Pilot Project, Phase II: Survey-Wide Implementation of Electronic Logbook Reporting on Headboats Operating in the U. S. South Atlantic and Gulf of Mexico.

FY 2012 Proposal

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Created: 05/13/2015

1. Overview

1.1. Sponsor
Rob Andrews

1.2. Focus Group
Survey Design and Evaluation

1.3. Background
In 2009 the MRIP Operations Team funded Phase I of a pilot project to develop and implement an electronic logbook reporting system on a small subset of headboats in the U. S. South Atlantic (SA). Electronic data collected in this project was compared with the conventional paper logbook submissions from participating captains. The year-long pilot project was successful based on the following statistics: 1) electronic logbooks were reported for 93% of trips documented by port agents; 2) species reporting accuracy on logbooks was 74% for species in the SAFMC Snapper-Grouper FMP when compared with species sampled by dockside samplers; 3) the average time for electronic logbook data to be available was 20 days, compared with current paper logbook requirements of once-monthly submission; 4) and the initial one-time cost of survey-wide implementation of electronic logbooks is estimated to be $96,000, with subsequent yearly maintenance costs of $36,000, compared with continuing annual costs at least $81,000 for paper logbook reporting, resulting in a savings of $165,000 over the first five years of electronic reporting.The data reporting methodology used in the one year pilot project involved the software developer providing proprietary software to each participant to install on their personally owned computer. Participants then filled out an electronic form and saved it to their computer for later e-mailing to the software contractor, who managed the data. Participants also filled out a paper logbook form for the same trip, and those were collected, as per usual procedures, by port samplers in the course of their normal sampling duties.

1.4. Project Description
This project will expand electronic logbook reporting to the entire universe of headboats currently reporting paper logbooks to the Southeast Region Headboat Survey (SHRS). There are currently approximately 160 vessels reporting to the SRHS in the SA and Gulf of Mexico (GOM). Transitioning from a pilot project involving only seven vessels to the full complement of 160 vessels will require a significant increase in outreach, education and training from the SRHS staff to the vessel owners. Much of this will be provided by individual SRHS port samplers and the software developer, with additional help provided by senior SRHS staff at the Beaufort Laboratory when necessary. General recommendations resulting from the one-year pilot project include: 1) survey wide implementation of electronic logbook reporting in the SEUS; 2) development of an internet-based software portal for electronic reporting, as opposed to installation of proprietary software forms on individuals computers; 3) utilize SRHS staff expertise to provide local training and QA/QC to vessel owners to improve data quality; and 4) review/revise/implement regulatory infrastructure for transitioning to electronic reporting, with emphasis on compliance issues (codify within the Code of Federal Regulations). We propose in this project to implement all of these recommendations.Additional technical recommendations provided by vessel owners, SRHS staff, software developers and stock assessment scientists include adding specific data elements helpful to the stock assessment process to the logbook form: fishing depth, more precise locations, identification of primary target species. Other good recommendations include adding visual aids helpful to participants when entering data, such as maps of fishing areas or a visual catalogue of fish species photos for help with species identification. We will offer all headboat owners the opportunity to either participate in our expanded electronic logbook reporting project or to continue to submit paper logbooks. Either one of these options will satisfy the federal statute requiring for-hire permit holders to report in a timely manner to the SEFSC. We will accomplish familiarization training, e-logbook set-up, and troubleshooting/technical help via the SRHS network of port samplers and the software contractor. The reporting will be via a web-based portal which the software contractor will develop, test and implement in the first 60 days of the project, with an estimated roll-out date of June 1, 2012. Senior SRHS staff at the Beaufort Laboratory will work with NMFS Southeast Regional Office (SERO) legal staff to ensure that the proper legal framework exists or can be put in place to ensure that electronic logbook reporting becomes the accepted procedure, as well as to ensure that timely and complete reporting is linked to the ability to possess and keep a for-hire permit in the applicable fisheries.

