



# Atlantic Coastal Cooperative Statistics Program

1050 N. Highland Street, Suite 200A-N | Arlington, VA 22201  
703.842.0780 | 703.842.0779 (fax) | [www.accsp.org](http://www.accsp.org)

## Coordinating Council Meeting Tuesday, October 28, 2014 4:15 PM – 5:15 PM

**Mystic Hilton  
20 Coogan Boulevard  
Mystic, Connecticut 06355**

### DRAFT AGENDA

1. Welcome/Introductions – Coordinating Council Chair C. Patterson
2. Public Comment\* – C. Patterson
3. Council Consent – C. Patterson
  - a) Approval of Agenda (Attachment 1) - **ACTION**
  - b) Approval of Proceedings from August 2014 (Attachment 2) - **ACTION**
4. Review of outstanding action items from August 2014
5. Review Recommendations of FY2015 submitted proposals (Attachment 3) - **ACTION** – Operations Committee Chair T. Hoopes and Advisory Committee Chair R. Bellavance
6. ACCSP Status Report
  - Program Update – Program Director M. Cahall
  - Committee Updates – Operations Committee Chair T. Hoopes
7. Review progress of the Independent Program Review (IPR) recommendations (Attachment 4)
  - a) ACCSP Governance Ad-Hoc Committee Update – R. Boyles
  - b) Funding Subcommittee Update – B. Beal
  - c) Standard Operating Procedures (SOP) Subcommittee Update – M. Cahall
8. Further discussion of ACCSP/ASMFC MRIP-AP AIS Transition Plan – C. Patterson
9. Other Business
10. Adjourn – C. Patterson

\*See Public Comment Guidelines:

[http://www.accsp.org/documents/ACCSP\\_PublicCommentPolicyOct2013.pdf](http://www.accsp.org/documents/ACCSP_PublicCommentPolicyOct2013.pdf)

*Our vision is to produce dependable and timely marine fishery statistics for Atlantic coast fisheries that are collected, processed, and disseminated according to common standards agreed upon by all program partners.*

ATLANTIC COASTAL COOPERATIVE STATISTICS PROGRAM  
COORDINATING COUNCIL MEETING

Crowne Plaza Hotel Old Town

Alexandria, Virginia

AUGUST 6, 2014

— — —

The Coordinating Council of the Atlantic Coastal Cooperative Statistics Program convened in the Presidential Ballroom of the Crowne Plaza Hotel Old Town, Alexandria, Virginia, August 6, 2014, and was called to order at 5:25 o'clock p.m. by Chairman Cherie Patterson.

CHAIRMAN CHERIE PATTERSON: We're convening the ACCSP Coordinating Council meeting right now. I'm Cherie Patterson, the Chair. We have a sign-up sheet so please sign it. Moving on, we have approval of the agenda next. Does anybody have any additional changes or additions to the agenda? Seeing none; the agenda is approved by consent.

The approval of the proceedings from May 15 is next. Does anybody have any changes to these proceedings? Seeing none; the proceedings are approved by consent. Is there any public comment? Seeing none; this is going to be a quick meeting. Reviewing the outstanding action items from our last meeting; we will have Mike explain the first one, a request from Mr. Simpson.

MR. MICHAEL CAHALL: Geoff White got in touch with him via an e-mail; and the short answer to the question I believe was no. There is a lot more technical detail that goes into that that sometimes I don't always understand, but I think he understood it just fine. The Outreach Strategic Plan; you all have it, so that action item is also complete and it is ready for approval.

CHAIRMAN PATTERSON: Does anybody have any comments, questions or changes to the Outreach Strategic Plan? Seeing none; approved by consent. Bob.

EXECUTIVE DIRECTOR ROBERT E. BEAL: I think a couple of executive committee members mentioned they might have some slight wordsmithing. I don't know if you need that to be okayed by this group or not.

CHAIRMAN PATTERSON: Is everyone fine if there are any minor wordsmithing from a state perspective? A single state who is now standing up.

MR. ROBERT H. BOYLES, JR.: I'll share with you my comments if you want me to.

CHAIRMAN PATTERSON: It is just editorial; it is just edits. Seeing no other concerns, we will still move forward with approval by consent. We will move on to the ACCSP Status Report.

MR. CAHALL: Ladies and gentlemen; as most of you know, we approved a new position for the program this year. It is a program assistant and it is being filled by Ms. Elizabeth Wyatt. Would you stand up for a moment, please? She has made an amazing contribution to our program already. In fact, the slide show you're about to watch is largely her doing. If you have noticed an increase in the volume and quantity of documentation that you have been receiving, almost of it is coming

through her hands. We're very glad to have her and she is already making a huge difference to the program.

We're going to go ahead and go through the committee status overview first and also talk about where we are with programs that we're also working on. The Operations Committee is working through their normal process. On July 22 we had a review of initial proposals, which basically we came up with a total of about \$4 million in proposals in this year, which is significantly more than we had last year. Last year's proposals totaled just almost exactly what we had available to fund.

This year is there going to be some competition. We have submitted the comments from the operations committee members and the advisors to the principal investigators; and they're working on the revisions to their proposals based on the comments. Also, in September there will be a conference call of the Operations Committee.

They're going to go ahead and review the progress of projects for FY 2013; and then, of course, a joint meeting in early October, which precedes the meeting of this group at the commission meeting in Mystic, where they will provide you with recommendations for funding. In addition, the Operations Committee is continuing to make progress on the SOP.

The SOP Subcommittee of the Operations Committee has been convened. They settled on a structure with some thanks to Dee Lupton, who provided us with an outline of the North Carolina systems. A number of the operations committee members agreed to be volunteered to write certain sections of it. Then we did a similar follow-on with staff so that the SOPs are moving forward as well.

The Advisory Committee had a WebEx on June 16 to review what is going on with the technical committees. They've also looked at the Data Warehouse Interface Survey. We've already started the process for reviewing the query interface that we have for the data warehouse; and we're looking for input from pretty as many different directions as we can get. That also includes the Advisory Committee. We asked them for input into the governance review as well; and they also, of course, reviewed the initial proposals and provide the comments to the principal investigators.

The Recreational Technical Committee also had a WebEx – you can see a common theme here – where the continued work on the state conduct project. You're going to get a little bit more detail in a minute. Again, working on the individual state budgets, I'm happy to report we have budgets from everyone.

They're working on the staffing plans, clarifying the different kinds of positions. They're pulling together an implementation packet for our September meeting review. Also, the Proportional Standard Error Project has a workshop that's going to be convening in late September in Baltimore, which they'll be directly participating in as well.

The Bycatch Prioritization Committee has been looking for an inventory of the state and federal sample sets; also looking towards getting them loaded into our biological database – the South Atlantic Small Group folks met – and looking at better characterization of the fleets; also looking at mechanisms to better characterize them and get a complete list. There will be another meeting of the Small Atlantic Group in late August or early September.

There have been a couple of meetings on the matrices. As you may recall, the matrices you approved this year were the same as last year. The goal was to get them on the same cycles. They've begun work on next year's matrices, looking at different methods to do it; and also changing the discard estimation categories. They have a meeting scheduled for late September.

The Biological and Review Panel is working on the inventories again; also working on the model implementation. There is a small group that's working on query interface. In addition to making modifications to our database design, we had no input yet as to how the query system should look, what kind of data elements should we be providing through an end user query system, whether there were potentially some indices that we could create automatically using the larger resources of our database service and things like that.

What they're looking at is looking at what our systems would be able to do for our end users. Right now we have a milestone first to have the first dataset in the system – actually two, likely – and queries that are available in March of next year. We will begin actually loading some of our test datasets in the next several weeks.

The Biological Query Small Group had two meetings in 2014; and again this is looking at the existing system. They looked at TIP and SEAMAP, which are two familiar systems; looking at the input parameters and output for the specific kinds of queries that we might be running. Again, the entire committee will be looking at the queries in January 2015.

Again, they have a meeting at the end of this month. There are many small groups; and you can see that Julie has been a very busy young lady in managing all of these smaller groups here. The small groups met twice in 2014; and again they're looking at integrating in some of the existing stuff, like the NOAA Fisheries productivity and sustainability worksheet. Again, they are planning to meet towards the end of this month.

For outreach, we're looking at the Outreach Strategic Plan, which you all just approved, but we've already started working on. They're working on the key messages, roles and responsibilities. There are, again, a number of subgroups. We're looking at strategies that are developed from the Independent Program Review.

We're planning at a planning stage for a meeting in early 2015. There are a lot of things that are on their agenda. They're involved in the data warehouse remodeling, are looking for building outreach for a SAFIS Etrips Mobile Tool, which we demonstrated for you all the last time. We're also looking at updating our website.

We have funding thanks to the FIS Program of NMFS to rebuild our website. We expect to have a request for proposals out in late October. Right now we're gathering requirements from staff and from committee members; and we're also serving the general end users. We're also working on an Orientation PowerPoint.

You may recall in our Outreach Plan that there is an Excellence Award; and we're looking at forming a nomination committee to look at the programs and folks involved in them for candidates, potentially, for that. The Information System Committee has been heavily involved in change management policy, quality assurance and audits. These are all part of the ongoing discussions that we've been having primarily with the northeast and southeast regions and science centers.



Again, change management is for us. We've had no good, formal process to move from a technical requirement "do this thing" into how do we turn that into an information system that provides that. One of the things that we're really looking at is how to ensure that a suggestion that may be made at lower level technical committee bubbles up to operations and then it goes back to down to information systems so that it can be turned into a technical specification and generally agreed on and then acted on by staff or contract to provide those services.

We have the workgroups that are going to be looking into those and start writing those policies. The Change Management Committee did meet in July. It is chaired by Tom Hoopes, who is also our Operations Committee Chair. Any others will be considered at the next meeting of the IS Committee.

The Commercial Technical Committee had a meeting on the 28<sup>th</sup> by WebEx; and we're implementing something called Catch Source, which was intended to solve a number of problems that were inherent in the old dealer reporting standard. Essentially it was difficult at times to tell whether what you sold the dealer came from aquaculture or potentially a lobster car, potentially a research set-aside as opposed to just coming off of a generic vessel trip.

We've implemented this new field to better identify the source of the catch. Of course, that had a lot of cascading issues that had to be identified and dealt with. The SAFIS data now percolates through many, many systems; and a change in this magnitude had to do a lot of research before we could consider making it into the Operational Information Systems.

They also are working on the Data Warehouse User Interface Project, which I described a little bit earlier. We're getting really good feedback now from the members of this committee; and my thanks to your staff folks who are taking the time to do some thinking about what they do and don't like about the current system.

Finally, Standard Codes, they have tackled bushels. It's hard to believe all your bushels are different, but they seem to be. This is something that came up recently in some discussions where we were looking at actually the conversion factor project because bushels in one state didn't convert the same way they converted in others because it turned out that the measures were totally different. They're working through that a little bit.

The whole conversion factor project really was to look at conversion factors that were used from landed condition into whole weight. Of course, many of them are being used because, well, they've always been used. What we're looking at is trying to create a firm scientific basis for some of these; and we're coming up with some very interesting results.

They're still compiling these data to make a decision about how we might use them and also about potentially expanding this project to be more comprehensive. Right now it is a limited number of species in a limited number of states. I think the research is showing that many of the conversion factors that we've used over the years are outdated and that need to be updated.

I think that we will be seeing certainly not this year but maybe next year some additional funding requests to do more research. In addition, they're working on creating a standardized methodology for the processes.

Moving on to kind of our current projects, I'm going to give you a little overview of the Proportional Standard Project, the MRIP transition; some work we've been doing with the SAFIS Handheld Trip Reporting, which we showed you last time; the lobster trap tag transferability; and then a couple of other smaller projects that maybe don't have quite as high a profile but are definitely going to have an impact over time.

The MRIP Proportional Error Project; we now have a workshop scheduled for September 23 and 24 to review the results of the various modeling runs and to come up with some recommendations about what the threshold percentages should be for data to be used in fisheries management. Almost immediately following that will be Recreational Technical Committee meeting – in fact, in the same hotel the next day – to sort of assimilate these results and begin to develop recommendations for changes to the standards.

For the MRIP; we are working now – and by we I mean mostly Geoff White, who has really, really put a yeoman effort getting this job done – on developing the supporting documents for this transition. We have budgets from all of our states. Eight states are planning to do with their own folks; four have requested ASMFC staffing support.

The level of support is varying a little bit by state, but it is essentially the model where some or all of these folks will be hired as ASMFC employees and then put into the field in the various states. We're going to be working to develop standardized position descriptions and salary ranges and that sort of thing for these positions.

In addition, we're working on the ASMFC/ACCSP coordination. We're going to assist ASMFC in preparing a cooperative agreement to support this, which will provide a funnel for the funds to get to the commission and obviously the contingency planning and also what the staffing plan looks like. I can tell you right now that the funding hasn't changed.

The baseline funding on our initial assessment hasn't really changed all that much. It sitting somewhat over \$4 million at this point. That is still very tentative and there is a lot of work left to do. Just as a reminder, here is our current timeline. The Recreational Technical Committee is going to meet on the September 25 to go through the implementation plan.

That is the thing that is on that meeting besides the PSE stuff. The goal here is to develop a recommendation to provide to the October Operations Committee meeting, which includes a fairly detailed plan and obviously the go, no-go. Then the Operations Committee will have the opportunity during that October meeting to review the materials and make a recommendation to the council, which we plan to present to you at the winter meeting in Mystic, hopefully with a good output.

To kind of give you an idea of how all of this is going to work and to give you a little bit of how the work is divided up, the site assignments that are made by the MRIP methodology will come through us down to the states. The dockside state data itself will be collected by the states either by their own employees or by commission employees acting on their behalf.

The data will be entered and quality assured by ACCSP probably with at least one or two additional staff folks plus the information systems and methods to support that. The data will be reviewed by states and edited by ACCSP as needed. Then we will deliver the data to MRIP; and then also

the updates to site and vessel directories will also be delivered to MRIP. Those will flow through us as well.

Then MRIP produces and releases the catch estimates and then cycle starts all over again. This essentially is the work breakdown for the state conduct of this intercept survey. A little more detail on the roles and responsibilities. NOAA Fisheries will continue to lead the survey design and maintain the registries of the angler and the vessel and the site registry.

They'll also produce and present to the public the estimates and provide the funding support for base sampling. ACCSP/ASMFC will serve as the Atlantic coordinator. That is what we're calling our role. I think that's what MRIP also calls our role. We will be the operational contact to NOAA Fisheries. We will do the central data processing and provide the data delivery to NOAA.

We'll execute the individual state contracts. By we I'm also meaning ACCSP and the commission. The roles and responsibilities for the states, as the plans stand now there will be an individual agreement between commission and each state for the data collection, which will outline the method that will be used and what the state and the commission's responsibilities are.

The states will provide the space and supervisors for the staff and manage the assignments and obtain the equipment. There are some cases where the commission may be acquiring the equipment on the state's behalf, depending on the state's ability to purchase that themselves. The state will conduct the assignments following the standard MRIP protocols and provide the data back to ACCSP/ASMFC. They'll also participate in the quality assurance and quality control.

For the staff, obviously our preferred option is to have the states hire and supervise their own staff. I think for most states that is also their own preferred option. The secondary option, which four states so far have elected to take, involves the ASMFC staffing support where the ASMFC will help with the standardized position descriptions, to the vacancy announcements, manage the hiring and benefits and pay, et cetera.

Then the states will have a lead role in the selection of the candidates. Typically when folks are hired out into the states, the commission has very little direct participation in the interview and selection process. It really is tailored more to what your requirements are, if you want all of the resumes, if you feel the need to have some of them prescreened, but typically the commission doesn't have a lot of direct involvement in that process. It's up to you guys to hire who you feel are the most appropriate for you agency.

Moving on the handheld trip reporting, right now that is a project of Rhode Island and the Rhode Island Party/Charterboat Association. It is intended to provide a tablet-based interface to the SAFIS E-trip system and will capture both for-hire and commercial trips. The development of this tool is largely completed. The contract closed out maybe last week. We're waiting on the end users manuals and some minor adjustments to the system.

We expect it to be in production in Rhode Island by the end of August or early September. This will give us a really nice period while the captains are not all that busy to kind of shake the bugs out and make sure that we've got it right. The contractors who developed it will also have an ongoing maintenance contract so that they can deal with any kind of problems that we may encounter or make any minor modifications.

We've also started working with GARFO to get the system certified to be used to report federal vessel trip reports. I expect that we'll have a conference call with them next week so that I can go through the details. I don't expect any difficulty getting the system certified.

Moving on, the Lobster Trap Tag Transferability System allows for transfer of allocation between the lobster management areas. It is in production right now for state transfers only in Massachusetts and Rhode Island. We are at the moment working on integrating the Vessel-Based Federal Permits.

There are basically two sides of functionality in this system; and it's a little bit like apples and oranges, which is always a little bit dangerous. We have on the one side the state allocations transferred between harvester-based permits; and on the federal side they transfer between vessel-based permits. We have to be able to reconcile that function in order for the various transferability rules to work.

We're working on completing the federal piece of this so that the transferability between vessels is working and up and running. That's our next step; and then we expect to have a pretty significant discussion probably towards the end of this month or early next month to go through all of the different scenarios.

We have found as we've worked with everybody that there are some unanticipated issues that come up as we work through, well, if we do this, what happens here; if we do that, what happens over there. We need to make sure that we've got all those bases covered hopefully before the end of the year when the system really needs to be able to work and handle the interactions between the federal permits and the state permits.

A couple of other things that we're also working on; I mentioned earlier the website redesign. We're doing a comparative website review. We've taken a look at most of our sister Fisheries Information Networks, looked at the councils, looked at some of NMFS websites to get some ideas. We've also surveyed the staff. Ann is spearheading that project. We will be working on an RFP, as I said before, in late October.

I did also mention the Data Warehouse Query Design. That is being spearheaded by the Commercial Technical Committee. They're providing direct input of their membership, but we're also looking at our end users and also doing a technology review. Part of the problem is that the technology that we're using right now for the flexible queries is pretty obsolete.

Its replacement are quite expensive and seem so far to have the same kinds of pitfalls that Oracle Discoverer had in the sense that they're fairly complex tools that have a fairly steep learning curve. What we would like to do is be able to present information to our end users in a fairly simple and straightforward way and yet at the same time meet their requirements. That is a fairly tough row to hoe; and it's going to take a little time for us to look at solutions that will be able to meet everybody's needs.

We're getting ready to kick off a pilot SAFIS Dealer Entry System for Massachusetts. They requested funding through the program, but it is going to be co-administered by ACCSP and by Massachusetts in form of Tom Hoopes. This is a harvester card swipe option that essentially provides through a card swipe all of the fisherman identification data and then has the dealer key

the balance of the information. It will be similar to our handheld tool in the sense that it will work on all the same platforms; in other words, Windows-based platforms, IOS-based platforms – that’s iPad – and then the Google Android-based platforms.

I went through a lot of information. Does anybody have any questions for me? I want to comment that we have had really, really good participation from our technical committees. I don’t know how much of that is from you guys reminding them that we need their help, but I really appreciate it. We’ve been able to make a lot of progress in the last six months; and it is in large part because of the active participation of our committees and also really, really good work on the part of our staff.

Joe Myers is here; Joe, would you stand up for a second. He is doing the Commercial Technical Committee and doing a great job for us; and, of course, Ann and Elizabeth and Geoff and everyone else. Karen has done an amazing job. I just got a raft of compliments on her today from folks. I really appreciate all that positive feedback. That’s it.

CHAIRMAN PATTERSON: We’re removing on to review of the funding requests.

MR. CAHALL: This is a little bit of an unusual meeting in the sense that we don’t normally have a council meeting; but they’ve been really successful in keeping everybody informed. These are the projects before you all usually get to see them so you can get a breadth of what is requested of us. We had a total of \$1.58 million in maintenance projects and 683K in new projects.

The program itself was \$1.8 million; so the grand total this year is \$4.096 million, which is roughly 650K more than we expect to get. Again, you guys might want to look this over and think through. There are a few of them that are probably a little bit off the mark of what are our priorities., others that have come back again after being absent for a little while, but I think you could expect to see a winnowed list come back to you in October. Again, you don’t usually get an opportunity to see the “before” here and we thought we’d go ahead and provide you with a list of the proposals that were submitted to us.

CHAIRMAN PATTERSON: Are there any questions for Mike? Moving on, the Coordinating Council and Executive Committee do have independent program review tasks assigned to them based on the review. The Executive Committee has been moving forward with some of these tasks. I’m going to have Robert Boyles talk about the Governance Workgroup that has been moving forward with one of the tasks; and then Bob Beal will discuss what has been forward with the Funding Subcommittee.

MR. BOYLES: As Cherie mentioned, the Independent Program Review did task us with a number of jobs to look at; one of which was the question related to governance of the program. I am chairing a small workgroup that is trying to delve into the issue of the structure and function of the program with respect to the challenges and the opportunities that are afforded us today in the funding climate, the political climate, et cetera.

The workgroup initially met in May. I believe I’ve reported back about the initial discussions on that; but just to recap, a lot of the conversation on the workgroup was really probing the question are there concerns with rolling or aligning or closely aligning the data collection efforts with a program like ACCSP into a regulatory body like the ASMFC.

A lot of good discussion among the workgroup around that topic. One of the outcomes of that first discussion was the question of perhaps we should survey our constituents. Over the last couple of months there was a Survey Monkey designed and developed and sent out to about 150 or 160 of our closest friends and associates, members of this Coordinating Council, technical advisors, Operations Committee members.

