish data handling and processing protocols for all NEAMAP data;

3. Compile and maintain a computerized directory of NEAMAP monitoring activities, including data summaries and inventories by gear, species, species group, and geographic area;

4. Identify and describe existing non-NEAMAP databases and activities that are of value to fishery independent assessments of regional living marine resources, and coordinate and integrate these, where possible, with the NEAMAP database;

5. Coordinate data management activities with and other existing programs, including common use of codes and formats;

6. Archive NEAMAP biological specimens and samples.

Goal 4 - Establish a comprehensive outreach program to secure funding and educate constituents on the actions, results, and benefits of the NEAMAP.

Objectives:

1. Develop an outreach package for Congress and other potential funding sources to secure long-term stable funding;

2. Develop methods to educate industry and the public about fishery independent sampling and data, including aspects such as the need for and benefits of fishery independent sampling, how the data are collected, and how the data are used;

3. Develop promotional materials that detail how NEAMAP data support fisheries management and natural resource stewardship, citing specific examples where appropriate;

4. Develop standardized, non-technical reports of survey results for distribution;

5. Encourage public and industry assistance and support in NEAMAP sampling activities.

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NEAMAP Survey Criteria

- Survey coincides spatiotemporally with existing NEAMAP surveys and covers a significant geographic area (e.g., a complete water body, an entire state coastline).
- Survey strives to routinely collect and process data beyond counts and lengths, notably individual weights and biomass by species, age samples, sex and maturity, food habits, gear performance data, etc.
- Survey strives towards electronic collection of as many data elements as possible and to make survey results available on the NEAMAP website in a format defined by ASMFC/NEAMAP.
- Methods have been peer-reviewed under the most recent sampling regime, or will be peer-reviewed at a future date to be determined jointly by ASMFC/NEAMAP and the survey personnel.
- Survey is open to the NEAMAP Committee providing substantial input into the design and execution of a given survey activity to work towards standardization.
- Survey personnel and/or other state personnel are active members of NEAMAP committees, including participating in special workshops designed to expand and standardize data collection, or willing to contribute once integrated into NEAMAP.
- Survey routinely contributes data to regional stock assessments, including those conducted by ASMFC and/or NMFS.
- Survey activity is supported by funds directed at interstate activities (e.g., Atlantic Coastal Fisheries Cooperative Management Act) or another stable funding source

Surveys to consider including within NEAMAP:

Rhode Island Trawl Survey
New Jersey Trawl Survey
Northern Shrimp Summer Trawl Survey
Connecticut Trawl Survey