1.5. Public Description

1.6. Objectives
1. Implement survey-wide electronic logbook reporting in the SRHS, using local port samplers and the software contractor for start-up technical help with website access, data required, etc.2. Develop and implement a web-based portal for data entry, replacing the personal computer-based proprietary software used in the pilot project. We anticipate this may allow some owners without computers to participate via secure login web access.3. Beaufort SRHS staff will provide data QA/QC via timely checks of submitted data, helping to clear up any confusion with data elements that any of the participants may be having.4. Ensure that electronic logbook survey is compatible with current Code of Federal Regulations governing mandatory reporting in the SRHS. 5. Development by the software contractor of additional features of the web-based data form useful to users and scientists (e.g., depth, location, target species, on-demand fish identification catalogue, etc.)

1.7. References
N/A

2. Methodology

2.1. Methodology
This project will test software modifications to the previously developed version of the electronic headboat logbook. These modifications include: 1) Internet-based portal to submit headboat data; (2) Visual aids for electronic logbook applications (e.g., maps of fishing area, species identification aids); (3) Inclusion of data fields for fishing depth, more precise location data, and a field declaring target species; (4) “Smart menus” which track users’ past entries to adaptively simplify future data entry; and 5) A query function allowing effort and catch to be summarized according to a user’s needs. SRHS staff will contact owners\vessel operators to initiate transition from paper to electronic reporting. Initial contact may be by certified mail. Each owner operator responsible for reporting to the SRHS will be contacted to identify any issues related to transmitting electronic reports via the Internet . Technical support from the software developer will be provided to facilitate Internet access, logbook training, and application of the new system. Support will also be provided by SRHS staff and port agents on demand. Paper logbooks will not be required of vessels participating in the electronic reporting survey. Any owner who does not want to participate in electronic reporting will be allowed to continue to submit paper logbook forms, but we will strongly encourage all headboat fishery participants to take part in the electronic reporting project. One incentive we will emphasize to potential participants is the query/summary application we will develop, which will allow individual owners to query the database for summary reports of their own vessel’s fishing activity (anglers carried, fish species numbers and weight landed and discarded). Beaufort SRHS staff will provide QA/QC of electronic logbook data as it comes in to the lab from the software contractor at regular intervals, and any problems identified will be referred to that participant’s port agent for contact and consultation to clear up any misunderstandings about procedures. Normal data quality assurance procedures will be employed to ensure the data is error-free. Paper logbooks will continue to be forwarded to key entry contractors outside this project for entry into the database. We anticipate this to be a fractional part of overall catch record submissions going forward. Year end estimates of catch and effort will be prepared as usual, and we will document any time savings realized in the estimation procedure attributable to the increased electronic reporting. We anticipate that a savings of two to two and a half months in the estimation procedure could result as a function of electronic real-time reporting.

2.2. Region
Gulf of Mexico, South Atlantic

2.3. Geographic Coverage
Southeast U. S through the Gulf of Mexico (North Carolina through Texas).

2.4. Temporal Coverage
May 1, 2012 – Dec 31, 2013

2.5. Frequency
Daily Reporting

2.6. Unit of Analysis
Vessel-trip

2.7. Collection Mode
Online Logbook report

3. Communication

3.1. Internal Communication
Weekly phone calls with field samplers; emails as necessary. Phone calls or emails with other critical team members (software developer) as necessary.

3.2. External Communication
Monthly reports to the MRIP Operations Team.

4. Assumptions/Constraints

4.1. New Data Collection

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4.2. Is funding needed for this project?

4.3. Funding Vehicle
MRIP Operations Team

4.4. Data Resources
Southeast Region Headboat Survey

4.5. Other Resources
The electronic logbook modifications and data elements included in the logbook for this project will require input from NOAA Fisheries Service stock assessment analysts and one private software consultant. We will consult with both entities to ensure the logbook is not only collecting the desired data, but that it is as user friendly as possible.

4.6. Regulations
Headboat owners are currently required to submit logbooks if selected by the Southeast Fisheries Science Center Director. The Director has currently selected all headboats to report. We are not asking for an additional report, but the same report in a different format. The regulation to report is still in place. We hope the ease of electronic reporting will encourage many permit holders to select the new method in place of paper logbooks. Non-reporting will continue to be monitored and reported to the SERO Permits office for consideration of non-renewal of permits for offenders. However, we do not anticipate any major problems in this regard.