I'm happy to report we had 70 respondents, a response rate of about 43 percent, not great from among the folks who know and love us the best, but still certainly respectable in terms of trying to give a sense of where folks' opinions may be. I'm happy to point out 20 percent of the folks who responded are represented around this table, so thank you all for your active participation and love for ascertaining really the question are the conditions that led to the establishment of ACCSP as a stand-alone program at its inception; do those conditions still exist.

Where we are now is analyzing the results of that survey. Staff did a great job of presenting those. What we are going to do is Cherie and I are going to go back and, take the results and develop a white paper, farm that white paper with some options back out to the workgroup and hope to have a more substantive report to you the next time we meet, perhaps at the annual ASMFC meeting in October. That's where we stand. I'll be happy to answer any questions or take comments. That concludes the status report, Madam Chair.

CHAIRMAN PATTERSON: Any questions for Robert? Bob.

EXECUTIVE DIRECTOR BEAL: As Robert mentioned, this is another one of the projects following up with IPR, the Funding Subcommittee. The Funding Subcommittee is looking at essentially the breakdown of funding that was just put on the screen. Right now 75 percent of the ACCSP competitive money goes to maintenance projects, 25 percent goes to innovative pilot program work; and the question is, is that the right ratio; should that continue; what are the other options for allocating the available funds to the partners of ACCSP?

We had a conference call of the subcommittee a few weeks ago, maybe even up to a month ago now. Mike Cahall, Ann McElhatton and I are working on a document – which means mostly Ann is doing it – working on a document that will be essentially a decision document that highlights a number of different funding options moving forward; some formulaic options that explore funding approaches similar to how the ASMFC Atlantic Coastal Act money is distributed to the states; some different funding options where if a project has been on maintenance funds for a number of years, that project is scored a little bit lower than some of the newer projects so that may shift some of the funding to more innovative projects; and some of the oldest projects that have been funded for a long time and are maintenance funded may move of that maintenance funding.

We're also going to try to do a bit of an analysis on essentially risk assessment; if fewer projects are funded through maintenance funds, what does that mean; how many of those projects may dry up and go away because the states can't find another source of funding to fund those projects and those date streams may be interrupted; and that's a bit problem.

All those different issues will be included in this decision document and we'll bring that decision document back to another conference call of the subcommittee hopefully in September; and then that document will be forwarded to the Operations Committee in late September/early October. Preferred options will be brought back to the Executive Committee and this Coordinating Council

at the annual meeting in October in Mystic, Connecticut. It is an ongoing project similar to the governance project but we're making good progress.

CHAIRMAN PATTERSON: Any questions for Bob? Mike has already given us a large update of the Operations Committee and subcommittee work. Did you want to talk about the SOP Subcommittee?

MR. CAHALL: The Operations Committee formed an SOP Subcommittee, the goal of which was to review the Independent Program Review and look at the responses that required Operations Committee input into the Standard Operating Procedures. Again, as I said earlier, they agreed to adopt a format that is largely in use in North Carolina to frame the document.

There were numerous writing assignments and the same for the staff; and I guess I could report that Cherie and I went through the Executive Committee ones a little bit earlier today to kind of sort them out. The goal would be to have a draft SOP document that would incorporate the Operations Committee and the staff's input for at least to the near-term recommendations probably by the fall.

There is also some question about exactly how that needs to be integrated in, whether it should be part of the standards, and there is a little bit more discussion to go on to go through that. I think already we've been implementing some changes that I think have streamlined our operations, even if they're not formally adopted into the SOP Document. We should have something that has the Operations Committee and staff short term in place; and as far as I'm concerned we'll start using them in the fall.

CHAIRMAN PATTERSON: Any questions for Mike? Is there any other business anybody would like to bring up? Based on the response, I think we can adjourn for the day.

(Whereupon, the meeting was adjourned at 6:05 o'clock p.m., August 6, 2014.)

— — —



## FY2015 ACCSP Project Proposal Rankings

Sort  
Operations

Sort Advisors

Sort Average

		Operations		Advisors		Average		Cost	Cummulative Cost
		Score	Ranking	Score	Ranking	Score	Ranking		
Increase at Sea Sampling Levels for the Recreational Headboat Fishery on the Atlantic Coast (19 pages)	M-8	56	1	53	4	55	1	\$ 168,738	\$ 168,738
ACCSP Data Reporting from South Carolina's Commercial Fisheries (12 pages)	M-7	53	2	56	2	54	2	\$ 165,825	\$ 334,563
Electronic Reporting and Biological Characterization of New Jersey Commercial Fisheries (19 pages)	M-6	53	3	50	5	52	4	\$ 158,740	\$ 493,303
FY2015: Managing Mandatory Dealer Reporting in Maine (28 pages)	M-2	51	4	54	3	52	5	\$ 176,373	\$ 669,676
FY2015: Maintenance and Coordination of Fisheries Dependent Data Feeds to ACCSP from the State of Rhode Island (20 pages)	M-4	51	5	58	1	53	3	\$ 79,719	\$ 749,395
Processing and Aging of Biological Samples Collected from U.S. South Atlantic Commercial and Recreational Fisheries (15 pages)	M-9	47	6	50	6	48	6	\$ 250,831	\$ 1,000,226
Observer Program for Mid-Atlantic and Rhode Island Small Mesh Otter Trawls (36 pages)	M-1	47	7	48	8	47	7	\$ 202,750	\$ 1,202,976
Portside Commercial Catch Sampling and Comparative Bycatch Sampling for Atlantic Herring, Atlantic Mackerel and Atlantic Menhaden fisheries (48 pages)	M-3	44	8	49	7	45	8	\$ 136,306	\$ 1,339,282
Improving Trip-Level Reporting and Quota Monitoring for State Licensed Participants in New York's Marine Fisheries (15 pages)	M-5	44	8	35	9	41	9	\$ 143,477	\$ 1,482,759
Update and Enhance ACCSP Data Transmission Methods for North Carolina Division of Marine Fisheries (11 pages)	N-13	54	1	62	1	56	1	\$ 75,620	\$ 75,620
FY2015: Creation and Expansion of State of Maine Swipe Card Program (23 pages)	N-10	49	2	46	4	48	2	\$ 238,125	\$ 313,745
Improving American Lobster Biological & Catch/Effort Data for Georges Bank and Characterizing Seasonal Egger Aggregation in Closed Area II (17 pages)	N-11	49	3	43	5	47	3	\$ 74,423	\$ 388,168
FY2015: South Atlantic Shrimp Catch and Effort Automation (17 pages)	N-14	45	4	49	2	46	4	\$ 125,000	\$ 513,168
Identification of Potential Errors and Development of a Data Flag System for the Trip Interview Program (10 pages)	N-15	43	5	47	3	44	5	\$ 82,250	\$ 595,418
Continued Web Portal Development for American Lobster Settlement Index Data Submission and Reporting (10 pages)	N-12	32	6	43	6	35	6	\$ 53,342	\$ 648,760



	Partner	Title	Primary Module	Others	Cost
MAINTENANCE	1	ASMFC/MAFMC	Observer Program for Mid-Atlantic and Rhode Island Small Mesh Otter Trawls (36 pages)	Biological (50%) Bycatch (45%), Catch/Effort (5%)	\$ 202,750
	2	ME DMR	FY2015: Managing Mandatory Dealer Reporting in Maine (28 pages)	Catch/Effort (95%) Metadata (5%)	\$ 176,373
	3	ME DMR	Portside Commercial Catch Sampling and Comparative Bycatch Sampling for Atlantic Herring, Atlantic Mackerel and Atlantic Menhaden fisheries (48 pages)	Biological (70%) Bycatch (30%)	\$ 136,306
	4	RI DFW	FY2015: Maintenance and Coordination of Fisheries Dependent Data Feeds to ACCSP from the State of Rhode Island (20 pages)	Catch/Effort (100%)	\$ 79,719
	5	NYS DEC	Improving Trip-Level Reporting and Quota Monitoring for State Licensed Participants in New York's Marine Fisheries (15 pages)		\$ 143,477
	6	NJ DFW	Electronic Reporting and Biological Characterization of New Jersey Commercial Fisheries (19 pages)	Catch/Effort (55%) Biological (45%)	\$ 158,740
	7	SC DNR	ACCSP Data Reporting from South Carolina's Commercial Fisheries (12 pages)	Catch/Effort (70%) Biological (30%)	\$ 165,825
	8	ACCSP RTC	Increase at Sea Sampling Levels for the Recreational Headboat Fishery on the Atlantic Coast (19 pages)	Catch/Effort (50%) Biological (25%), Bycatch (25%)	\$ 168,738
	9	SEFSC	Processing and Aging of Biological Samples Collected from U.S. South Atlantic Commercial and Recreational Fisheries (15 pages)	Biological (100%)	\$ 250,831
			<b>Total Maintenance</b>	<b>\$ 1,482,759</b>	
NEW	10	ME DMR	FY2015: Creation and Expansion of State of Maine Swipe Card Program (23 pages)	Catch/Effort (100%)	\$ 238,125
	11	NH FGD	Improving American Lobster Biological & Catch/Effort Data for Georges Bank and Characterizing Seasonal Egger Aggregation in Closed Area II (17 pages)	Catch/Effort Biological, Bycatch	\$ 74,423
	12	RI DFW	Continued Web Portal Development for American Lobster Settlement Index Data Submission and Reporting (10 pages)	Biological (100%)	\$ 53,342
	13	NC DMF	Update and Enhance ACCSP Data Transmission Methods for North Carolina Division of Marine Fisheries (11 pages)	Catch/Effort (100%)	\$ 75,620
	14	SEFSC	FY2015: South Atlantic Shrimp Catch and Effort Automation (17 pages)	Catch/Effort (100%)	\$ 125,000
	15	SEFSC	Identification of Potential Errors and Development of a Data Flag System for the Trip Interview Program (10 pages)	Biological (100%)	\$ 82,250
			<b>Total New</b>	<b>\$ 648,760</b>	
Admin	16	ACCSP	ACCSP Administrative Budget (22 pages)	Admin	\$ 1,731,666
			<b>Grand Total Proposed</b>	<b>\$ 3,863,185</b>	

Shanna Madsen  
Atlantic States Marine Fisheries Commission  
1050 N. Highland St., Suite 200A-N  
Arlington, VA 22201  
[smadsen@asmfc.org](mailto:smadsen@asmfc.org)

September 1, 2014

Michael Cahall  
Atlantic Coastal Cooperative Statistics Program  
Operations and Advisory Committees  
1050 N. Highland St., Suite 200A-N  
Arlington, VA 22201

Dear Mr. Cahall,

Please find attached a maintenance proposal from the Atlantic States Marine Fisheries Commission and Mid-Atlantic Fishery Management Council entitled, "Observer Program for Mid-Atlantic (New Jersey, Maryland, Virginia) and Rhode Island Small Mesh Otter Trawls". The proposal seeks continued funding for the ongoing project to conduct observed trips in New Jersey, Maryland, Virginia, and Rhode Island. The funding requested reflects the sampling days needed to carry out 5% coverage in Virginia and Rhode Island and 4% coverage in New Jersey and Maryland. We increased coverage of Rhode Island to 5% from last year's proposal (4%) because we believe it is important to cover the Atlantic mackerel fishery and its associated bycatch. Increasing from percent coverage did not significantly affect costs as FY14 funded trips were 50 sea days and in the FY15 proposal we request 52 sea days.

There were a number of comments from the initial round of project reviews. I have addressed each comment below in outline format for sake of clarity and brevity.

- Please clarify the ageing technician position.
  - o The ageing technician position was from the FY12 iteration of this proposal. Age samples were processed and aged by hiring an employee through a cooperation established with the Virginia Institute of Marine Science (VIMS). I have attached the final report that VIMS submitted to ASMFC (Attachment 3).
- Provide matrix ranking from last year.
  - o The Biological and Bysampling Matrices from 2015 are the same as 2014.

- It was discussed if a rollover report could be obtained. It was noted that a rollover report could not be obtained and was only included last year due to missed fishing days from Hurricane Sandy.
  - o From FY13, there were 193 rollover seadays. The FY14 iteration of the project that is currently being sampled was funded for only 60 seadays, while 248 were actually scheduled to maintain the project at 4-5% coverage for each state. This means the 193 rollover seadays should be fully spent in the FY14 cycle of the Observer Program. See updated “Summary Table of Metrics” in the proposal.
- Please be sure to review all general comments as well.
  - o It was noted that some of the dates were incorrect in the original proposal draft. These are now updated.

Thank you for your consideration. Please do not hesitate to contact me with any questions.

Warm regards,

Shanna Madsen

Proposal for Funding made to:  
Atlantic Coastal Cooperative Statistics Program  
Operations and Advisory Committees  
1050 N. Highland St., Suite 200A-N  
Arlington, VA 22201

**Observer Program for Mid-Atlantic (New Jersey, Maryland, Virginia) and Rhode Island  
Small Mesh Otter Trawls**

Submitted by:  
Shanna Madsen  
Atlantic States Marine Fisheries Commission  
1050 N. Highland St., Suite 200A-N  
Arlington, VA 22201  
[smadsen@asmfc.org](mailto:smadsen@asmfc.org)

Rich Seagraves  
Mid-Atlantic Fishery Management Council  
800 N. State St., Suite 201  
Dover, DE 19901  
[rseagraves@mafmc.org](mailto:rseagraves@mafmc.org)

## OBSERVER PROGRAM FOR MID-ATLANTIC SMALL MESH OTTER TRAWLS

**Applicant Name:** Atlantic States Marine Fisheries Commission and Mid-Atlantic Fishery Management Council

**Project Title:** Observer Program for Mid-Atlantic (New Jersey, Maryland, Virginia) and Rhode Island Small Mesh Otter Trawls

**Project Type:** Maintenance

**ACCSP Program Priorities:** 1) Biological (50%), 2) Bycatch (45%), and 3) Catch/Effort (5%)

**Principal Investigator:** Shanna Madsen, Fisheries Science Coordinator; ASMFC  
Rich Seagraves, Senior Scientist; MAFMC

**Requested Award Amount:** \$202,750

**Requested Award Period:** 1 August 2015 – 31 July 2016

**Date Submitted:** June 30, 2014

**Objective:**

To collect biological and discard data for commercially and recreationally important species from the small mesh otter trawl fisheries in the mid-Atlantic (New Jersey, Maryland, Virginia) and Rhode Island using at-sea observers.

**Need:**

Obtaining discard and biological information is critical to adequately characterize the quantity and length and age compositions of fishery catches. A recurring high priority recommendation from stock assessments and fishery management plans (FMPs) for several species managed by the Atlantic States Marine Fisheries Commission (ASMFC) and Mid-Atlantic Fishery Management Council (MAFMC) is to increase at-sea observer coverage to obtain commercial discard and associated biological data. Recent examples include the assessments of black sea bass, scup, weakfish, and Atlantic croaker (NEFSC 2008, Northeast Data Poor Stocks Working Group 2009, SEDAR 2010). Further, ASMFC (through its Management & Science Committee and ISFMP Policy Board) maintains a list of coast wide critical research priorities which identifies the need for at-sea observer data of discards, age/length samples and/or catch/effort data for river herring, weakfish, scup, black sea bass, spiny dogfish, and bluefish. All of these species, except bluefish, are identified in the upper quartile of the Atlantic Coastal Cooperative Statistics Program (ACCSP) FY 2015 Biological Priority Matrix.

Table 1 describes species of interest that are commonly caught in directed fisheries or as bycatch in the mid-Atlantic using small mesh (<5.5”) otter trawls, the fifth highest priority fishery as determined in the ACCSP FY 2015 Bycatch Priority Matrix. The ASMFC Fishing Gear Technology Work Group (FGTWG) evaluated all Atlantic fisheries and their gears for magnitude of gear interactions (i.e., bycatch, protected species), and also identified small mesh otter trawls as a high priority fishery (ASMFC 2008).

**Table 1.** Priority ranking by ACCSP and ASMFC FGTWG for species and gear to be observed.

<b>Fishery/Species</b>	<b>ACCSP Biological Sampling Priority Matrix Ranking</b>	<b>ACCSP Bycatch Priority Matrix Ranking</b>	<b>ASMFC FGTWG Matrix Ranking</b>
Black Sea Bass	1		
Winter flounder	2		
Shad	4		
Spiny Dogfish	5		
Scup	8		
Summer flounder	10		
River herring	12		
Weakfish	13		
Summer Flounder Trawl		5	5
Scup Trawl		5	9
Croaker/Weakfish Trawl		5	10
Black Sea Bass Trawl		5	26

Concerns have been expressed by governmental and non-governmental groups regarding the discarding of river herring by commercial fishing fleets operating off the northeastern and mid-Atlantic coast of the United States (Wigley et al., 2009). A recent paper on river herring discards recommends increasing observer coverage, particularly in the mid-Atlantic region, to determine adequate catch sample sizes and derive discard estimates (Wigley et al., 2009). Concerns at the State level on this issue resulted in a letter (Attachment 1) from the ASMFC requesting the MAFMC to consider the bycatch of river herring in all small mesh fisheries under its jurisdiction. The ASMFC also asked that the Council develop and implement monitoring and management provisions to address the bycatch of river herring in all small mesh fisheries under its management authority.

In April 2014, the Council fully implemented Amendment 14 to the Atlantic Mackerel, Squid and Butterfish (MSB) Fishery Management Plan. The primary goals of the Amendment are 1) to develop an effective river herring and shad catch monitoring program for the Atlantic mackerel and longfin squid fisheries, and 2) to limit incidental river herring and shad catches. Amendment 14 aims to address a suite of reporting and monitoring provisions helping to maximize at-sea observer's ability to sample catch and minimize the discarding of unsampled catch. The Amendment also applied a catch cap for river herring and shad for the Atlantic mackerel fishery, which appears to have more river herring and shad catch than other MSB fisheries. The efficacy of the cap that was implemented under Amendment 14 depended largely on the accuracy and precision of alosine catch estimates in the mackerel fishery. Accurate and precise estimates of alosine catch in other fisheries could assist consideration of additional actions in the future. While the implementation of Amendment 14 is a step in the right direction towards evaluating the level of alosine bycatch in the Atlantic mackerel and *Loligo* fisheries, funding of increased at-sea observers under Amendment 14 remains problematic. There remains an acute need to find alternative funding sources to expand or increase at-sea observer coverage to assess oceanic bycatch of alosines in the Mid-Atlantic region.

Furthermore, the MAFMC SSC noted the following source of scientific uncertainty for scup: "commercial discard estimates are imprecise and represent a considerable portion of the total catch." Therefore, there is a need to increase at-sea observer coverage of the directed scup fishery and squid fishery to address imprecision of the discard estimates for scup.

In addition, age-structured models have become the paragon for stock assessments, and the need for detailed age data to support them continues to grow. The age structure of the discards is a critical input to assessments, particularly in fisheries with a large regulatory discard component where it cannot be assumed that the age structure of the harvest represents the age structure of the discards. Moreover, at-sea sampling can help fill gaps in age-length keys that are not adequately sampled from the landed catch. Increased collection and processing of age samples is an established need for improvement of stock assessments of many managed species, including all of the focal species in the proposal. Age sampling through the project will significantly improve catch-at-age information gaps for several species, with emphasis on the discarded component of populations that is not characterized through age sampling of landings.

**Results and Benefits:**

Improving collection of bycatch/discard and biological data is a goal for all ACCSP partners and data collection standards have been developed by ACCSP. The ASMFC Management & Science Committee and Policy Board of state Commissioners have identified high priority research needs for the various species it manages, and a comprehensive need deemed critical from this list was to develop a region wide observer program for trawl fisheries. Many states view a multi-state or regional program as the best approach to address observer coverage needs, given the transient nature of vessels involved in many fisheries. In addition, ACCSP encourages regional or multi-partner participation in proposed projects. This regional proposal will encompass the mid-Atlantic small mesh otter trawl fishery occurring in four states. A regional approach has lower operational costs and more effectively addresses the need for at-sea observer data for many species, rather than a species-by-species or state-by-state basis. A regional program also promotes consistency in data collection and utilization in coast wide stock assessments.

The project will fulfill data needs for three of the ACCSP modules in order of priority: 1) Biological Data (50%), 2), Discards, Bycatch and Protected Species Data (45%) and 3) Catch and Effort, and Landings Data (5%). In addition to collecting discard and biological data, observers will be able to record information on catch and effort from the vessels on which they are observing to validate reporting or provide information where there may be gaps in reporting versus landings. Data will be collected via NMFS protocols and submitted in accordance with ACCSP requirements along with associated metadata descriptions. ACCSP is currently developing biosampling and bycatch data reporting formats to receive the data produced from these types of sampling projects. The observer project will provide an opportunity to test new formats and develop revised reporting methods for the Program. Additionally, the catch and effort data obtained from observed trips will be supplied to the appropriate partner to be able to validate vessel reported and landings information. The data collected will address many needs identified as critical for advancing stock assessments and improving fisheries management across the mid-Atlantic region (Table 2).

**Table 2.** Benefits for stock assessments, FMPs and ACCSP priorities from this project.

<b>SPECIES</b>	<b>BENEFIT/RESULT</b>	<b>IN RESPONSE TO</b>
<b>Scup</b>	Characterize the quantity, length and age composition of fishery landings and discards.	Assessment recommendation, ACCSP Bio Matrix, and ASMFC Research Priorities
<b>Longfin Squid</b>	Growth information for older squid is still uncertain.	Assessment recommendation, ACCSP Bio Matrix.
<b>Weakfish</b>	Provide discard data for all commercial gear types from both directed and non-directed fisheries. In particular, quantify trawl bycatch. Improved estimates would best be obtained through increased observer coverage.	Assessment recommendation, ASMFC Weakfish FMP, ASMFC Research Priorities and ACCSP Bycatch Matrix.
	Collection of catch and effort data including size and age composition of the catch. Increase length frequency sampling, particularly in northern fisheries.	Assessment recommendation, ACCSP Bio Matrix.



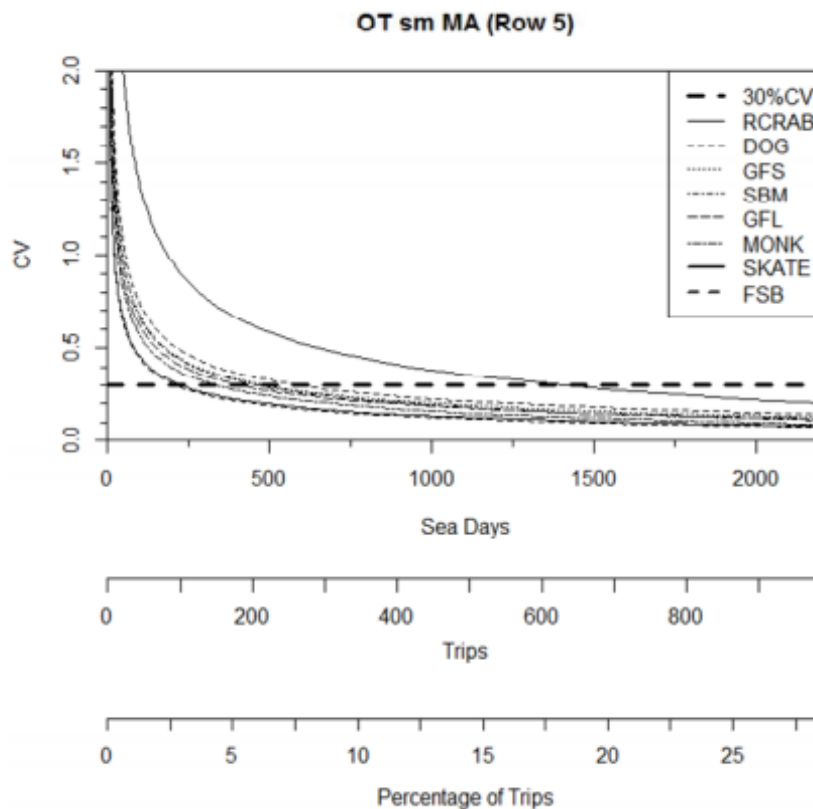
<b>Black sea bass</b>	Collection of at-sea samples to improve understanding of the timing of sex change and potential influence of population size on sex switching  Collection of data for quantification of discard  Increased sea sampling to provide better estimates of discards Increased age sampling across all components of the fishery	Assessment recommendation, ACCSP Bio Matrix.  Assessment recommendation, ACCSP Bio Matrix. ASMFC Research Priorities, ACCSP Bycatch Matrix. ASMFC Research Priorities, ACCSP Bio Matrix.
<b>River herring/Shad</b>	Expand observer coverage to quantify additional sources of mortality for alosine species, including bait fisheries, as well as rates of bycatch in other fisheries	ASMFC Research Priorities, ACCSP Bycatch Matrix.
<b>Summer flounder</b>	Collection of age/length samples and catch/effort data from commercial fisheries throughout range. More comprehensive collection of otoliths.	ASMFC Research Priorities, ACCSP Bio Matrix
<b>Atlantic croaker</b>	Increased observer coverage for studies of discards for commercial fisheries Fishery-dependent biological sampling, including extraction of ageing structures, to improve age-length keys	Assessment gap, ACCSP Bycatch Matrix. ASMFC Research Priorities
<b>Bluefish</b>	Provide data for evaluation of magnitude, length frequency, and age composition of discards from the commercial fisheries	ASMFC Research Priorities, Management Board directive
<b>Spiny dogfish</b>	Characterization and quantification of spiny dogfish in other fisheries Provide data for determining coastwide discard mortality rate for fixed and mobile gear fisheries with dogfish bycatch	ASMFC Research Priorities, ACCSP Bycatch Matrix ASMFC Research Priorities, ACCSP Bycatch Matrix

In the most recent Standardized Bycatch Reporting Methodology (SBRM) fisheries prioritization, the mid-Atlantic fleets and small-mesh fleets in particular remain very under-sampled due to funding constraints (2013 SBRM Standard Sea Days needed to achieve a 30% CV for river herring: approximately 1,093; currently funded: 722 sea days). The Northeast Fisheries Science Center (NEFSC) administers the SBRM which determines the number of sea days needed to observe a fishery for appropriate coverage and is carried out by the Northeast Fisheries Observer Program (NEFOP). This multistate project will complement information currently obtained through the NEFOP, while ensuring state and Council priorities are addressed. Many of the primary species taken in small-mesh trawl fisheries are co-managed by ASMFC and the MAFMC, such as black sea bass, scup, summer flounder, and bluefish. By collecting small mesh otter trawl fisheries data in this under sampled region, the project will provide a well-documented need identified by both state and federal fisheries management.

Furthermore, the proposed project will build upon the time series of an established ACCSP funded program underway which is beginning to address the great need for at-sea observer coverage in the mid-Atlantic region for small mesh otter trawl fisheries. In 2012, ASMFC received enough funding from ACCSP to continue and expand an observer program of the mid-Atlantic small mesh otter trawl fisheries in the states of New Jersey, Virginia, Maryland and

Rhode Island. The new funding allowed for coverage of trips from the state of New York, as well as increasing coverage in Rhode Island and New Jersey to try to obtain observed trips of the Atlantic mackerel fishery, which are all critical in describing scup and river herring discards. The ACCSP funded ASMFC observer program continues to obtain discard, biological and catch/effort data for bluefish, scup, black sea bass, weakfish, summer flounder, Atlantic croaker, *Loligo* squid, river herring and shad. Furthermore, the expansion included the hiring of a technician to process the age samples collected which completes the description of the catch and discard data obtained from observing these fisheries. A preliminary sample size analyses (Wigley et al. 2013) of additional sea days provided by this observer program indicate that the increased number of trips increased precision for four species groups: summer flounder/scup/black sea bass, squid/butterfish/mackerel, small mesh groundfish, and large mesh groundfish. Without the additional ACCSP-funded trips, the expected coefficient of variation would have been above the targeted 30%.

**Figure 1.** Results from the 2013 sample size analysis conducted by Wigley et al. (2013). The curves represent the relationship between the coefficient of variation (CV) and the sample size (sea days, trips, and percentage of trips) for each of the species groups. Results suggest that small mesh groundfish (GFS), squid/butterfish/mackerel (SBM), large mesh groundfish (GFL), and summer flounder/scup/black sea bass (FSB) precision increased, driving the CV below 30%.



In addition, the Council implemented in 2011 Amendment 10 to the Atlantic Mackerel, Squid and Butterfish FMP which instituted a butterfish mortality cap, that will require the closure of the directed *Loligo* fishery if the butterfish mortality cap is attained. The effectiveness of the

butterfish mortality cap program relies heavily on the veracity of the bycatch estimates from the NEFOP program. Increased sampling of the *Loligo* fishery under the current proposal should provide a collateral benefit to the butterfish mortality cap program through increased precision of butterfish bycatch estimates in the *Loligo* fishery. Increasing observer coverage in both the *Loligo* fishery and directed scup fishery should result in more precise discard estimates for the species and reduce scientific uncertainty in the stock assessment. This should result in increased confidence in the assessment overall and a smaller buffer between the overfishing limit and the acceptable biological catch (i.e., resulting in greater benefits to fishermen through increased allowable harvest levels).

**Approach:**

The ASMFC and MAFMC will contract with the well-established NMFS Northeast Fisheries Observer Program (NEFOP) to buy at-sea observer sea days for the states of Rhode Island, New Jersey, Maryland and Virginia. ASMFC will designate number of sea days (Appendix 1) by state, by month and by target gear type (small mesh otter trawl) in order to achieve coverage on vessels in areas and times of year where fisheries of interest are most active. Table 4 provides the sea day schedule determined by ASMFC for number of sea days to observe in each state and month on vessels using small mesh otter trawls. The directed fishery to target is not dictated so as to not bias the data collected for later use in stock assessments. By conducting the observed trip in a state at a particular time of year when the fishery of interest is known to be active, it is likely that trips will be conducted in the desired fishery. ASMFC provides a vessel selection list to the observer provider as a tool to look for effort. The list is derived from the list NEFSC uses of active vessels, but identifies vessels by state. This helps the provider figure out who has fished in the past in each port/state. The order in which the vessels appear on the list is randomized. If they are unable to find these exact vessels, they randomly select vessels at the docks for coverage.

Observers follow protocols from the NEFSC Fisheries Observer Program manual to record information on vessel and trip, and the NEFSC Fisheries Observer Program Biological Sampling manual for biological sampling on both the kept and discarded catch: actual weights, length frequencies, and age structures. Observers will make note of the species of interest (scup, black sea bass, summer flounder, weakfish, croaker, bluefish, squid) and bycatch species (scup, river herring, black sea bass, summer flounder, weakfish, croaker, bluefish, spiny dogfish) of concern, and prioritize these species for biological data to be collected. Data collected via NEFOP observers will be made available to the ACCSP at the end of each year.

A Memorandum of Understanding (Attachment 2) has been established between ASMFC and NEFSC in sampling small mesh otter trawl vessels in the Mid-Atlantic, which will be carried out for the states of Virginia, Maryland, New Jersey and Rhode Island, whereby NEFSC will provide at-sea observer coverage as designated by ASMFC.

A benefit of this approach is that funding is transferred within NOAA and does not incur indirect charges nor NOAA grant administration fees, enabling more of the award to be most efficiently and directly applied to the project to address state and Council priorities.

All four states (RI, NJ, MD, VA) have expressed support and commitment to participating in the project. States have promised dedicated staff time and oversight to assist with the observer assignments as needed (Table 3). ASMFC will oversee all project coordination and be in contact with each participating state regularly.

**Table 3.** Roles of state personnel to work on this project

Rhode Island	John Lake	State contact for NEFOP assignments
New Jersey	Peter Clarke	State contact for NEFOP assignments
Virginia	Joe Cimino	State contact for NEFOP assignments
Maryland	Steve Doctor	State contact for NEFOP assignments

All observers will be deployed on commercial vessels involved in mid-Atlantic small mesh (<5.5”) otter trawl fisheries beginning in August 2014 through tasking via NEFOP. Allocation of days and time periods will be adjusted by region to ensure observer coverage is proportionally applied to fishing effort for species of interest (Appendix 1). Appendix 1 identifies the active months for directed fisheries most likely to capture the species of interest either as directed catch or bycatch. Trip level information for this gear type by state, as well as commercial landings data from dealer reports for species of interest taken by small mesh otter trawl (ACCSP 2008), will be used to determine areas of greatest effort for this gear type. This will be compared to available discard data from the SBRM Annual Discard Reports to help prioritize coverage. Based on trips and confidential landings which capture species of interest from previous years, observed trips will be allocated proportionally to define observer coverage objectives. Allocation will also be adjusted depending on how much coverage NEFOP is able to employ in a given year. This project will adopt the NOAA Fisheries National Observer Program as the standard for training and certifying at-sea observers. Observers will follow data collection protocols from the NEFOP Fisheries Observer Program Manual and Biological Sampling Manual, including associated codes, metadata description and random selection of vessels and trips. This project will make available observer trip data for purposes of validation, but does not propose to actively validate collected data. Collected specimens will be sexed, enumerated, measured, weighed, and submitted in accordance with ACCSP standards. Complete catch information for all kept and discarded species will be recorded as time allows, as well as lengths and weights taken from as many species as possible. Whenever possible, the observer should collect detailed biological information, such as length measurements and age structures from species managed through ASMFC and MAFMC FMPs. The number of biological collections will be based on the ACCSP Biosampling Targets FY2014. Data collections will adhere to all ACCSP bycatch module minimum data elements including: enumerating, measuring, and weighing of all target and bycatch species; date, time, location, and net characteristics (length, height, hang ratio, twine size, etc.) of all sets and retrievals; and data on all protected species interactions including identification, disposition, measuring, inspection, and all standard resuscitation, tagging, release, and reporting protocols.

Additionally, age sample collections will encompass the following:

- scup – scale samples, priority on large specimens
- black sea bass, river herring – scale samples; otolith samples from unmarketable individuals (mortalities)

- summer flounder, bluefish, Atlantic croaker, weakfish – otolith samples from unmarketable individuals (mortalities)

Project leads plan to evaluate the three years of ageing data that have been collected and are currently being processed, to compare the size-at-age of observer fish to the size-at-age of fish from fishery independent surveys to see if there are significant differences. If there are not, we may be able to conduct observer fish ageing more periodically (only every 3-5 years) and in ‘off years’ apply age-length keys from independent surveys to estimate the ages of fish that would’ve been observed. If feasible, the approach would reduce the support needed to collect and age samples via fishery observers in future years.

For 2015-2016, we propose to sample a similar number of sea days as was funded in previous years, which would achieve a 4% coverage level in NJ and MD and 5% in VA (which is important to capture weakfish trips) and RI (which is important to capture Atlantic mackerel trips). The number of trips has increased in the states necessitating a much higher number of sea days to achieve 5% coverage in states like NJ. There may be rollover sea days from FY14 that can be used in FY15 to get closer to the 5% coverage level in NJ and MD. Please see the budget narrative (Table 6) explaining what was proposed and funded each year. The actual schedules vary slightly due to changes in observer coverage (what NEFOP was able to cover in all four states with their own funding) and effort (the number of trips taken in each state), so adjustments to days within each state were made.

**Geographic Location:**

The location and scope of observer coverage will be in the Mid-Atlantic Bight, in state and federal waters, aboard vessels departing from and landing in the states of Rhode Island, New Jersey, Maryland and Virginia. Cape May, NJ, is the principal port for the small-mesh trawl fishing mode, with over 16 million lbs landed (42% of total landings for this mode) each year. Point Pleasant, NJ takes in 2.3 million lbs annually. Additional ports of origin for the observers will be: Point Judith, RI, Ocean City, MD, Hampton, VA, Chincoteague, VA, and Newport News, VA.

**Milestone Schedule:**

**Table 4.** Milestone schedule by state and month.

	<b>A</b>	<b>S</b>	<b>O</b>	<b>N</b>	<b>D</b>	<b>J</b>	<b>F</b>	<b>M</b>	<b>A</b>	<b>M</b>	<b>J</b>	<b>J</b>	<b>A</b>
	<b>u</b>	<b>e</b>	<b>c</b>	<b>o</b>	<b>e</b>	<b>a</b>	<b>e</b>	<b>a</b>	<b>p</b>	<b>a</b>	<b>u</b>	<b>u</b>	<b>u</b>
	<b>g</b>	<b>p</b>	<b>t</b>	<b>v</b>	<b>c</b>	<b>n</b>	<b>b</b>	<b>r</b>	<b>r</b>	<b>y</b>	<b>n</b>	<b>l</b>	<b>g</b>
<b>Small mesh otter trawl observations and biological sampling:</b>													
<b>Rhode Island</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>		<b>X</b>	<b>X</b>	<b>X</b>			<b>X</b>	
<b>New Jersey</b>		<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>				
<b>Maryland</b>		<b>X</b>	<b>X</b>					<b>X</b>	<b>X</b>				
<b>Virginia</b>				<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>				
<b>Data coding/verification</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>		
<b>Data transfer to ACCSP, partners</b>											<b>X</b>	<b>X</b>	<b>X</b>

2014/2015 Sea days to be sampled each month in each state

	<b>RI</b>	<b>NJ</b>	<b>MD</b>	<b>VA</b>
<b>JAN</b>		12		7
<b>FEB</b>	4	15		7
<b>MAR</b>	4	15	2	14
<b>APRIL</b>	4	12	2	7
<b>MAY</b>				
<b>JUNE</b>				
<b>JULY</b>	4			
<b>AUG</b>	4			
<b>SEPT</b>	10	12	2	
<b>OCT</b>	8	6	2	
<b>NOV</b>	4	15		7
<b>DEC</b>	10	15		7

**Project Accomplishments Measurement:**

**Table 5.** Progress tracking by observations and biological data collection.

<b>Project Goals</b>	<b>Progress</b>
<b>Small Mesh Otter Trawl Observations</b>	Success will be measured by the number of trips observed per state toward 4-5% coverage. Coverage will be monitored via monthly check-ins between observers and state contacts on trips accomplished and data entry. ASMFC will check in with state contacts on a monthly basis.
<b>Biological Data Collections</b>	The ACCSP Biosampling Targets for FY14 will be followed for lengths by quarter as applicable and age sample numbers. Data will be inputted to the ACCSP Bio-tracking system quarterly.
Scup	Scales
Black sea bass	Scales and Otoliths
Summer flounder	Otoliths
Weakfish	Otoliths
Atlantic croaker	Otoliths
Bluefish	Otoliths
River herring	Scales and Otoliths
Spiny dogfish	Lengths only
Longfin squid	Lengths only

**Budget Narrative:**

**Table 6.** Cost Summary for Observer Sampling of Mid-Atlantic Small-mesh Otter Trawl Fisheries.

Item OBSERVER COVERAGE maintenance	Funding Source			
	In-kind from States		Request from ACCSP	
	Personnel	Other	Personnel	Other
1. Contract Observers				
A. 213 sea days			\$202,350	\$400
2. Project Oversight (12 months at 6 hours per month, 4 States)+(12 months at 12 hours per month, 3 agencies)	\$15,912			
Column Subtotals	\$15,912		\$202,350	\$400
Funding Source Subtotals	\$15,912		\$202,750	
Indirect (35%)*			N/A	
Funding Source Subtotals + Indirect	\$15,912		\$202,750	
Funding Source Grand Totals	\$15,912		<b>\$202,750</b>	
Total Project Cost	\$218,662			
Percent Contribution by Source	7%		93%	

Cost Details:

1. Contract Observers:

- A. 213 days at NEFOP rate of \$950/day and \$400 incidentals
- RI – 52 sea days (\$49,400) squid, scup, Atlantic mackerel
- NJ – 102 days (\$96,900) scup, black sea bass, weakfish, croaker, bluefish, squid, summer flounder, Atlantic mackerel
- MD – 10 days (\$9,500) summer flounder, weakfish, croaker
- VA – 49 days (\$46,550) summer flounder, weakfish, croaker, black sea bass
- Includes all observer costs: salary, indirect, fringe, training, insurance, travel, data entry

2. Project Oversight:

- In RI, NJ, MD, and VA, state fisheries agency personnel, one biologist from each state, currently serving in fishery-dependent sampling capacities will consult on observer coverage to advise where trips are needed and when boats are going out.
- 12 months at 6 hours per month, 4 States, \$37.25/hour: \$10,728
- \$37.25/hour is an average of the 4 biologists
- In-kind from ASMFC, MAFMC, NEFOP staff who are administering the project, including assignment of observer trips to directly address fisheries assessment and management needs
- 12 months at 12 hours per month, 3 scientists, \$27.00/hour: \$5,184
- \$27.00/hour is an average of the 3 agency scientists

\*There is no indirect charge nor any NOAA grant administration fee as the funding is distributed within NOAA to NEFOP directly.



*Comparison of Observer Program funding for all years*

The costs proposed for FY15 are to carry out 213 sea days.

FY11 (four states) started 8/17/11	FY12 (five states) started 8/17/12	FY13 (five states) started 8/17/13	FY14 (four states) starts 8/17/14	FY15 proposed (four states)
257 Sea days– \$245,084	Maintenance– 257 SD \$245,084	Maintenance– 188 SD \$178,609	Maintenance– 248 SD \$236,000	Maintenance– 213 SD \$202,750
	New (w/ MAFMC) –190 SD \$179,897			
	Ageing personnel \$64,171			
Total \$245,084	Total \$489,152	Total \$178,609*	Total \$57,400*	Total \$202,750

*\*Sea days not observed in FY12 carry over to FY13 and FY14, resulting in 183 SD sea days allocated for FY13 and FY14*

*Future Costs and Funding Outlook*

Future Operational Costs are similar, dependent on the need for observer coverage done by NEFOP and ASMFC. Additionally, the New York Department of Environmental Conservation has identified state funds to support continuation of small mesh fishery observer trips from vessels departing New York ports as they did in FY14. That support directly reduces the FY15 observer program request to ACCSP.

No long-term funding has been identified to date among the project partners. The approach for obtaining long-term observer program funding is to complete pilot years using ACCSP support, then provide evidence of success to state and federal fisheries agencies towards garnering future support from those agencies. Another consideration is the potential to expand observer coverage to additional states and fisheries, dependent upon success of initial sampling activities. Additional fisheries would be those identified by ACCSP as biological sampling and bycatch priorities. The ASMFC continues to work with its Northeast Regional Coordinating Council partners – NMFS-NERO, NEFSC, MAFMC, and NEFMC –to identify outstanding observer coverage needs and approaches to funding more coverage. Outstanding needs are based on the Standardized Bycatch Reporting Methodology process and would complement existing observer coverage. An NRCC recommendation is to develop a multistate or regional program as the best approach to improving observer coverage given the transient nature of vessels involved in many fisheries. We envision initial support via ACCSP providing ‘proof of concept’ for a multistate

observer program that will lead to establishing long-term support from state and federal agencies, and potentially the fishing industry.