4.7. Other
N/A

5. Final Deliverables

5.1. Additional Reports
Mid term report assessing progress on logbook e-reporting system, with suggested improvements.

5.2. New Data Set(s)

5.3. New System(s)
Updated electronic logbook reporting system allowing much faster year end estimates of catch/effort.

6. Project Leadership

6.1. Project Leader and Members

First Name	Last Name	Title	Role	Organization	Email	Phone 1	Phone 2
Kenneth	Brennan	Research Fishery Biologist	Team Leader	NMFS Beaufort Laboratory	Kenneth.Brennan@noaa.gov	252-728-8618	
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First Name	Last Name	Title	Role	Organization	Email	Phone 1	Phone 2
Steve	Turner	Division Chief	Team Member	SEFSC, Miami NMFS Laboratory	Steve.turner@noaa.gov	305-361-4482 x 482	
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7. Project Estimates

7.1. Project Schedule

Task #	Schedule Description	Prerequisite	Schedule Start Date	Schedule Finish Date	Milestone
2	Software contractor incorporates additional data elements for logbook into database.		05/01/2012	06/30/2012	
7	Final report assessing full year performance of reporting system, suggested improvements		01/02/2014	02/28/2014	
1	Software contractor develops internet access portal for data entry by vessel personnel.		05/01/2012	06/30/2012	
4	SRHS field staff meet with headboat owners/captains and train in e-logbook system.		09/03/2012	11/30/2012	
3	SRHS staff develop training materials, train field staff in electronic logbook system.		07/02/2012	08/31/2012	
6	Mid term assessment of effectiveness/accuracy of electronic logbook reporting by SRHS staff.		07/01/2013	08/16/2013	

Task #	Schedule Description	Prerequisite	Schedule Start Date	Schedule Finish Date	Milestone
5	Coast wide data collection of headboat fishery from electronic logbook implementation		01/01/2013	12/31/2013	

7.2. Cost Estimates

Cost Name	Cost Description	Cost Amount	Date Needed
Modifications to Software Infrastructure.	Development of internet access portal and new data fields for electronic logbook system.	$30000.00	06/30/2012
Annual Secure data server maintenance fee/data handling.	cost to maintain secure website for logbook data, and to transfer data to SRHS staff.	$36000.00	01/01/2013
Federal Travel	Travel for SRHS staff to train field personnel in new updated logbook reporting system.	$10000.00	09/01/2012
Database Management Costs	Costs to modify SEFSC Oracle database to receive and accomodate e-logbook data.	$20000.00	11/01/2012
TOTAL COST		$96000.00	

8. Risk

8.1. Project Risk

Risk Description	Risk Impact	Risk Probability	Risk Mitigation Approach
Interpretation by OMB that electronic reporting is "new data collection" and lengthy approval processes must be endured to get approval to collect data that way.	The impact of this would be slow down the start time of this project considerably.	Low	We will initiate the OMB fast track approval process to collect currently collected data in this alternate fashion.

Risk Description	Risk Impact	Risk Probability	Risk Mitigation Approach
Refusal of stakeholders (vessel personnel) to participate in electronic logbook reporting.	The impact would be lack of cooperation by vessel personnel in reporting via electronic logbooks, thus meaning they would continue to report via paper logbooks. This would not allow for the more timely processing of headboat logbook data, leading to delays in generating annual estimates of catch and effort of the headboat sector.	Low	We consider this risk item to be low because the pilot project for electronic logbooks was well received, and the fishing public generally is supportive of incorporating technology into the surveys. Our field agents have a good working relationship with the vast majority of stakeholders they deal with, and we do not anticipate there will be any problems with convincing stakeholders to participate in this data collection effort.
Inability to travel to accomplish training tasks in late FY2012.	Due to a much talked about NMFS travel ceiling, we run a slight risk of not being allowed to complete necessary travel to accomplish training tasks associated with this project. We want to either send two local Southeast Region Headboat Survey staff to the field to meet with and train all port agents in the new data collection methods, or we would like to bring all port agents to the Beaufort Laboratory and do all the training at one site, one time. Both of these options would be threatened by the invocation of a travel ceiling.	Medium	While it would not be the best way to accomplish the training mission, we could do the training via combinations of webinar, conference calls, emails, etc., with intensive one on one followup by Beaufort SRHS staff with individual field samplers.

9. Supporting Documents