Should ACCSP fund the FY15 observer program, this will mark a total of 5 years of data collection. Five years of data should enable further analyses on whether adding extra sea days improves bycatch and discard estimates, as well as if characterization of the discards is improving characterization of the population. We have done a preliminary evaluation of the observer program through collaboration with NEFOP but propose a more in-depth analysis at the 5 year benchmark. We would like to work with target species assessment scientists to analyze how much the added observer sampling has made a difference in their stock assessments. We will also further collaborate with NEFOP to see how thoroughly we have covered data gaps using a sample size analysis. We anticipate that the observer data evaluation will show significant success, making our program better positioned to seek other sources for long-term funding.

## References

Atlantic Coastal Cooperative Statistics Program. 2013. Confidential Landings by Year, Species, State Landed & Gear; generated by Katie Drew; using ACCSP Data Warehouse [online application], Washington, D.C.: Available at <http://www.accsp.org> --> Data Center --> Data Warehouse --> Login; accessed April 24, 2012.

Atlantic States Marine Fisheries Commission. 2002. Amendment # 4 to the Interstate Fishery Management Plan for Weakfish. ASMFC, Washington, DC.

ASMFC. 2008. Fishing Gear and Technology Work Group 2008 Report to the Management and Science Committee.

Murray, K.T. 2006. Estimated average annual bycatch of loggerhead sea turtles (*Caretta, caretta*) in U.S. Mid-Atlantic bottom otter trawl gear, 1996-2004. U.S. Department of Commerce, Northeast Fisheries Science Center Reference Document 06-19, 26 p.

NMFS 2006. Public Hearing Draft. Northeast Region Standardized Bycatch Reporting Methodology. An Omnibus Amendment to the Fishery Management Plans of the Mid-Atlantic and New England Regional Fishery Management Councils. November.

Northeast Data Poor Stocks Working Group. 2009. The Northeast Data Poor Stocks Working Group Report, December 8-12, 2008 Meeting. Part A. Skate species complex, deep sea red crab, Atlantic wolffish, scup, and black sea bass. US Dept Commer, Northeast Fish Sci Cent Ref Doc. 09-02; 496 p.

Northeast Fisheries Science Center. 2009. 48th Northeast Regional Stock Assessment Workshop (48th SAW) Assessment Summary Report. US Dept Commer, Northeast Fish Sci Cent Ref Doc. 09-10; 50 p. Available from: National Marine Fisheries Service, 166 Water Street, Woods Hole, MA 02543-1026, or online at <http://www.nefsc.noaa.gov/nefsc/publications/> (Weakfish Stock Assessment 2009)

Powell, E.N., A.J. Bonner, and E.A. Bochenek. 2003. Scup discarding in the fisheries of the Mid-Atlantic Bight, Final Report to the New Jersey Fisheries Information and Development Center, Final Report to the Mid-Atlantic Fisheries Management Council Research Set-Aside Program, Project #NA16FM2268, 59p.

Price, B. Proposal to ACCSP, NC Fishery Observer Response Team.

Rossmann, M., C. Orphanides, D. Belden, D. Plaka. 2006. Marine mammal and sea turtle interactions with trawl gear-documented by the northeast observer program. A presentation to the Cetacean and Sea Turtle Bycatch Workshop., Ocean City Md.

SEDAR 2010. Unpublished. Atlantic Croaker Stock Assessment 2009. pers. comm.

Wigley SE, Blaylock J, Rago PJ. 2009. River Herring Discard Estimation, Precision, and Sample Size Analysis. NEFSC Ref Doc 09-20; 15 p.

Wigley SE, Blaylock J, Rago PJ, Shield G. 2013. 2013 Discard estimation, precision, and sample size analyses for 14 federally managed species groups in the northeast region. US Dept Commer, NEFSC Ref Doc. 13-15; 150 p.

## Project History Table

August 2011	Begin first year of observed trips with biological sampling
<i>Continue through July 2012</i>	
August 2012	Begin second year of observed trips with biological sampling
<i>Continue through July 2013</i>	
July 2013 through June 2014	Begin one year contract work processing biological samples from August 2011 through January 2014
August 2013	Begin third year of observed trips with biological sampling
<i>Continue through July 2014</i>	
August 2014	Begin fourth year of observed trips with biological sampling
<i>Continue through July 2015</i>	

## Total Project Cost by Year

2011/2012	\$245,084
2012/2013	\$489,152 <i>(\$424,981 for observed trips; \$64,171 for an ager)</i>
2013/2014	\$178,609*
2014/2015	\$57,400*

\*Sea days not observed in FY12 carry over to FY13 and FY 14, resulting in 183 SD sea days allocated for FY13 and FY14

## Summary Table of Metrics

Summary of proposed and actual trips/days observed beginning August 1, 2013 through April 2014. Proposed trips/days are on the left side of the column then actual trips/days in italics on the right side of the column. The unobserved days will rollover for FY14.

	RI		NJ		NY		MD		VA		Proposed Days	Actual Days							
	Trips	Days	Trips	Days	Trips	Days	Trips	Days	Trips	Days									
JAN	6	2	12	2	14	6	35	16	2		4	2	2		53	18			
FEB	6	5	12	5	14	4	35	7	2		2	2	1	2	7	9	56	21	
MAR	6	2	12	2	14	3	35	6	2	1	4	6	2	1	2	7	11	60	25
APR	2		4		2	7	5	10	2		4	6	2	1	2	4		15	14
MAY	2	7	4	7	2	5	5	9	2	7	4	7	2		2			15	23
JUN	2	4	4	4	2	8	5	8			2	2	2	1		5		9	19
JULY	2	1	4	15					1		1			1	1	7	6	11	22
AUG													1		7			7	0
SEPT	9	1	18	14	8	2	20	7					1		7			45	21
OCT	10	6	20	13	17	2	43	2	1	1	1	1	1	1	7			71	16
NOV	2	2	4	2	5	2	12	9			2		1	1	7	5		25	16
DEC		1		1	7	3	18	4			2	1	2	1	7			27	6

**Biological samples collected from August 2011 – August 2013**

- ~ 2699 scale samples, ~ 600 otolith samples

Scup	Scales	1522
Black sea bass	Otoliths/Scales	115/610
Summer flounder	Otoliths/Scales	244/317
Weakfish	Otoliths	142
Atlantic croaker	Otoliths	38
Bluefish	Otoliths/Scales	2/112
River herring	Scales	81
Winter flounder	Otoliths/Scales	32/37

**APPENDIX 1.** Observer coverage proposed to be conducted by NEFOP by state (RI, NJ, MD, VA) and by season, based on 4-5% coverage of average trips 2011-2013 across the fleet in each state. Number of trips derived from ACCSP data query for small mesh bottom otter trawl gear. Observer coverage in trips is listed with number of associated sea days in parentheses. The coverage by NEFOP (present observer coverage for 2013) was then subtracted from the 4-5% trips for each state to derive the proposed trip coverage. Last column denotes month of needed trips and sea days with goal of targeting species listed underneath.

<b>RHODE ISLAND</b>	<b>Season</b>	<b>5% Coverage</b>	<b>Observer Coverage 2013</b>	<b>Trip length avg</b>	<b>Needed trips</b>	<b>Proposed sea days</b>	<b>Month to cover</b>
<b>OT sm trips</b>	<b>2237</b>	89	85 (190 SD)	2	<b>26</b>	<b>52</b>	
<b>Squid – Longfin Inshore</b>	July				2	4	<b>Feb</b>
	Aug						Atl M
	Sept				2	4	<b>Mar</b>
	Oct						Atl M
	Nov				2	4	<b>Apr</b>
	Dec						Atl M
<b>Scup</b>	Sept				2	4	<b>July</b>
	Oct				2	4	<b>Aug</b>
<b>Atlantic mackerel</b>	Feb				5	10	Squid
	Mar						<b>Sept</b>
	Apr						Squid
	Dec				4	8	Scup
							<b>Oct</b>
							Squid
					2	4	Scup
							<b>Nov</b>
					5	10	Squid
							<b>Dec</b>
							Squid
							Atl M

Appendix 1. Continued.

NEW JERSEY	Season	4% Coverage	Observer Coverage 2013	Trip length avg	Needed trips	Proposed sea days	Month to cover
<b>OT sm trips</b>	<b>3177</b>	127	93 (285 SD)	3	<b>34</b>	<b>102</b>	
<b>Scup</b>	Jan				4	12	<b>Jan</b>
	Feb						Scup
	Mar						BF
	Apr						SF
	Nov				5	15	<b>Feb</b>
	Dec						Scup
<b>Black sea bass</b>	Feb						BSB
	Mar						BF
	Apr				5	15	SF
	Dec						<b>Mar</b>
<b>Weakfish/ Croaker</b>	Sept						Scup
	Oct						BSB
					4	12	BF
<b>Bluefish</b>	Jan						Atl M
	Feb						<b>Apr</b>
	Mar						Scup
	Nov				4	12	BSB
	Dec						Atl M
<b>Squid – Longfin Inshore</b>	Sept						<b>Sept</b>
	Oct						Wk/Crkr
	Nov				2	6	Squid
<b>Summer flounder</b>	Jan				5	15	SF
	Feb						<b>Oct</b>
	Sept						Wk/Crkr
	Nov						Squid
	Dec						<b>Nov</b>
<b>Atlantic mackerel</b>	Mar				5	15	Scup
	Apr						BSB
							BF
							SF

**Appendix 1. Continued**

<b>MARYLAND</b>	<b>Season</b>	<b>4% Coverage</b>	<b>Observer Coverage 2013</b>	<b>Trip length avg</b>	<b>Needed trips</b>	<b>Proposed sea days</b>	<b>Month to cover</b>
<b>OT sm trips</b>	<b>586</b>	23	18 (32SD)	2	<b>5</b>	<b>10</b>	
<b>Summer flounder</b>	Oct				2	4	<b>Mar</b>
	Nov						Wk/Crkr
	Dec						BSB
<b>Weakfish/Croaker</b>	Sept				1	2	<b>Apr</b>
	Oct						BSB
							BF
<b>Black sea bass</b>	Mar				1	2	<b>Sept</b>
	Apr						SF
							Wk/Crkr
<b>Bluefish</b>	Mar				1	2	<b>Oct</b>
	Apr						SF
							Wk/Crkr



**Appendix 1. Continued.**

<b>VIRGINIA</b>	<b>Season</b>	<b>5% Coverage</b>	<b>Observer Coverage 2013</b>	<b>Trip length avg</b>	<b>Needed trips</b>	<b>Proposed sea days</b>	<b>Month to cover</b>
<b>OT sm trips</b>	<b>539</b>	27	20 (146 SD)	7	<b>7</b>	<b>49</b>	
<b>Summer flounder</b>	Jan				1	7	<b>Jan</b>
	Feb						SF
	Mar						Wk/Crkr
	Apr						BSB
							Scup
<b>Weakfish/Croaker</b>	Jan				1	7	<b>Feb</b>
	Feb						SF
	Mar						Wk/Crkr
	Apr						BSB
	Nov				2	14	<b>Mar</b>
	Dec						SF
							Wk/Crkr
<b>Black sea bass</b>	Jan						BSB
	Feb						Scup
	Mar				1	7	<b>Apr</b>
	Apr						SF
	Dec						Wk/Crkr
							BSB
<b>Bluefish</b>	Jan				1	7	<b>Nov</b>
	Nov						Wk/Crkr
	Dec						BF
					1	7	<b>Dec</b>
<b>Scup</b>	Jan						Wk/Crkr
	Feb						BSB
	Mar						BF

## Curriculum Vitae for Principal Investigators

### SHANNA L. MADSEN

Fisheries Science Coordinator  
Atlantic States Marine Fisheries Commission  
1050 N. Highland St. Suite 200A-N  
Arlington, VA 22201  
Office: (703) 842-0740

#### PROFESSIONAL PREPARATION

---

**Master of Science** in Marine Science *Aug 2008-Dec 2011*  
University of South Alabama, AL, GPA: 3.93  
Advisor: Dr. John F. Valentine  
**Thesis research:** *Top-down Impacts of Exploited Higher Order Consumers on the Structure and Function of a Species-rich Community*, NOAA-NURC

**Bachelor of Science** in Marine Science, *Cum Laude* *Jan 2006-May2008*  
SUNY at Stony Brook University, NY, GPA: 3.57

#### PROFESSIONAL EXPERIENCE

---

**Fisheries Science Coordinator** *Sept 2013-present*  
Atlantic States Marine Fisheries Commission, Arlington, VA

- *Coordinate the activities of the ASMFC scientific committees, and other special projects within the Science Program*
  - Staff lead for the Assessment Science Committee, Management and Science Committee, Committee on Economics and Social Sciences, Multispecies Technical Committee as well as all subcommittees associated with those groups.
  - Coordinate the activities of the Northeast Area Monitoring and Assessment Program (NEAMAP) as well as the Southeast Area Monitoring and Assessment Program in the South Atlantic (SEAMAP-SA).
  - Participating member of the Biological and Bycatch Panels of the Atlantic Coastal Cooperative Statistics Program.
  - Work closely with state and federal fisheries scientists and managers in several areas, including fishery-independent surveys, fishery-dependent sampling, multispecies and ecosystem modeling, and fisheries socioeconomics.

**Environmental Cooperative Science Center Coordinator of Research and Services** *Aug 2012-Aug 2013*  
Mission-Aransas National Estuarine Research Reserve, Texas

- *Educate young environmental scientists (predominantly from underrepresented minority groups) in NOAA related sciences*
  - Coordinate ECSC research taking place in the MANERR while assisting other ECSC researchers and students with data collection
  - Mentor ECSC students by aiding in the development and implementation of graduate research projects
  - Collaborate with FAMU and other ECSC partners to facilitate the dispersion of data and information
  - Develop public outreach events with Reserve staff

**Lab Technician**, Dauphin Island Sea Lab, AL  
Marine Ecology Lab; Dr. Kenneth L. Heck Jr.

Aug 2011-Aug 2012

- *Climate-related Ichthyofaunal Shifts in the Northern Gulf of Mexico: Implications for Estuarine Ecology and Nearshore Fisheries*, NGI
  - Project supervisor: Evaluate parrotfish herbivory potential in Northern GoM due to climate-driven range expansions
  - Collect and analyze data to be presented to scientists and managers

**Aquarist Assistant (Volunteer)**  
Dauphin Island Estuarium, AL; Brian Jones

Aug 2010-Jan 2012

- Assist with typical upkeep of DI Estuarium (i.e. feeding, water quality analysis, specimen collection, cleaning, etc.) as well as interact with the public

**Research Assistant**, Dauphin Island Sea Lab, AL  
Marine Conservation Lab; Dr. John F. Valentine

Aug 2010-Aug 2011

- *Food Webs Without Borders: A Case for Ecosystem-Based Management in the Northern Gulf of Mexico*, NGI
  - Collected fish and plant samples using otter trawls, dredges, and gillnets
  - Prepared samples for stable isotope analysis to determine the degree of food web linkage in the Northern GoM
- *Impacts of the Deepwater Horizon Incident on Food Web Structure in the North Central Gulf of Mexico*, NGI
  - Surveyed fish populations in the North Central GoM to assess the impacts of the DWH incident on the food web
  - Analyzed data for presentation at scientific meetings
- *Marine Reserve Effectiveness in Restoring Coastal Food Webs: A Multitrophic Assessment Using Special Protection Areas in the Florida Keys National Marine Sanctuary*, NOAA-NURC
  - Conducted visual surveys of fish communities and quantified ecosystem processes such as predation and herbivory in the FKNMS to evaluate reserve success

## **PUBLICATIONS**

---

Toscano, B.J., F.J. Fodrie, **S.L. Madsen**, and S.P. Powers. (2010) Multiple prey effects: Agonistic behaviors between prey species enhances consumption by their shared predator. *Journal of Experimental Marine Biology and Ecology* 385: 59-65.

**Madsen, S.L.** and J.F. Valentine. (In prep) Top-down impacts of exploited higher order consumers on the structure and function of a species-rich community. Targeted journal: *Ecology*.

**Madsen, S.L.**, K.L. Heck Jr., and F.J. Fodrie. (Submitted) Potential impacts of parrotfish herbivory in northern GoM seagrass communities due to climate-driven range expansions. Targeted journal: *Marine Ecology Progress Series*.

**RICHARD J. SEAGRAVES**  
Mid-Atlantic Fishery Management Council  
800 N. State Street, Dover, DE 19901  
302-674-2331/rseagraves@mafmc.org

### **EDUCATION**

Master of Science, College of Marine Studies, University of Delaware, Newark, DE. Thesis: A comparative study of the size and age composition and growth rate of weakfish (*Cynoscion regalis*) populations in Delaware Bay. May, 1981.

Bachelor of Arts, Biological Sciences. College of Arts and Sciences, University of Delaware, Newark, DE. June, 1977.

### **EMPLOYMENT**

Senior Scientist, Mid-Atlantic Fishery Management Council, Dover, DE. May 2006 - present.

Fishery Management Specialist, Mid-Atlantic Fishery Management Council, Dover, DE. Sept. 1991 - May 2006.

Fish and Wildlife Scientist II, Delaware Division of Fish and Wildlife, Dover, DE. February 1980 - August 1991.

Research Associate and Graduate Teaching Assistant, College of Marine Studies, University of Delaware, Lewes, DE. January 1979 - January 1980.

Senior Research Biologist, Ichthyological Associates, Middletown, DE. March 1977 - January 1979.

### **PROFESSIONAL ORGANIZATIONS/ACTIVITIES**

Atlantic Scientific Review Group for Marine Mammals

Atlantic States Marine Fisheries Commission Advisory Committee

Chairman, ASMFC Weakfish Technical Committee

ASMFC Shad and River Herring Technical Committee

ASMFC Northeast Statistical and Technical Committee

ASMFC Marine Recreational Fisheries Committee

ASMFC Summer Flounder Technical Committee and NE Regional SAW S. Demersal Working Group

ASMFC Winter Flounder Technical Committee

NE Regional SAW Pelagic Working Group

NE Regional SAW Invertebrate Working Group

Co-Chairman, ASMFC/NEFSC Woods Hole Trawl Symposium

Consultant, U.S. Environmental Protection Agency E-Map Program

MMPA Take Reduction Team Member: Atlantic Bottlenose Dolphin; Harbor Porpoise; Atlantic Large Whale; Atlantic Trawl Gear; Pelagic Longline

### **PUBLICATIONS**

- Shepherd, G.R., C.M. Moore and R.J. Seagraves. 2002. The effect of escape vents on the capture of black sea bass, *Centropristis striata*, in fish traps. Fisheries Research, Vol. 54, No. 2, pp.195-207.
- Seagraves, R.J. 1992. Weakfish Fishery Management Plan Amendment #1. Atlantic States Marine Fisheries Commission, Fishery Management Report No. 20. Washington, DC. 68p.
- Vaughan, D.S., R.J. Seagraves, and K. West. 1991. An Assessment of the Atlantic Weakfish Stock, 1982-88. Atlantic States Marine Fisheries Commission, Washington DC. Special Report No. 21. 29p.
- Azarovitz, T.A., J. McGurrin, and R. Seagraves. 1989. Proceedings of a Workshop on Bottom Trawl Surveys. Atlantic States Marine Fisheries Commission, Washington, DC, Special Report Report No. 17. 70p.
- Seagraves, R.J. and R.W. Miller. 1988. Striped bass by-catch in Delaware's commercial shad fishery. Delaware Division of Fish and Wildlife, DNREC, Dover, DE. 25p.
- Boreman, J. and R.J. Seagraves. 1984. Status of the weakfish stock along the Atlantic coast, 1984. National Marine Fisheries Service, Woods Hole, MA, Woods Hole Laboratory Reference Document No. 84-19. 43p.
- Seagraves, R.J. 1988. Survey of the sport fishery of Delaware Bay. Project F33-R-7 Annual Report. Delaware Division of Fish And Wildlife, Dover, DE. 40p. (Published Annually, 1982-88).
- Seagraves, R.J. and R.W. Cole, 1990. Monitoring fish populations in Delaware Bay. Project No. F37-R-2 , Annual Report. Delaware Division of Fish and Wildlife, Dover, DE. 65p. (Published Annually, 1980-1990).
- Seagraves, R.J. 1989. Stock identification of weakfish along the Atlantic coast of the U.S. Project No. F38-R-2 Final Report. Delaware Division of Fish and Wildlife, Dover, DE. 16p.
- Seagraves, R.J. 1982. Commercial fishery landings in Delaware. Delaware Coastal Zone Management Program, Annual Report. Delaware Division of Fish and Wildlife, Dover, DE. 89p. (Published Annually, 1980-1982).
- Seagraves, R. 1989. Delaware Recreational Fisheries Statistics Program. In: A Handbook for Recreational Fisheries Statistics Programs of the Atlantic Coast. J. McGurrin and C. Moore eds. Special Report No. 16, Atlantic States Marine Fisheries Commission, Washington, DC. 74.

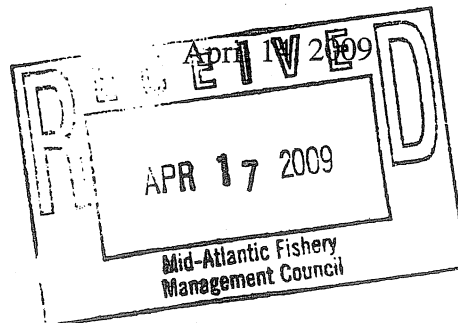
# Atlantic States Marine Fisheries Commission

1444 Eye Street, N.W., Sixth Floor  
Washington, D.C. 20005  
(202) 289-6400  
(202) 289-6051 (fax)  
www.asmf.org

George D. Lapointe (ME), Chair  
Robert H. Boyles, Jr. (SC), Vice-Chair

John V. O'Shea  
Executive Director

*Working towards healthy, self-sustaining populations for all Atlantic coast fish species, or successful restoration well in progress, by the year 2015*



Mr. Daniel Furlong, Executive Director  
Mid-Atlantic Fishery Management Council  
Room 2115, Federal Building  
300 S. New Street  
Dover, Delaware 19904

Dear Mr. ~~Furlong~~, *Dan,*

The Atlantic States Marine Fisheries Commission's Shad and River Herring Management Board (Board) requests that the Mid-Atlantic Fishery Management Council (Council) consider the bycatch of river herring (alewife and blueback herring) in all small mesh fisheries. Specifically, the Board asks that the Council develop and implement monitoring and management provisions to address bycatch of river herring in the small mesh fisheries under the jurisdiction of the Council.

The Board is concerned that many populations of river herring are in decline, or remain at depressed but stable levels, along the Atlantic coast. Given the river herring's diadromous life cycle, it is susceptible to varied threats throughout different life stages. These threats include bycatch, direct harvest, predation by other species, habitat degradation, and barriers to upstream and downstream migration. The Board is working to address all these threats, as possible, within their authority or through coordinated efforts with the appropriate agencies. Of particular concern is the bycatch of river herring in the small mesh fleets occurring in federal waters.

The Board and the Shad and River Herring Technical Committee want to work with the Council and staff in analyzing the available data and developing monitoring programs and management options to minimize the impacts of small mesh fisheries on river herring. We look forward to working cooperatively with the Council to address this difficult and important issue.

Sincerely,

John V. O'Shea

cc: Paul Diodati, Chair, Shad and River Herring Management Board  
Shad and River Herring Management Board

MEMORANDUM OF UNDERSTANDING  
THROUGH WHICH  
Atlantic States Marine Fisheries Commission

IS PURCHASING  
At-Sea Observer Days

FROM  
National Marine Fisheries Service  
Northeast Fisheries Science Center  
U.S. Department of Commerce

1. PARTIES AND PURPOSE

This Memorandum of Understanding (MOU) establishes an agreement between the Atlantic States Marine Fisheries Commission (ASMFC) and the National Marine Fisheries Service (NMFS), Northeast Fisheries Science Center (NEFSC), U.S. Department of Commerce (DOC), through which ASMFC will pay NEFSC for At-Sea Observer days. The NMFS will provide at-sea observer coverage for up to 257 days from August 1, 2011 through July 31, 2012, or a one-year period to begin as soon as funding is finalized.

2. AUTHORITY

The authorities for ASMFC and DOC to enter into this agreement are:

- (1) The Atlantic Coastal Fisheries Cooperative Management Act, 16 U.S.C § 5101-5108, and
- (2) The ASMFC authority to enter into this agreement as an MOU signatory to the Atlantic Coastal Cooperative Statistics Program (ACCSP) which authorizes the use of ACCSP funds for the collection and management of data related to management of the fisheries.
- (3) DOC/NEFSC's programmatic authority includes the Magnuson-Act, 16 U.S.C. § 1801 et seq., authorizing the Secretary of the DOC to utilize observers to study fish behavior and fishing techniques to minimize and by-catch any adverse effects on essential fish habitat and promote efficient harvest of target species.

3. TERMS AND CONDITIONS

a) The NEFSC will provide at-sea observer coverage for up to 257 days (single and multi-day trips) on small/medium mesh (<5.5") otter trawl vessels that hold a limited access incidental catch permit targeting scup, black sea bass, summer flounder, weakfish, croaker, bluefish, or squid in state and federal waters off of Rhode Island, New Jersey, Maryland and Virginia, August 1, 2011 through July 31, 2012.

b) The ASMFC will provide an estimated annual sea day schedule for coverage based on the Northeast Fishery Observer Program (NEFOP) sea day schedule, broken out by month and state. The ASMFC will notify NEFOP at least 60 days in advance of when the desired sampling is to take place. The timing of the at-sea observer trips will be from August 1, 2011 through July 31,

2012. There will be constant communication between ASMFC and NEFOP in order to make any necessary modifications to the sea day schedule (e.g., how to shift unused days).

c) The cost per observer trip will be \$950 per day. This includes the cost of the observer at-sea, deployment costs such as travel and meal reimbursements to the vessel for multi-day trips.

1. The total cost of the items listed above will not exceed \$245,084.

2. Funding is designated through the Atlantic Coastal Cooperative Statistics Program (ACCSP) and will be transferred to NEFSC from the NMFS Office of Science and Technology.

d) The procurement, training and costs of at-sea observers will be made through the current service provider holding the NEFOP contract award.

e) Whenever possible, the observer should collect detailed biological information, such as length measurements and age structures for: scup – scale samples, priority on large specimens, river herring – scale samples, summer flounder – unmarketable (mortalities) individuals collected for otolith samples, weakfish – unmarketable (mortalities) individuals collected for otolith samples, black sea bass – scale samples and unmarketable (mortalities) individuals collected for otolith samples, bluefish – unmarketable (mortalities) individuals collected for otolith samples, Atlantic croaker – unmarketable (mortalities) individuals collected for otolith samples. The number of biological collections will be based on the ACCSP Biosampling Targets FY2011 and provided by ASMFC.

f) The NMFS will process observer collected data and samples through their usual means and infrastructure (ACCSP will be given access to NMFS at-sea observer data sets). The NMFS will develop and assign a program code to ASMFC trips for tracking purposes. Data to be available within 90 days after collection.

g) NMFS will provide monthly invoices to ASMFC on its letterhead addressed to Patrick Campfield, ASMFC, 1050 N. Highland St., Ste 200A-N, Arlington, VA 22201, for services rendered outlining:

1. Total trips completed

2. Date trips completed

3. Ports of origin and landing for each trip

4. Targeted species for each trip

#### 4. CONTACTS

Jack Moakley, Chief, Operations, NEFSC

166 Water St.

Woods Hole, MA 02543

508-495-2235 (office)

508-495-2049 (fax)

Jack.Moakley@noaa.gov



Sara Weeks, Point of Contact within the Fisheries Sampling Branch  
166 Water St.  
Woods Hole, MA 02543  
508-495-2227 (office)  
508-495-2124 (fax)  
Sara.Weeks@noaa.gov

Patrick Campfield, Director of Fisheries Science, ASMFC  
1050 N. Highland St., Suite 200A-N  
Arlington, VA 22201  
703-842-0740 (office)  
703-842-0741 (fax)  
PCampfield@asmfc.org

Melissa Paine, Scientific Committee Coordinator, Point of Contact at ASMFC  
1050 N. Highland St., Suite 200A-N  
Arlington, VA 22201  
703-842-0740 (office)  
703-842-0741 (fax)  
MPaine@asmfc.org

The parties agree that if there is a change regarding the information in this section, the party making the change will notify the other party in writing of such change.

##### 5. DURATION OF AGREEMENT, AMENDMENTS, AND MODIFICATIONS

This agreement will become effective when signed by all parties. The agreement will terminate on July 31, 2012, but may be amended at any time by mutual consent of the parties. Any party may terminate this agreement by providing 30 days written notice to the other party. This agreement is subject to the availability of funds.

---

Signature/Date

Laura Leach  
Director of Finance and Administration, ASMFC  
1050 N. Highland St., Suite 200A-N  
Arlington, VA 22201  
703-842-0740 (office)  
703-842-0741 (fax)

---

Signature/Date

Frank Almeida

Acting Science and Research Director, Northeast Fisheries Science Center

166 Water St.

Woods Hole, MA 02543

508-495-2233 (office)

508-495-2232 (fax)

**Atlantic State Marine Fisheries Commission  
NOAA National Marine Fisheries Service**

**FINAL PERFORMANCE REPORT**

Recipient: Virginia Institute of Marine Science, College of William and Mary (VIMS)

Contract #: 13-0101

Grant Title: Processing and Ageing of Collected Samples from the Existing ASMFC Observer Program (a subsection of "Observer Program Expansion for Mid-Atlantic (New York, New Jersey) and Rhode Island Small Mesh Otter Trawls")

Contract Award Period: 4/1/13 – 12/31/13

Performance Reporting Period: 4/1/13 – 12/31/13

Description of Work:

The Multispecies Research Group (MRG) of the Department of Fisheries Science, Virginia Institute of Marine Science (VIMS), was responsible for processing hard parts and assigning year-class ages for fishes subjected to at-sea biological sampling as part of the Observer Program conducted by the Atlantic States Marine Fisheries Commission (ASMFC). Specifically, 1924 specimens representing 20 species were sampled for age determination by this observer program from 2011 through January 2013. MRG personnel prepared and read each sample, and assigned a final year-class age to each fish using species-specific, accepted protocols.

Project Status/Work Accomplished:

As outlined in the Description of Work, the MRG was responsible for providing the laboratory services necessary to process and age hard parts collected from fishes selected for biological sampling by the ASMFC Observer Program, 2011 to January 2013. Specifically, the MRG used accepted protocols to prepare the scale, otolith, and vertebrae samples collected in the field by fishery observers, determine the age of each hard part (and therefore, specimen), and then assign a final year-class age value to each of the sampled fishes. To facilitate the completion of this work, the MRG hired a technician on a single-year contract to conduct the bulk of the laboratory sample processing. Senior ageing personnel of the MRG were responsible for reading hard parts and assigning final ages. MRG staff have prior experience processing and ageing hard parts for all of the species collected by the ASMFC Observer Program as part of this study.

All ageing samples collected by the ASMFC Observers in 2011, 2012, and the early months of 2013 were sent to VIMS during the last week of June 2013. Data associated with each of these samples were released to VIMS by the Northeast Fisheries Science Center (NEFSC), Northeast Fishery Observer Program at this time as well. Sample preparation began in earnest in the early part of July 2013, and was completed during the third week of January 2014. Specifically, preparation involved first cleaning all of the samples received and matching each with the associated specimen information in the provided database. For scales, standard protocol involved mounting and pressing three to five quality samples (i.e., exhibited minimal curling, were not regenerated, etc.) from each fish in acetate. Pressing in acetate was accomplished using a Carver Hydraulic Press at 75°C and 20,000 lbs. of pressure for 120 seconds. Processed samples were read independently by three readers with a Bell-Howell microfiche

reader, and final year-class ages were assigned to each specimen using the mode of these three reads and considering date of capture relative to time of annual mark formation.

Otolith processing varied depending on the morphology of the structures. Samples were mounted whole for species that have relatively small, fragile otoliths (i.e., clupeids) while thin, transverse otolith sections were cut and mounted on glass slides for those with more substantial structures (i.e., scup, summer flounder, weakfish, etc.). The latter method was also used to process the few monkfish vertebrae provided. Samples were read under a dissecting scope by three readers using transmitted light and, as with the scales, a final year-class age was assigned to each specimen using the mode of the three independent reads as well as date of capture relative to time of annual mark formation.

It is worth noting that the preparation of all of the ageing hard parts and assignment of final year-class ages followed established protocols routinely used by personnel both of the MRG at VIMS and of the NEFSC Population Biology Branch, Fishery Biology Program. Successful age determinations were made for 1,374 specimens.

Table 1. A listing of the species sampled by the ASMFC Observer Program for this project and, for each species, the total number of specimens that were successfully aged by the MRG and the number that were sampled for ageing by observers at sea.

<b>Species</b>	<b>Number Successfully Aged</b>	<b>Number Sampled for Ageing</b>
Alewife	5	18
American Shad	0	1
Atlantic Croaker	24	26
Atlantic Herring	0	1
Atlantic Menhaden	7	10
Black Sea Bass	188	301
Blueback Herring	1	3
Bluefish	93	117
Butterfish	5	5
Hickory Shad	2	3
Monkfish	19	29
Scup	578	709
Spotted Sea Trout	0	1
Striped Bass	5	7
Summer Flounder	222	441
Weakfish	124	140
Windowpane Flounder	35	38
Winter Flounder	61	64
Witch Flounder	2	4
Yellowtail Flounder	3	6

### Problems/Challenges:

As is evident in Table 1, there were often a number of specimens of a given species that were sampled by observers for ageing but for which a final year-class age could not be determined. The reasons for not being able to assign an age were variable. Sample degradation proved to be a frequent problem with 2011 scale samples, while several sets of otoliths (all years) were shattered in their envelopes, likely a result of transport issues. Some samples were missing; in certain instances hard parts were absent from their envelopes, while in other cases envelopes were missing entirely. It should be noted that, while the standard MRG protocol is to press a minimum of three to five scales per specimen for ageing, there were instances in which fewer than this number was available for processing. In these cases, protocols were relaxed so that age data could be generated for these specimens. There were also several occurrences where the data associated with the sample were missing from or incorrect in the database, rendering any age data derived from the sample useless. Finally, scale pressing errors committed by MRG staff resulted in the loss of five scup, three black sea bass, and one summer flounder sample.



STATE OF MAINE  
DEPARTMENT OF  
MARINE RESOURCES  
MARINE RESOURCES LABORATORY  
P.O. BOX 8, 194 MCKOWN POINT RD  
W. BOOTHBAY HARBOR, MAINE 04575-0008

PAUL R. LEPAGE  
GOVERNOR

PATRICK C. KELIHER  
COMMISSIONER

Atlantic Coastal Cooperative Statistics Program  
1050 N. Highland St. Ste. 200 A-N  
Arlington, VA 22201

August 20, 2014

We are pleased to submit the **revised** proposal titled “FY15: Managing Mandatory Dealer Reporting in Maine” for your consideration. This is a maintenance proposal which has not changed in the scope of work. The DMR piloted a swipe card initiative for elver dealers during the 2014 season and DMR is funding the cost of this project, although other partners may benefit from its results. The DMR also implemented a new law that authorizes license suspensions for those who fail to report on time which has improved the timeliness and quality of data being submitted. Please view all graphs in color. This proposal addresses the following 2015 ranking criteria: catch and effort, metadata, regional impact, funding transition plan, in kind contribution, improvement in data quality and timeliness, impact on stock assessment and properly prepared. For a summary of the proposal for ranking purposes, please see page 20. Contact Robert Watts at the Maine Department of Marine Resources with any questions. Thank you for your consideration of this proposal.

In our original proposal, committee members asked that we address the three questions below. We are addressing them in this cover letter, but also in the report as well.

1. Would it be worth it for ME DMF to consider uploading their data from MARVIN to SAFIS rather than the Warehouse? This might be accomplished via the file upload process, and in turn might save ACCSP staff time and resources not having to load the Warehouse with periodic updates, but also in transferring data from SAFIS to the Warehouse when that is done. It also might make data available to dealers in SAFIS that switch from paper to electronic reporting. Furthermore, assuming the swipe card system upgrade happens (or even if it doesn't), it sounds like those transactions get loaded into SAFIS? Wouldn't it make more sense to have all ME dealer data go into one repository, rather than having to merge these records from multiple sources in the Warehouse?

The DMR does not upload data from MARVIN to SAFIS because DMR staff continually audit data each week, so the data that are uploaded to the warehouse are a mix of pre- and post-audited records. The reloading of data from MARVIN to the Warehouse is an automated process that the DMR loads into a temporary table provided by the Warehouse. If we were to perform the same upload method to SAFIS we would need the ability to mass delete records from SAFIS (which we do not have the ability to do at this time) before records are reloaded to avoid creating duplicate records. In addition, quahog and Bluefin tuna data are loaded into the warehouse and not into SAFIS, so all Maine dealer data would still reside in the warehouse and not SAFIS.

2. Are the elver dealers just buying elvers, or did any of them buy other products as well?

Elver dealers could purchase other products as well if they have the proper license. The DMR has a separate elver dealer license. This past season, only two dealers had the ability to purchase other species.

3. Is there consideration for ME DMR to go to a plain paper (8.5" x 11") reporting form instead of a bound logbook for paper reporting dealers to save money? This form could be emailed, faxed or sent via us mail which might save some cost.

The DMR does not require paper dealers to use the supplied bound logbook. Many of our paper dealers download the electronic version of their form from our website. We do accept forms via email, fax or U.S. mail. The bound logbook includes a carbon copy that dealers use for their records, or to resend should the original gets lost in the mail. Many dealers like this carbon copy feature, which is one of the main reasons why we choose to continue to purchase these bound logbooks.

Sincerely,

Robert Watts  
Marine Resources Scientist  
[rob.watts@maine.gov](mailto:rob.watts@maine.gov)  
(207) 633-9412

Atlantic Coastal Cooperative Statistics Program  
1050 N. Highland Street. Suite. 200A-N  
Arlington, VA 22201

**FY15: Managing Mandatory Dealer Reporting in Maine**  
**(Revised)**

**Total Cost: \$176,373**

Submitted by:

Robert B. Watts II  
Maine Department of Marine Resources  
PO Box 8  
West Boothbay Harbor, ME 04575  
[rob.watts@maine.gov](mailto:rob.watts@maine.gov)

Heidi R. Bray  
Maine Department of Marine Resources  
PO Box 8  
West Boothbay Harbor, ME 04575  
[heidi.bray@maine.gov](mailto:heidi.bray@maine.gov)

David A. Libby  
Maine Department of Marine Resources  
PO Box 8  
West Boothbay Harbor, ME 04575  
[david.a.libby@maine.gov](mailto:david.a.libby@maine.gov)

June 30, 2014



**Applicant Name:** Maine Department of Marine Resources (DMR)

**Principal Investigator:** Robert Watts, Marine Resource Scientist

**Project Title:** FY15: Managing Mandatory Dealer Reporting in Maine

**Project Type:** Maintenance Project

**Requested Award Amount (without the NOAA administration fee):** \$176,373

**Requested Award Period:** One year after receipt of funds

**Change in Scope/Cost from Previous Year Project:**

This is a maintenance proposal which has not changed its scope from the FY14 proposal. The dealer reporting objectives have largely remained unchanged since 100% of licensed dealers must report trip level information on 100% species they purchase from harvesters, which meets ACCSP standards. However, in 2014 the DMR piloted a swipe card reporting project with the elver fishery called the “Elver System” as well as a mobile app for dealers to report and the DMR funding the cost of this project. Reporting frequencies have increased for elver dealers from weekly to daily. It is the intent of the DMR to expand the use of swipe cards over time to other fisheries with mandatory reporting. The DMR also implemented a new law that authorizes license suspensions for those who fail to report on time which has greatly improved the timeliness and quality of the data being submitted. The DMR hired a new position to administer this suspension authority, which was funded by the DMR. These costs are not included in this grant proposal. See Attachment 1 for a summary of the project history and Attachment 2 (view in color) for a graph of previous grant costs.

**Objectives:**

The objective of this proposal is to collect trip level landings information from all licensed dealers who buy directly from harvesters. The primary tasks will be regulation compliance, data entry and data auditing. Staff will also focus on dealer outreach to help industry understand the importance of the accurate and timely reporting. Electronic reporting will be encouraged for those still opting to report on paper. The Maine State Legislature passed law requiring that all elver dealers report electronically using the Elver System swipe card program for the 2014 season. The preliminary results of this pilot program have proven successful. The DMR will use this past season as a learning process to make modifications based on user and fishery management feedback. The DMR intends to expand the swipe card project in the near future to other fisheries that require mandatory reporting. There is no plan to mandate electronic reporting for all other dealers at this time, as this is not an ACCSP requirement.

**Need:**

Maine has a large number of dealers who can buy directly from harvesters, and thus has to spend significant resources tracking compliance, and entering and auditing a large numbers of records. In 2013 and 2014, 773 dealers were licensed to buy from harvesters and 227 (29%) of them were required to report to National Marine Fisheries Service (NMFS). Regardless of their federal permit status, DMR works with all dealers to ensure all landings are reported either to DMR or to SAFIS, and staff audits all records with a state landed of Maine. Of the 773 dealers, 345 (45%) chose to report on paper; 208 (27%) chose Trip Ticket (electronic reporting software developed by Bluefin Data LLC); 96 (12%) chose file upload; 65 (8%) chose key entry SAFIS; 117 (15%) were required to use the Elver System (swipe card reporting program developed by Bluefin Data LLC); and 6 (1%) would report using the NMFS quahog database (Table 1).

Report Type	Combo Dealers	State Dealers	Total
Paper	21	324	345
Quahog Electronic Reporting System*	6	0	6
Key Entry SAFIS*	44	21	65
Trip Ticket*	129	79	208
File Upload*	49	47	96
Elver System*	5	112	117
<b>Total Electronic (*)</b>	<b>233</b>	<b>259</b>	<b>492</b>
<b>Grand Total</b>	<b>254</b>	<b>583</b>	<b>837</b>

\*\*35 dealers have multiple methods of reporting

Some dealers opted to report using multiple methods, (largely due to the exemption of certain species in the federal reporting requirement). Of the 1.55 million trips entered for 2013 in the data warehouse, over 31% of them were landed in Maine which exceeds any other state (Figure 1 – view in color). These records were submitted by both “state-only” dealers (those that only report to DMR) as well as “combo” dealers (those that report to fulfill both NMFS and DMR requirements). Because DMR cooperatively works with NMFS to collect and audit data from federally permitted dealers, DMR staff devotes time and resources to help these “combo” dealers submit data and DMR staff audits all these records.

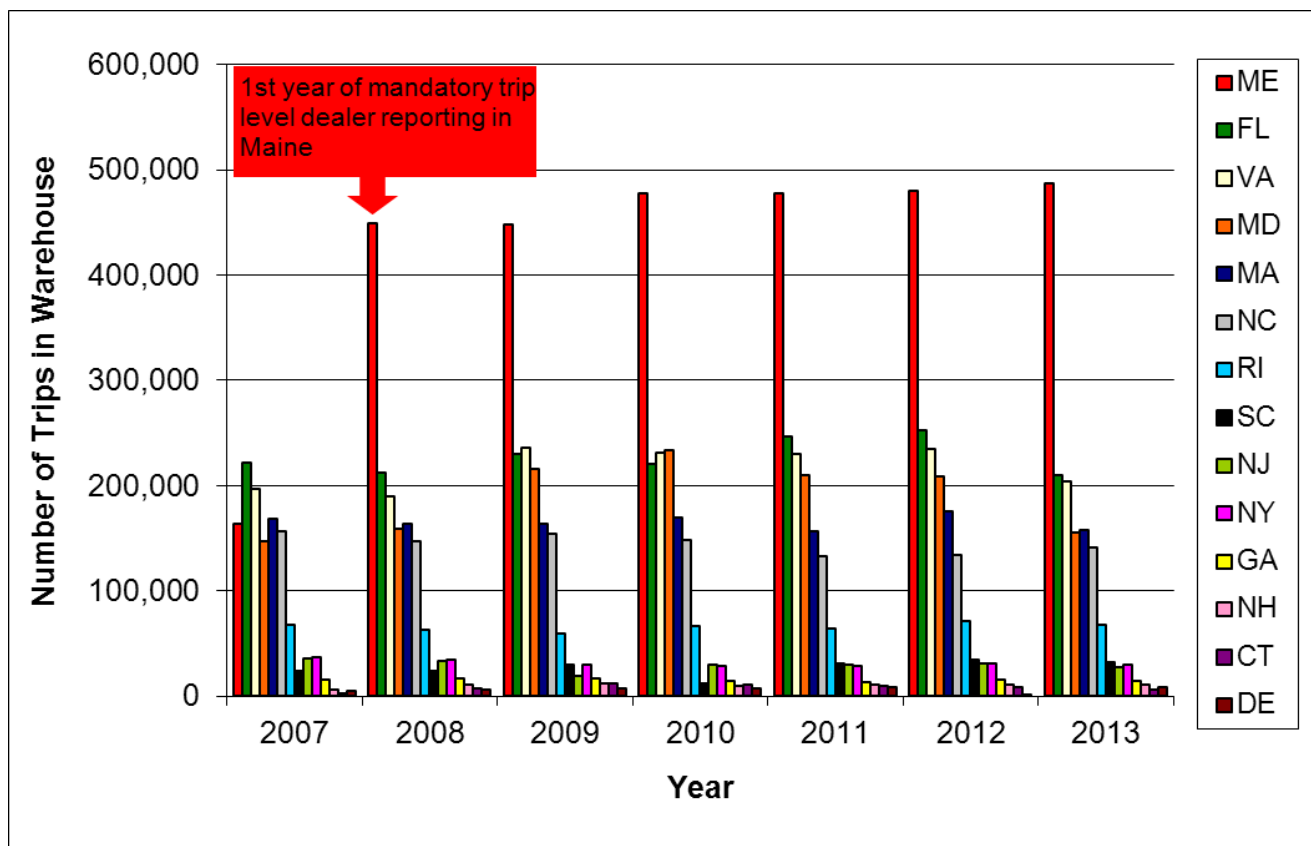
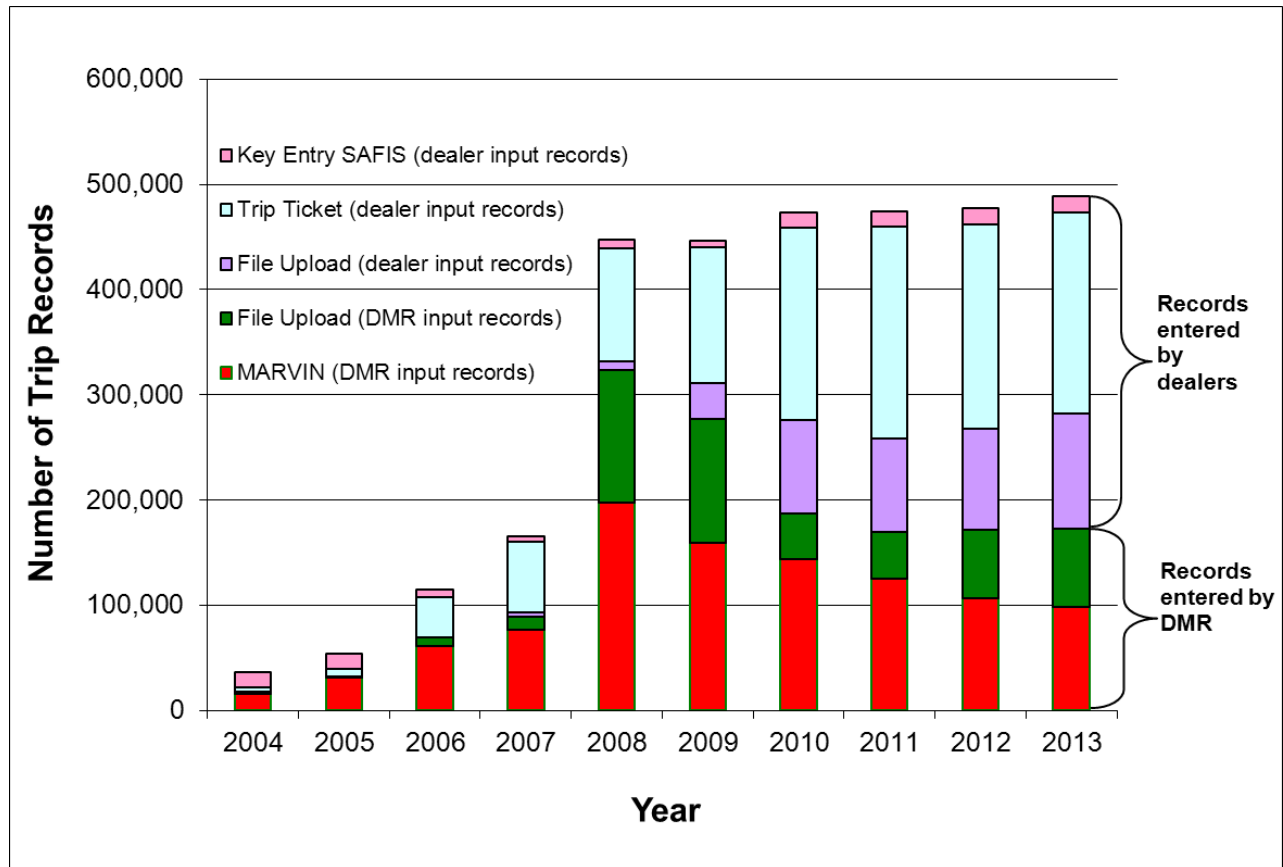


Figure 1: Number of Reported Trip Records by State Landed in ACCSP Data Warehouse

The number of trip records that DMR staff uploaded into SAFIS or data entered into MARVIN (DMR’s database that contains all sampling, biological and landings data that DMR collects) has increased 93% from since 2007 (Figure 2 – view in color). When dealers submit reports on paper, they are entered into the MARVIN database. MARVIN is used for reports submitted on paper because it is faster method of data entry and DMR wishes to use this tool to audit the data before sending a copy of

it to ACCSP. Routines are set up to convert the MARVIN data to ACCSP codes before they are uploaded to the ACCSP warehouse.

The numbers in Figures 1 and 2 differ because they contain different data sets. Figure 1 shows the Maine-landed data in the warehouse which contains data from: MARVIN dealer data, MARVIN harvester data, SAFIS data, the federal ocean quahog data, and highly migratory species data. Figure 2 only shows Maine-landed records from MARVIN dealer data and SAFIS data.



**Figure 2: Number of Dealer Reported Trip Records entered in MARVIN and SAFIS**

Landings data entered in MARVIN are uploaded to the ACCSP data warehouse. The significant increase in the amount of data entry and auditing is the single greatest challenge for the dealer program staff. DMR absorbed the cost of two of the four positions previously funded by ACCSP grants, and DMR is also funding the new position who will administer the license suspension part of the program. DMR is now requesting funding for two existing positions: one Specialist I who audits data, uploads data for “state-only” dealers, trains and supports “combo” dealers to report their own data, and provides the personal outreach with industry; and one Office Associate I who key enters dealer landings submitted on paper. It is essential that this dealer reporting program continue as it is an important tool for monitoring Maine’s commercial fisheries which are large and economically important to the U.S. seafood industry. According to the NMFS commercial fisheries database (as of 6/12/14), Maine ranked the second highest state on the Atlantic Coast in commercial value (\$538 million) and fourth highest in whole pounds landed (308 million) in 2013. This comprehensive dealer reporting program is also an ASMFC (Atlantic States Marine Fisheries Commission) compliance issue for several fisheries, including for American lobster which is Maine’s largest fishery.

Summary of staffing:

*DMR Landings Program staff involved in dealer reporting who are fully funded by DMR:*

- Scientist IV: makes decisions on the general Landings Program direction.
- Scientist III: oversees the Landings Program, participates in ACCSP committees, transfers data to ACCSP and responds to data requests.
- Scientist I: manages the day-to-day operations of the Landings Program, is responsible for database development, responds to data requests and updates the Landings Program web page. This position also audits data, and monitors licenses and compliance.
- Specialist II: provides one-on-one outreach with the seafood dealers; trains dealers how to report electronically or on paper; follows up on compliance issues; uploads data from “state-only” dealers who choose to file upload; and audits data. This position trains “combo” dealers how to file upload their own data, maintains dealer upload conversion tables, troubleshoots uploading errors, and installs Trip Ticket at dealer locations. This position not only audits data from “state-only” dealers but also data submitted electronically by “combo” dealers. This position frequently works with federally permitted dealers because the dealers are also submitting this information in order to fulfill DMR reporting requirements. See the *Approach* section below for further details on auditing. This position is also assigned tasks in the harvester-reporting project.
- Office Associate II: corresponds with industry regarding new suspension authority for failure to report on time; identifies and notifies delinquent reporters; follows protocols for suspending licenses; works with the licensing division to ensure licenses are re-issued when reports have been submitted.
- Office Associate I: opens and processes mail and enters data into MARVIN.

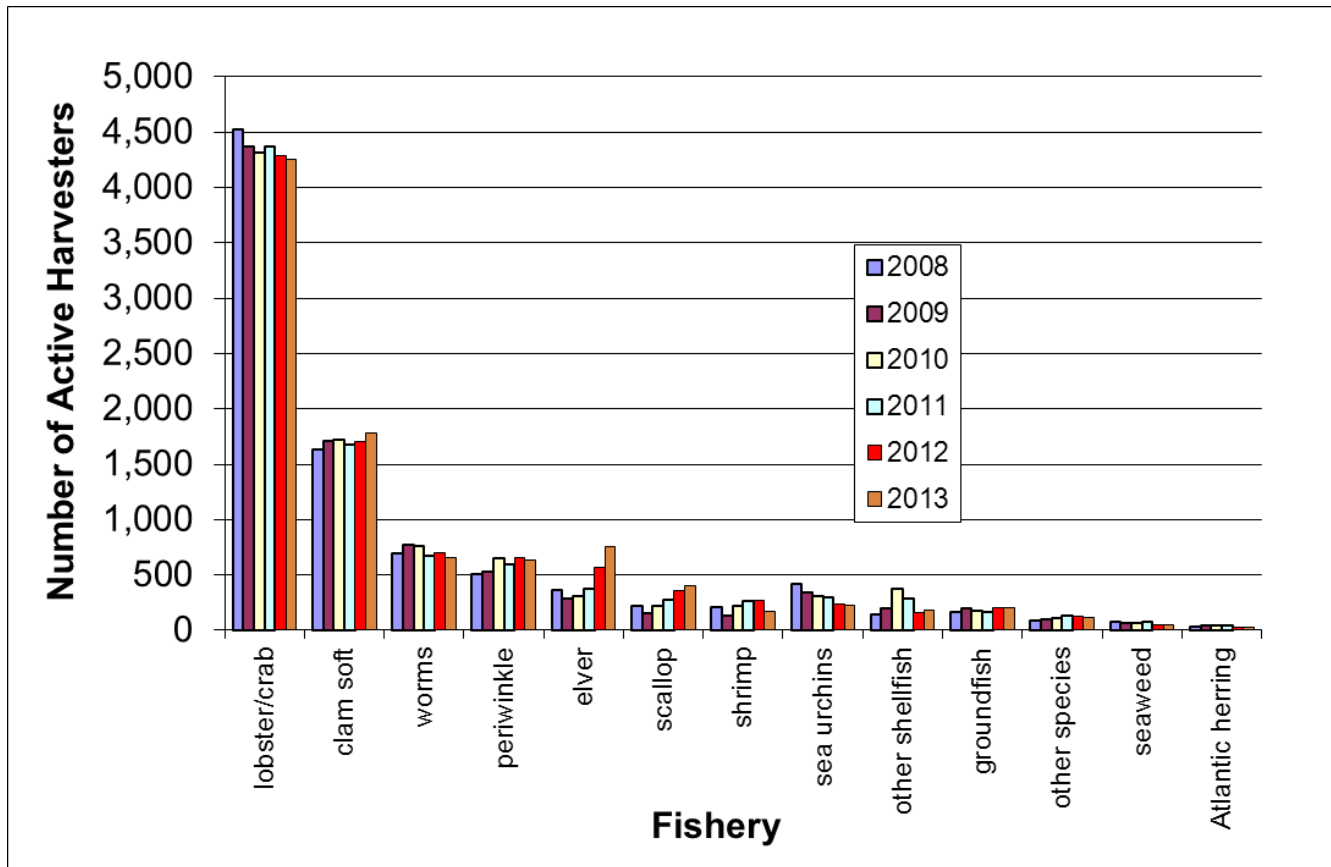
*DMR Landings Program staff currently funded by ACCSP and in need of additional ACCSP funding:*

- Specialist I: provides one-on-one outreach with the seafood dealers; trains dealers how to report electronically or on paper; follows up on compliance issues; uploads data from “state-only” dealers who chose to file upload; and audits data. This position trains “combo” dealers how to file upload their own data, maintains dealer upload conversion tables, troubleshoots uploading errors, and installs Trip Ticket at dealer locations. This position not only audits data from “state-only” dealers but also data submitted electronically by “combo” dealers. This position frequently works with federally permitted dealers because the dealers are also submitting this information in order to fulfill DMR reporting requirements. DMR staff help federally permitted dealers to submit data and staff audit the data submitted to ensure the data are as accurate as possible, even though the data may have been submitted under the NMFS partner ID. See the *Approach* section below for further details on auditing.
- Office Associate I: key enters dealer reports into MARVIN, files the dealer reports submitted to DMR and performs other office duties as requested (assists with mailings, compliance entry, opening mail, etc.).

The FY14 grant did not include any funding for the elver swipe card program. The DMR fully funded the original programming and maintenance costs associated with this project. The DMR will continue to fund the monthly maintenance fees. The DMR has been absorbing positions to transition off ACCSP grant money, and the new positions/resources needed for the license suspension authority were absorbed by the DMR and are not included in this funding request. DMR will continue to try to identify alternative sources of funding for the dealer reporting project, but the State of Maine is continuing to face budget challenges and there are few options for state funding to cover the total cost at this time.

**Results and Benefits:**

The data collected so far have shown how valuable this information is for Maine’s fisheries. In the lobster industry, DMR scientists have learned more about the fleet characteristics and number of active full time and part time fishermen involved in this fishery than they have been able to with the current sampling programs. Other fishery managers are now analyzing landings data to learn more about the fishing fleet and the makeup of other fisheries. DMR has learned how many harvesters are active in each fishery (Figure 3 – view in color).



**Figure 3: Number of Active Harvesters Reported in Dealer Data**

This grant will allow DMR to complete an eighth year of mandatory trip level reporting for all dealers. More data auditing and follow up with dealers will help to ensure the data reported are as accurate as possible. DMR continues to encourage more dealers to move from paper reporting to electronic reporting as dealers become more comfortable with trip level reporting, and will continue to mandate electronic swipe card reporting in the elver fishery for 2014. The DMR anticipates requiring more fisheries to report using the swipe card program in the future. DMR is already uploading data reported to MARVIN to ACCSP every two months, which benefits all partners.

Metadata for the dealer program will be updated as needed according to the Federal Geographic Data Committee (FGDC) and the Content Standard for Digital Geospatial Metadata (CSDGM) standards where appropriate. The resulting metadata will be reported to ACCSP as text and XML.

This project will help DMR meet the data collection standards of ACCSP. All partners will benefit, as all data will be uploaded to ACCSP and many of the species landed in Maine have a broad geographic range which includes many other agencies in their management. Partners may also benefit from the technologies built and lessons learned from the elver dealer swipe card/mobile app project that was rolled out to elver dealers in 2014.

## **Approach:**

### **1. Enforce compliance**

DMR staff will enforce compliance of the trip level reporting regulation through these methods:

- Provide initial outreach and technical support needed for dealers to report trip level landings to DMR. Meet with dealers individually as needed to explain reporting procedures, load software, troubleshoot problems with reporting, and explain consequences for failing to report.
- Review reports submitted for completeness and log the submissions in the compliance database. If reports are incomplete, DMR will contact industry to correct reporting mistakes. If a dealer cannot be contacted by phone, the report will be returned for correction.
- Complete at least 20 compliance calls monthly to delinquent dealers.
- Complete two compliance mailings throughout the year to warn dealers of consequences for failing to comply with the reporting regulation.
- DMR will withhold future licenses of dealers who fail to report required data.
- DMR will suspend dealer licenses for those who fail to report in a timely manner. See Attachment 4 for the law, which dictates suspension procedures DMR will follow.

### **2. Data entry**

Paper reports will be entered into MARVIN. Staff will file upload all data through the SAFIS interface for those “state-only” dealers who choose to report from their own accounting systems.

### **3. Encourage electronic reporting**

DMR staff will encourage dealers reporting on paper to report using one of the three electronic reporting methods (SAFIS key entry, Trip Ticket, or file upload). DMR staff will train “combo” dealers who are required to report electronically according to NMFS regulation to upload their own data and will help them maintain their conversion tables so the correct fishermen, vessels, ports and species-grade-market-unit combinations are reported. DMR staff will install Trip Ticket at those dealer locations where file uploading is not an option. Staff will also customize the Trip Ticket program so that only the correct harvesters, vessels, species, ports and gears pertinent to the dealer can be chosen.

DMR believes the electronic reporting can benefit many in the industry as much as it benefits DMR by reducing the amount of key entry required of staff. Starting with the 2014 elver season, the DMR required all elver dealers report daily using the “Elver System”, which was created by Bluefin Data LLC . The DMR required the Elver System to be used to record and report all harvester to dealer transactions. The DMR supplied each dealer with an Elver System program and swipe card reader (at the expense of the DMR) and training. There were a total of 117 buying stations that could have purchased directly from harvesters in 2014. The use of the Elver System eliminated the need of DMR staff to manually enter each transaction and provided staff with the most up to date data available. Dealers were required to report daily which allowed the DMR to monitor each harvester’s individual quota and the overall quota.

The “Elver System” proved to be a more accurate way to identify harvesters and the landing date. Since the pilot phase of electronic swipe-card reporting has been a success, DMR is looking into expanding this type of reporting for other fisheries, based on how data are used in management decisions, how timely the information needs to be submitted, and how much staff time DMR devotes to auditing/correcting inaccurate data.

### **4. Continue outreach with industry to promote buy-in.**

DMR staff will continue to work with dealers to explain the purpose and benefits of this reporting system. Staff will attend the annual Maine Fishermen’s Forum and present a Landings Program poster explaining the importance of accurate reporting as well as displaying preliminary data by fishery. Staff will work with established industry organizations, such as the DMR advisory

councils, lobster zone councils, and dealer and harvester associations to reiterate the program goals and show results of mandatory reporting. A newsletter will be distributed to dealers containing a summary of landings data reported, as well as information about the Landings Program, data confidentiality and the importance of the data collection. Staff will also focus on explaining the new statutory authority for suspending licenses for those who fail to report on time, and how this will help gather more accurate data.

#### **5. Audit of dealer data submitted.**

Staff will audit data submitted on a monthly basis. Paper data will be audited twice per month; electronic audits sent via email from SAFIS will be corrected weekly. SAFIS audits for “state-only” dealers will be corrected via an ODBC connection to a view of the Maine data. Audits concerning “combo” dealers will also be vetted through the NMFS Northeast Region. DMR staff audit data submitted by “combo” dealers because these dealers submit data in order to also fulfill DMR reporting requirements. DMR performs basic audits of records to catch potential oversights from NMFS audits, audits data exempted from the federal reporting rule (e.g. softshell clams, razor clam, mussels, oysters, quahog, elver, and worm data), and performs additional audits that NMFS does not. For example, DMR audits all records to flag those harvesters selling without a license for that species. DMR also compares dealer-reported landings with harvester-reported landings and identifies dealers with discrepancies. In all of these audits, DMR contacts dealers when discrepancies are discovered and works to correct records or recover missing data.

#### **6. Transmission of dealer data to ACCSP.**

DMR will upload dealer data from MARVIN to the ACCSP data warehouse once every two months. In each data feed, the following fields are uploaded to the warehouse according to ACCSP protocols: supplier dr id, supplier dealer id, supplier trip id, supplier cf id, supplier vessel id, unload year, unload month, unload day, state code, county code, port code, primary gear, data source, data supplier, reported quantity, live pounds, dollars, disposition code, grade code, unit measure, species ITIS, market code, supplier action flag, dr seq id, fishing mode. DMR enters data every day, and is usually not backed up with data entry so the data being uploaded include what was recently submitted. DMR staff also continually audit data each week, so the data being uploaded to the warehouse are a mix of pre- and post-audited records. DMR does not keep track of what percentage of the uploaded records are “reloads” due to errors, but simply reloads all the data in MARVIN to the warehouse every other month. In addition, the data being supplied by the Elver System is being sent directly to SAFIS daily during elver season.

The DMR does not upload data from MARVIN to SAFIS because DMR staff continually audit data each week, so the data that are uploaded to the warehouse are a mix of pre- and post-audited records. The reloading of data from MARVIN to the Warehouse is an automated process that the DMR loads into a temporary table provided by the Warehouse. If we were to perform the same upload method to SAFIS we would need the ability to mass delete records from SAFIS (which we do not have the ability to do at this time) before records are reloaded to avoid creating duplicate records. In addition, quahog and Bluefin tuna data are loaded into the warehouse and not into SAFIS, so all Maine dealer data would still reside in the warehouse and not SAFIS.

#### **7. Report metadata to ACCSP.**

Metadata will be created with ESRI ArcCatalog 10 in order to conform to the FGDC (Federal Geographic Data Committee) standards and specifications. As specified by the federal standard, DMR metadata will include the following main sections with detailed information on: identification information, data quality information, spatial data organization information, spatial reference information, entity and attribute information, distribution information, metadata reference information, citation information, time period information and contact information. Created metadata will be available in text and XML formats.

**Geographic Location:** Operations will be based out of Boothbay Harbor, Maine and the project will take place throughout Maine.

**Milestone Schedule:**

	<u>Months</u>											
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
1. Enforce dealer compliance	X	X	X	X	X	X	X	X	X	X	X	X
2. Data enter dealer reports	X	X	X	X	X	X	X	X	X	X	X	X
3. Encourage electronic dealer reporting	X	X	X	X	X	X	X	X	X	X	X	X
4. Industry outreach to promote dealer buy-in	X	X	X	X	X	X	X	X	X	X	X	X
5. Audit dealer data	X	X	X	X	X	X	X	X	X	X	X	X
6. Upload dealer data to ACCSP	X	X	X	X	X	X	X	X	X	X	X	X
7. Report metadata to ACCSP												X
8. Semi-annual reports							X					X
9. Annual reports												X

**Project Accomplishments Measurement:**

<b>Goal</b>	<b>Measurement</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Enforce Dealer Compliance	Number of licenses rejected due to failure to report	43	155	48	56	66	81	16	35	15	66	198
Dealer Data Entry	Number of trip records in data warehouse	16,518	27,455	121,940	163,516	448,653	447,573	477,895	477,081	480,418	487,541	54,723
Dealer Data Entry	Number of catch records in data warehouse	53,909	75,037	182,947	279,438	687,992	702,698	737,234	724,597	743,917	816,118	66,681
Dealer Data Entry	Number of positive trip records by year landed in MARVIN	15,830	31,488	61,656	76,742	197,283	159,432	143,953	124,057	106,693	98,811	15,162
Dealer Data Entry	Number of positive trip records by year landed in SAFIS	21,045	22,632	53,456	88,597	250,093	286,456	329,241	348,363	370,578	389,377	53,778
Encourage Electronic Reporting	Number of dealers submitting positive reports for Maine in SAFIS	68	78	98	142	204	229	274	291	312	325	249
Transmission of Dealer Data to Data Warehouse	Frequency of submission by year landed	Yearly	Yearly	Yearly	Yearly	Yearly/2 times per mo	2 times per mo	2 times per mo	2 times per mo	2 times per mo	2 times per mo	1 time per 2 mo
Outreach	Number of custom data requests (other than what was posted on the DMR website)	-	11	95	155	204	269	275	281	302	419	293

\*2013 and 2014 data are incomplete at the time of proposal submission



Cost Summary: FY15 Managing Mandatory Dealer Reporting in Maine			
<b>Personnel<sup>A</sup></b>		<b>Calculation</b>	<b>Cost</b>
1 Specialist I (Eileen Burk)		full time position for 12 months	\$42,382
1 Office Associate I (Currently Vacant)		full time position for 12 months	\$37,063
		<b>Subtotal</b>	<b>\$79,445</b>
<b>Fringe Benefits<sup>A</sup></b>			
1 Specialist I (Eileen Burk)		Includes health, dental, workers comp, FICA, life insurance and retirement	\$22,928
1 Office Associate I (Currently Vacant)		Includes health, dental, workers comp, FICA, life insurance and retirement	\$21,989
		<b>Subtotal</b>	<b>\$44,917</b>
		<b>Total Personnel</b>	<b>\$124,362</b>
<b>Travel</b>			
1 seasonal vehicle <sup>B</sup>		1 car * \$108.65/mo * 12 mo	\$1,304
Mileage fee		1 car * 1,000 mi per mo * \$.1525/mi * 12 mo	\$1,830
Toll allowance		Estimated	\$75
5 Overnight stays <sup>C</sup>		5* \$100/night	\$500
Per diem (includes extended days)		(5 overnights + 5 extended days) * \$50/day	\$500
<b>Supplies</b>			
Filing Supplies		folders, folder labels, year labels	\$500
<b>Contractual</b>			
Trip Ticket 1 yr maintenance (Software support and upgrades)		\$350/mo fee * 12 mo	\$4,200
<b>Other</b>			
Printing and binding of dealer report forms		500 logbooks * \$2.50 per logbook	\$1,250
Postage for logbooks		Mail 500 logbooks * \$4.75 per logbook	\$2,375
Postage for info packets and letters		(.48*680 compliance letters)+(.48*680 letters explaining compliance enforcement)+(5.75*200 certified letters to delinquent dealers)	\$1,803
Telecommunication charges <sup>D</sup>		4 phones * \$50/mo * 12 mo	\$2,400
		<b>Subtotal</b>	<b>\$16,737</b>
<b>Total Direct Costs</b>			<b>\$141,099</b>
<b>Indirect Costs (25%)</b>			<b>\$35,275</b>
<b>Total Award to DMR</b>			<b>\$176,373</b>
A: Cost includes salary and benefits, which are dictated by contract with State of Maine and are non-negotiable.			
B: All state agencies must rent vehicles through state's Central Fleet Agency which is non-negotiable. Vehicle costs include the following services and costs: maintenance, repairs, insurance, and gasoline.			
C: DMR staff meet with and train dealers how to electronically report to DMR and/or NMFS.			
D: One cell phone for each of the two specialists and one each for the two scientists working on the project.			

**FY 2015 Partner Contribution – For ACCSP Purposes**

Scientist IV (15% time)	\$16,240
Scientist III (50% time)	\$47,597
Scientist I (50% time)	\$42,565
Specialist II (75% time)	\$48,937
Office Associate I (15% time)	\$9,240
Office Associate II (100%)	\$60,591

---

Total	\$225,171
-------	-----------

### **Budget Narrative for FY2015 proposal:**

**Personnel and Fringe Benefits:** The Specialist I named in the grant is Eileen Burk and the Office Associate I is currently vacant and open for recruitment. These positions are funded full time (100%) by this award and they are Department of Marine Resources' employees. Salaries and benefits for these employees are dictated by contract with the State of Maine and are non-negotiable. Benefits include retirement benefits, FICA, health insurance, dental insurance, workers compensation and life insurance. The benefits are determined by a formula the state uses which is variable dependent upon the position classification, the pay grade of the employee (e.g. the number of years the person has been employed by the State of Maine) and type of coverage the employee selects.

**Travel:** The Specialists are the employees who will be travelling. The travel is for visiting dealers for the purpose of installing reporting software, training dealer staff how to electronically report or troubleshooting reporting problems. Staff provides dealers with one-on-one training on these reporting systems and help troubleshoot electronic reporting problems. Travel occurs throughout the coast of Maine, although trips to the interior are not unusual if the dealer headquarters is located inland. These dealers must be trained in the use of electronic reporting and in some cases given reporting software in order to submit their landings information.

The monthly fee for the seasonal vehicle is dictated by contract with the State of Maine Central Fleet Agency; the fee is based on the type of vehicle leased, and the mileage fee is based on how many miles the car was used the previous year. Because of this, the vehicle fees between projects may differ. This project has one Chevy Cobalt car which is a state owned vehicle that DMR leases from the State of Maine Central Fleet Agency.

Occasional extended day travel or overnight stays are necessary. If multiple dealer appointments to these remote areas are made for the same day, or appointments are made for consecutive days, overnight travel may be necessary.

**Supplies:** Filing supplies are needed each year. The DMR does not require paper dealers to use the supplied bound logbook. Many of our paper dealers download the electronic version of their form from our website. We do accept forms via email, fax or U.S. mail. The bound logbook includes a carbon copy that dealers use for their records, or to resend should the original gets lost in the mail. Many dealers like this carbon copy feature, which is one of the main reasons why we choose to continue to purchase these bound logbooks.

**Contract:** The Trip Ticket reporting software is custom-made software only available from Bluefin Data LLC and was purchased in a previous grant. This is the only vendor that can provide the software support and maintenance and this is the only outside vendor providing these services to ACCSP and NMFS as well as DMR. In this grant segment, this award will pay for a maintenance contract for Bluefin Data LLC to provide backup support, to be available for troubleshooting software problems and provide program upgrades as needed. This program is essential, as seafood dealers in Maine use the software to comply with DMR regulations. The information is used by DMR, National Marine Fisheries Service and other state agencies for fisheries management.

**Other:** Cell phones for the Specialists and the Scientists are necessary for communication and safety when on travel to dealer locations. The Scientist positions are not mentioned in the personnel costs because the position is paid for with state money (not grant money), although the staff member travels while working on this grant award. Staff often need to call NMFS or Bluefin Data LLC when installing software or troubleshooting reporting issues at the dealer locations. The Specialists do not have office phones, so the cell phones also serve as the only phone through which dealers can contact them with questions.

Dealer reporting logbooks are printed every year and distributed to those who opt to report on paper. Some dealers use many logbooks per year, depending on the logbook type they choose and the number of harvesters with which they do business.

**Indirect costs:** The Department of Marine Resources has an indirect cost rate of 25%. See Attachment 3 for the Negotiated Indirect Cost Agreement.

<b>Cost Summary: FY14 Managing Mandatory Dealer Reporting in Maine</b>			
<b>Personnel<sup>A</sup></b>	<b>Calculation</b>	<b>Cost</b>	
1 Specialist I (Eileen Burk)	full time position for 12 months	\$41,967	
1 Office Associate I (Debra Whitehouse)	full time position for 12 months	\$36,691	
			<b>Subtotal</b>
			<b>\$78,658</b>
<b>Fringe Benefits<sup>A</sup></b>			
1 Specialist I (Eileen Burk)	Includes health, dental, workers comp, FICA, life insurance and retirement	\$19,485	
1 Office Associate I (Debra Whitehouse)	Includes health, dental, workers comp, FICA, life insurance and retirement	\$18,807	
			<b>Subtotal</b>
			<b>\$38,292</b>
			<b>Total Personnel</b>
			<b>\$116,950</b>
<b>Travel</b>			
1 seasonal vehicle <sup>B</sup>	1 car * \$113.51/mo * 12 mo	\$1,362	
Mileage fee	1 car * 1,000 mi per mo * \$.16/mi * 12 mo	\$1,920	
Toll allowance	Estimated	\$75	
4 Overnight stays <sup>C</sup>	5* \$100/night	\$500	
Per diem (includes extended days)	(5 overnights + 5 extended days) * \$50/day	\$500	
<b>Supplies</b>			
Filing Supplies	folders, folder labels, year labels	\$500	
<b>Contractual</b>			
Trip Ticket 1 yr maintenance (Software support and upgrades)	\$350/mo fee * 12 mo	\$4,200	
<b>Other</b>			
Printing and binding of dealer report forms	300 logbooks * \$2.50 per logbook	\$750	
Postage for logbooks	Mail 300 logbooks * \$4.75 per logbook	\$1,425	
Postage for info packets and letters	(.44*680 compliance letters)+(44*680 letters explaining compliance enforcement)+(5.75*200 certified letters to delinquent dealers)	\$1,748	
Telecommunication charges <sup>D</sup>	3 phones * \$50/mo * 12 mo	\$1,800	
			<b>Subtotal</b>
			<b>\$14,781</b>
<b>Total Direct Costs</b>		<b>\$131,731</b>	
<b>Indirect Costs (25%)</b>		<b>\$32,933</b>	
<b>Total Award to DMR</b>		<b>\$164,663</b>	

A: Cost includes salary and benefits, which are dictated by contract with State of Maine and are non-negotiable.

B: All state agencies must rent vehicles through state's Central Fleet Agency which is non-negotiable. Vehicle costs include the following services and costs: maintenance, repairs, insurance, and gasoline.

C: DMR staff meet with and train dealers how to electronically report to DMR and/or NMFS.

D: One cell phone for each of the two specialists and one for the scientist working on the project.

#### **FY 2014 Partner Contribution – For ACCSP Purposes**

Scientist IV (15% time)	\$14,596
Scientist III (50% time)	\$36,492
Scientist I (50% time)	\$28,791
Specialist II (75% time)	\$42,173
Office Associate I (15% time)	\$7,163
Elver swipe card/mobile app reporting project:	\$70,000
Office Associate II (100%)	\$59,405

---

Total	\$258,620
-------	-----------

### **Budget Narrative for Proposed FY14 Grant:**

**Personnel and Fringe Benefits:** The Specialist I named in the grant is Eileen Burk and the Office Associate I is Debra Whitehouse. These positions are funded full time (100%) by this award and they are Department of Marine Resources' employees (not contract workers). Salaries and benefits for these employees are dictated by contract with the State of Maine and are non-negotiable. Benefits include retirement benefits, FICA, health insurance, dental insurance, workers compensation and life insurance. The benefits are determined by a formula the state uses which is variable dependent upon the position classification, the pay grade of the employee (e.g. the number of years the person has been employed by the State of Maine) and type of coverage the employee selects.

**Travel:** The Specialists are the employees who will be travelling. The travel is for visiting dealers for the purpose of installing reporting software, training dealer staff how to electronically report or troubleshooting reporting problems. Staff provides dealers with one-on-one training on these reporting systems and help troubleshoot electronic reporting problems. Travel occurs throughout the coast of Maine, although trips to the interior are not unusual if the dealer headquarters is located inland. These dealers must be trained in the use of electronic reporting and in some cases given reporting software in order to submit their landings information.

The monthly fee for the seasonal vehicle is dictated by contract with the State of Maine Central Fleet Agency; the fee is based on the type of vehicle leased, and the mileage fee is based on how many miles the car was used the previous year. Because of this, the vehicle fees between projects may differ. This project has one Chevy Cobalt car which is a state owned vehicle that DMR leases from the State of Maine Central Fleet Agency.

Occasional extended day travel or overnight stays are necessary. If multiple dealer appointments to these remote areas are made for the same day, or appointments are made for consecutive days, overnight travel may be necessary.

**Supplies:** Filing supplies are needed each year.

**Contract:** The Trip Ticket reporting software is custom-made software only available from Bluefin Data LLC and was purchased in a previous grant. This is the only vendor that can provide the software support and maintenance and this is the only outside vendor providing these services to ACCSP and NMFS as well as DMR. In this grant segment, this award will pay for a maintenance contract for Bluefin Data LLC to provide backup support, to be available for troubleshooting software problems and provide program upgrades as needed. This program is essential, as seafood dealers in Maine use the software to comply with DMR regulations. The information is used by DMR, National Marine Fisheries Service and other state agencies for fisheries management.

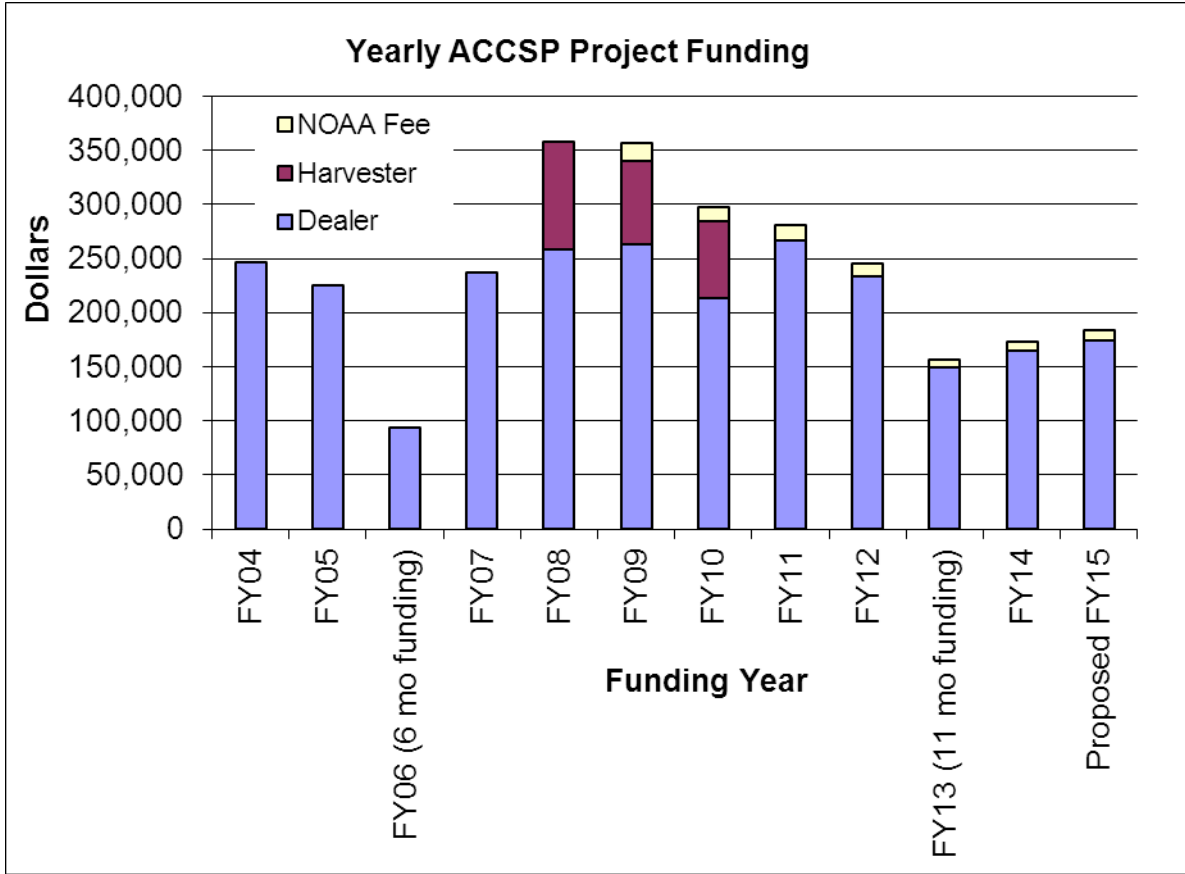
**Other:** Cell phones for the Specialists and the Scientist are necessary for communication and safety when on travel to dealer locations. The Scientist position is not mentioned in the personnel costs because the position is paid for with state money (not grant money), although the staff member travels while working on this grant award. Staff often needs to call NMFS or Bluefin Data LLC when installing software or troubleshooting reporting issues at the dealer locations. The Specialists do not have office phones, so the cell phones also serve as the only phone through which dealers can contact them with questions.

Dealer reporting logbooks are printed every year and distributed to those who opt to report on paper. Some dealers use many logbooks per year, depending on the logbook type they choose and the number of harvesters with which they do business.

### Attachment 1: Project History

Fund Year	Title	Cost	Extension through	Actual dates funding covered	Results
2004	Implementation of a Mandatory Dealer Reporting System for Maine Commercial Landings According to ACCSP Standards	246,965	Apr 2006	Jul 2004-Apr 2006 (extension required when Ops Committee asked DMR not to hire Office Associate I with this grant and salary savings when Specialist I quit)	Established Reporting Advisory Committee; drafted trip level reporting regulation; extensive outreach with industry including 10 state-wide meetings and 11 industry-specific meeting; worked with SCBI to develop and deploy "Trip Ticket" to state dealers; 1174 dealer visits; recruited dealers to report voluntarily; defeated a legislative bill to stop DMR's reporting program; see Completion Report for more info.
2005	Continuation of Implementation of a Mandatory Dealer Reporting System for Maine Commercial Landings According to ACCSP Standards	224,749	Jun 2007	May 2006-Jun 2007 (extension required because FY04 was extended and a Specialist I was promoted in DMR, leaving vacant position for a number of months)	Worked with ACCSP to make SAFIS usable for Maine state dealers; began file uploading voluntary dealer data; began collecting voluntary paper trip tickets; 380 dealer visits; 67 dealers actively reporting; worked to modify report options in "Trip Ticket" software to benefit dealers; began phasing out duplicative reporting by dealers; passed comprehensive trip level reporting regulation for all dealers in June 2007 which will give momentum to project.
2006	Interim Support for Mandatory Dealer Reporting in Maine	94,093	Dec 2007	Jun 2007-Dec 2007	Worked to get remaining 404 dealers set up with a trip level reporting method. Notified dealers to begin reporting trip level data as of Jan 1, 2008. Began uploading harvester license & vessel data weekly to SAFIS.
2007	FY07 – Mandatory Dealer Reporting for Maine Commercial Landings	237,548	Oct 08	Jan 2008 -Oct 2008	Began enforcing trip level reporting; begin audit dealer data; began monthly compliance calls to delinquent dealers; encouraged more electronic reporting; staff entering paper data from 433 dealers and uploading electronic data from 58 dealers.
2008	FY08- Managing Mandatory Dealer and Harvester Reporting in Maine	357,574	Oct 09	Nov 2008-Sept 2009	Complete 1 <sup>st</sup> year of mandatory dealer reporting regulation; enter, audit and transmit data to ACCSP; year 1 of 10% lobster and dogfish harvester reporting; begin to implement scallop harvester reporting.
2009	FY09 – Managing Mandatory Dealer and Harvester Reporting in Maine	357,415	Nov 10	Oct 2009-Sept 2010	Complete 2 <sup>nd</sup> year of mandatory dealer reporting; enter, audit and transmit data to ACCSP; year 2 of 10% lobster and dogfish harvester reporting; year 2 of scallop harvester reporting. Enter, audit and transmit data to ACCSP.
2010	FY10- Managing Mandatory Dealer and Harvester Reporting in Maine	298,129	Nov 11	Oct 2010-Oct 2011	Complete 3 <sup>rd</sup> year of mandatory dealer reporting; enter, audit and transmit data to ACCSP; year 3 of 10% lobster and dogfish harvester reporting; year 3 of scallop harvester reporting. Enter, audit and transmit data to ACCSP.
2011	FY11- Managing Mandatory Dealer Reporting in Maine	280,605	Nov 12	Aug 2011 – July 2012	Complete 4 <sup>th</sup> year of mandatory dealer reporting; enter, audit and transmit data to ACCSP. Work on more audits, including dealer data vs. harvester data submitted.
2012	FY12 – Managing Mandatory Dealer Reporting in Maine	245,303	Nov 13	Aug 2012-July 2013	Complete 5 <sup>th</sup> year of mandatory dealer reporting; enter, audit and transmit data to ACCSP. Expanding audits, including dealer data vs. harvester data submitted.
2013	FY13- Managing Mandatory Dealer Reporting in Maine	156,966	Oct 14	Aug 2013-June 2014	Complete 6 <sup>th</sup> year of mandatory dealer reporting; enter, audit and transmit data to ACCSP. Expanding audits, including dealer data vs. harvester data submitted for different fisheries.
2014	FY14- Managing Mandatory Dealer Reporting in Maine	164,663		July 2014 – June 2014	Complete 7 <sup>th</sup> year of mandatory dealer reporting; enter, audit and transmit data to ACCSP. Enforce timely reporting with license suspension and implement new swipe card program for elver dealers.

**Attachment 2: Yearly Breakdown of ACCSP Funding**



### Attachment 3: Negotiated Indirect Cost Agreement

**U.S. Department of Commerce**  
Office of Acquisition Management – Grants Management Division  
1401 Constitution Ave., NW, HCHB Rm 6412  
Washington, DC 20230, Attn: Indirect Cost Program

#### CERTIFICATE OF INDIRECT COSTS

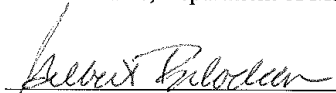
This is to certify that I have reviewed the indirect cost rate proposal prepared and maintained herewith and to the best of my knowledge and belief:

- (1) All costs included in this proposal dated February, 2014 to establish indirect cost billing rates for July 1, 2013 through June 30, 2014 are allowable in accordance with the requirements of the federal awards to which they apply and OMB Circular 87, "Cost Principles for State, Local, and Indian Tribal Governments". This proposal does not include any costs which are unallowable as identified in the applicable federal cost principles. For example, advertising contributions and donations, bad debts, entertainment costs or fines and penalties.
- (2) All costs included in this proposal are properly allocable to federal awards on the basis of a beneficial or causal relationship between the expenses incurred and the agreements to which they are allocated in accordance with applicable requirements. Further, the same costs that have been treated as indirect costs have not been claimed as direct costs. Similar types of costs have been accounted for consistently and the Federal Government will be notified of any accounting changes that could affect the rate.
- (3) The indirect cost rate calculated within the proposal is 28.29%, which was calculated using an indirect cost rate base type of Modified Total Direct Costs. The calculations were based on actual costs from fiscal year July 1, 2012 thru June 30, 2013 to obtain a federal indirect cost billing rate for fiscal year beginning July 1, 2013.

Subject to the provisions of the Program Fraud Civil Remedies Act of 1986, (31 USC 3801 et seq.), the False Claims Act (18 USC 287 and 31 USC 3729); and the False Statement Act (18 USC 1001), I declare to the best of my knowledge that the foregoing is true and correct.

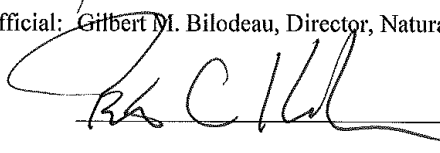
Organization Name: State of Maine, Department of Marine Resources

CFO Signature:

 Date: 3/6/14

Name/Title Authorized Official: Gilbert M. Bilodeau, Director, Natural Res Ser Ctr

Dept Head Signature:

 Date: 3/5/14

Name/Title Authorized Official: Patrick Keliher, Commissioner



# Department of Marine Resources

## INTEROFFICE MEMORANDUM

---

**TO:** FILE  
**FROM:** PATRICK C. KELIHER, COMMISSIONER  
**SUBJECT:** RATE USED FOR COST ALLOCATION  
**DATE:** 3/19/2014

---

In accordance with OMB Circular A-87, the Department of Marine Resources has submitted to the U.S. Department of Commerce a departmental cost allocation plan for use during state fiscal year 2014 ending June 30, 2014. The indirect cost rate proposal is 28.29%. I am authorizing the use of the lesser rate of 25% to be used during this period.

A handwritten signature in black ink, appearing to read "P. C. Keliher". The signature is written in a cursive style and extends across the width of the page.

Patrick C. Keliher, Commissioner



#### **Attachment 4: Authority to Suspension Licenses for Delinquent Reporters**

An Act To Improve the Quality of the Data Used in the Management of Maine's Fisheries

Be it enacted by the People of the State of Maine as follows:

Sec. 1. 12 MRSA §6301, sub-§6 is enacted to read:

6. Ownership identified. If a license issued under chapter 625 is issued to a firm, corporation or partnership, the individual who owns the highest percentage of that firm, corporation or partnership must be identified on the license application. When 2 or more individuals own in equal proportion the highest percentages of a firm, corporation or partnership, each of those owners must be identified.

Sec. 2. 12 MRSA §6412 is enacted to read:

§ 6412. Suspension of license or certificate for failure to comply with reporting requirements

1. Authority to suspend. The commissioner, in accordance with this section, may suspend a license or certificate issued under this Part if the holder of the license or certificate fails to comply with reporting requirements established by rule pursuant to section 6173. A license or certificate suspended under this section remains suspended until the suspension is rescinded by the commissioner. The commissioner shall rescind a suspension when:

A. The commissioner determines and provides notice to the holder of the suspended license or certificate that the holder has come into compliance with the reporting requirements established by rule pursuant to section 6173; and

B. The holder pays to the department a \$25 administrative fee.

When a suspension is rescinded, the license or certificate is reinstated. Until the suspension is rescinded, the holder of the suspended license or certificate is not eligible to hold, apply for or obtain that license or certificate.

2. Process for suspension for failing to comply with weekly reporting. If the commissioner determines that a person who holds a license or certificate under this Part has failed to comply with a weekly reporting requirement established by rule pursuant to section 6173, the commissioner shall notify the person at the telephone number provided on the application for the license or certificate and by e-mail if an e-mail address is provided on the application. If the license or certificate holder has not complied with the reporting requirements within 2 days after the commissioner has provided the notice, the commissioner shall mail a notice of suspension to the license or certificate holder by certified mail or the notice must be served in hand. The notice must:

A. Describe the information that the license or certificate holder is required to provide pursuant to this Part that the department has not received; and

B. State that, unless all the information described in paragraph A is provided to the department or the license or certificate holder requests a hearing, the license or certificate will be suspended in 3 business days after the license or certificate holder's receipt of the notice.

If the license or certificate holder has not complied with the reporting requirements or requested a hearing within 3 business days after receipt of the notice, the commissioner shall suspend the license or certificate.

3. Process for suspension for failing to comply with monthly reporting. If the commissioner determines that a person who holds a license or certificate under this Part has failed to comply with a monthly reporting requirement established by rule pursuant to section 6173, the commissioner shall notify the person at the telephone number provided on the application for the license or certificate and by e-mail if an e-mail address is provided on the application. If the license or certificate holder has not complied with the reporting requirements within 45 days after the commissioner has provided the

notice, the commissioner shall mail a notice of suspension to the license or certificate holder by certified mail or the notice must be served in hand. The notice must:

A. Describe the information that the license or certificate holder is required to provide pursuant to this Part that the department has not received; and

B. State that, unless all the information described in paragraph A is provided to the department or the license or certificate holder requests a hearing, the license or certificate will be suspended in 3 business days after the license or certificate holder's receipt of the notice.

If the license or certificate holder has not complied with the reporting requirements or requested a hearing within 3 business days after receipt of the notice, the commissioner shall suspend the license or certificate.

4. Hearing. A license or certificate holder receiving a written notice of suspension pursuant to this section may request a hearing on the suspension by contacting the department within 3 business days of receipt of the notice. If a hearing is requested, the suspension is stayed until a decision is issued following the hearing. The hearing must be held within 3 business days of the request, unless another time is agreed to by both the department and the license or certificate holder. The hearing must be conducted in the Augusta area. The hearing must be held in accordance with:

A. Title 5, section 9057, regarding evidence, except the issues are limited to whether the license or certificate holder has complied with reporting requirements established by rule pursuant to section 6173;

B. Title 5, section 9058, regarding notice;

C. Title 5, section 9059, regarding records;

D. Title 5, section 9061, regarding decisions, except the deadline for making a decision is one business day after completion of the hearing; and

E. Title 5, section 9062, subsections 3 and 4, regarding a presiding officer's duties and reporting requirements, except that notwithstanding Title 5, section 9062, subsection 1, the presiding officer must be the commissioner or the commissioner's designee.

## **Summary of Proposal for ACCSP Ranking**

**Proposal Type:** Maintenance

**Primary Program Priority and Percentage of Effort to ACCSP modules:**

*Catch and Effort (10 points):* 100% of licensed dealers must report trip level information on 100% species they purchase from harvesters.

*Metadata (2 Points):* will be created with ESRI ArcCatalog 10 in order to conform to the FGDC standards and specifications. Created metadata will be submitted to ACCSP in text and XML formats.

**Project Quality Factors:**

*Regional Impact (5 Points):* all partners will benefit, as all the data collected will be uploaded to ACCSP. Regional management organizations, such as ASMFC, will benefit from the trip level information from Maine. Partners may also benefit from the technologies/procedures tested in the elver swipe card/mobile app reporting project. DMR contracted to have a mobile app built for dealers to use in conjunction with swipe card technology, and rolled it out to industry for use for the 2014 season. DMR is paying for all start-up costs associated with this project, but will share findings with ACCSP.

*Funding transition plan (4 Points):* through DMR's recent reorganization, the cost of one of the positions was absorbed by state and DMR is no longer asking for funding for salary and benefits. DMR also funds the new Office Associate II that is responsible for license suspensions for those who fail to report, and all costs associated with that additional position. DMR paid for the development of a "limited species" version of the Trip Ticket software and a mobile app that will be used in conjunction with harvester swipe cards for elver dealers to report with swipe card technology. DMR will pay for the ongoing monthly maintenance fee associated with this program. Currently the DMR does not have any plans to require electronic reporting for all fisheries. Geographical restrictions prevent all dealers from having reliable high-speed internet access at this time.

*In-kind Contribution (3 Points):* the partner contribution is listed on page 10.

*Improvement in Data Quality/Timeliness (4 Points):* DMR is able to audit data at a more detailed level, including checking dealer reported data against harvester reported data. DMR encourages reporting timeliness through outreach with dealers and is working with Marine Patrol to ensure industry understands the importance of submitting accurate and timely information. The Maine State Legislature also passed a new law that authorizes license suspensions for those who fail to report on time which will improve the timeliness and quality of the data being submitted. DMR mandated electronic reporting through a swipe card system for the elver fishery in 2014, which improved timeliness and data quality.

*Impact on Stock Assessment (3 Points):* Regional management organizations which carry out stock assessments will benefit from the detailed landings data reported from Maine. This information is used in stock assessments for many species that are managed by regional agencies.

*Properly Prepared (5 Points):* DMR followed ACCSP guidelines and pertinent documents when preparing this proposal.

**Robert B. Watts II**  
**Maine Department of Marine Resources**  
**(207) 633-9412**  
[rob.watts@maine.gov](mailto:rob.watts@maine.gov)

June, 2014

**PROFILE:**

- Knowledge of Maine and federal regulations pertaining to commercial fishing and associated reporting requirements through working with the Department of Marine Resources and the National Marine Fisheries Service.
- Knowledgeable of Maine's fishing industries and how they operate.

**EDUCATION:**

Access 2003: Programming in Microsoft Access, VTEC, Portland, ME 2011

Access 2003: Advanced Topics, VTEC, Portland, ME 2008

B.S. Marine Science, Maine Maritime Academy, Castine, ME 2002

**EMPLOYMENT EXPERIENCE:**

**Feb 2012 – Present**                      **Marine Resource Scientist I**  
**Maine Department of Marine Resources**  
**West Boothbay Harbor, ME**

- Manages daily operations of Maine's Commercial Landings Program, which collects, compiles and distributes commercial fishery statistics for Maine's commercial fisheries.
- Supervises five Landings Program personnel.
- Maintain Microsoft Access databases for licensing information, compliance, dealer and harvester data entry.
- Communicates with industry regarding reporting requirements, monitors reporting compliance and works with the licensing division in order to ensure all mandatory reporting requirements are met and licenses are issued accordingly.
- Oversees outreach to industry
- Maintains dealer and harvester auditing databases.
- Oversees Maine's Interactive Voice Response (IVR) reporting program.
- Serves as key contact for Maine commercial landings information in order to provide fishery managers, scientists, industry members and the public with commercial fishery information.

**Oct 2007 – Jan 2012**                      **Marine Resource Specialist II**  
**Maine Department of Marine Resources**  
**West Boothbay Harbor, ME**

- Oversee daily operations of the harvester landings program.
- Notify new harvesters about reporting requirements.
- Maintain databases used for data audits and data entry.
- Monitor reporting compliance database and notifies harvesters if they are delinquent.
- Supervise two Landings Program personnel.
- Oversees IVR reporting.
- Prepare data requests from various sources

**Jul 2005 – Oct 2007**

**Marine Resource Specialist I  
Maine Department of Marine Resources  
West Boothbay Harbor, ME**

- Interviewed marine recreational anglers all over the Maine coast to help determine fish stocks. Identified, weighed, measured and recorded fish caught by anglers.
- Entered data into a workable spreadsheet for analysis.
- Created publications, updated regulation handouts and updated the recreational fishing website as needed.

**May 2001 – Jun 2005**

**Conservation Aid  
Maine Department of Marine Resources  
West Boothbay Harbor, ME**

- Interviewed marine recreational anglers all over the Maine coast to help determine fish stocks. Identified, weighed, measured and recorded fish caught by anglers.
- Entered data into a workable spreadsheet for analysis.
- Acted as a liaison between the State of Maine and the recreational anglers, answered anglers questions about fishing regulations.

**Heidi Ryder Bray**  
**Maine Department of Marine Resources**  
**(207) 633-9504**  
[heidi.bray@maine.gov](mailto:heidi.bray@maine.gov)

June, 2014

**PROFILE:**

- Knowledge of the distribution, abundance and migration patterns of many commercial species as well as fishing practices in the Gulf of Maine.
- Knowledge of Maine statutes and regulations as well as federal regulations pertaining to commercial fishing through working with Department of Marine Resources, National Marine Fisheries Service and Atlantic Coastal Cooperative Statistics Program.
- Expertise in Microsoft Access database programming, including experience with Visual Basic and SQL.
- Certified SCUBA diver and member of Maine Department of Marine Resources Dive Team.

**EDUCATION:**

Writing Queries Using Microsoft SQL Server Transact-SQL 2008, VTEC, Portland, ME 2009

Mastering Microsoft Access Programming, VTEC, Portland, ME 2004

Introductory VBA, State Training and Development Office, Augusta, ME 2003

B.S. Biology, Eckerd College, St. Petersburg, FL 1998

**EMPLOYMENT EXPERIENCE:**

**Dec 2011-Present**                      **Marine Resources Scientist III**  
**Maine Department of Marine Resources**  
**West Boothbay Harbor, ME**

- Directs Maine's Commercial Landings Program, which collects, compiles and distributes commercial fishery statistics for Maine's commercial fisheries.
- Runs the Boothbay Harbor environmental monitoring program, which is a program that collects weather and sea condition data.
  - MARVIN database development coordinator.
  - Oversees Maine's Recreational Fishing Program.
  - Oversees the Maine/NH Inshore Trawl Survey.
- Serves as key contact for Maine commercial landings information in order to provide fishery managers, scientists, industry members and the public with commercial fishery information.
- Promotes Maine's partnership with Atlantic Coastal Cooperative Statistical Program (ACCSP) through serving on the Commercial Technical Committee, Information Systems Technical Committee and Outreach Committee; working to bring the Landings Program into compliance with ACCSP standards.

**Aug 2004 – Dec 2011**                      **Marine Resources Scientist I**  
**Maine Department of Marine Resources**  
**West Boothbay Harbor, ME**

- Managed Maine's Commercial Landings Program.
- Supervised seven Landings Program employees.
- Designed and built databases used by Landings Program.
- Served as key contact for Maine commercial landings information in order to provide fishery managers, scientists, industry members and the public with commercial fishery information.

- Communicated with industry regarding reporting requirements, monitors reporting compliance and works with the licensing division in order to ensure all mandatory reporting requirements are met and licenses are issued accordingly.
- Promoted Maine's partnership with Atlantic Coastal Cooperative Statistical Program (ACCSP) through serving on the Commercial Technical Committee, Information Systems Technical Committee and Outreach Committee; worked to bring the Landings Program into compliance with ACCSP standards.

**Nov 2001 - Aug 2004**                    **Marine Resource Specialist**  
**Maine Department of Marine Resources**  
**West Boothbay Harbor, ME**

- Managed Maine's Commercial Landings Program.
- Served as State of Maine contact for Maine commercial landings statistics.
- Informed industry of reporting requirements, monitored reporting compliance and helped enforce these regulations.
- Promoted Maine's partnership with Atlantic Coastal Cooperative Statistical Program (ACCSP).

**May 1999 – Sep 2002**                    **Naturalist**  
**Boothbay Whale Watch**  
**Boothbay Harbor, ME**

- Identified different whale species off coast of Maine and presented biological information to the public regarding different marine mammals and other marine species found in the Gulf of Maine region.

**Apr 2000 – Nov 2001**                    **Conservation Aide**  
**Maine Department of Marine Resources**  
**Augusta, ME**

- Maintained fishway at Brunswick Hydro Facility; conducted alewife tagging program; aged alosids via scale and otolith reading; transported and stocked alosids; conducted river and pond sampling; entered and analyzed sample data; inspected fish passages at regional dams; evaluated capability to pass fish up and/or downstream; investigated fish kills; coordinated and supervised volunteer program.

**Mar 2000 – May 2000**                    **Contract Employee**  
**Maine Department of Marine Resources**  
**West Boothbay Harbor, ME**

- Coordinated and entered Vessel Trip Report data; interviewed fishermen for sample data; identified different shrimp species and processed samples.

**May 1997 – Aug 1999**                    **Intern & Scientific Technician**  
**Darling Marine Center, University of Maine**  
**Walpole, ME**

- Processed samples for research to study effects of trawling on the ocean bottom; research on Cumacean taxonomy; drew and described new species of Cumacean; processed benthic samples; participated in ROV research cruise in the Gulf of Maine; assisted in international trawling workshop; participated in mudflat inventory in the Damariscotta River.

**David Alton Libby**  
**Maine Department of Marine Resources**  
**(207) 633-9532**  
[david.a.libby@maine.gov](mailto:david.a.libby@maine.gov)

June, 2014

**EDUCATION:**

Waterville Senior High School, Waterville, Me. 1967.  
Ricker College, Houlton, Me. B.A., Biology, December 1971.  
Benthic Ecology, University of Maine Darling Center, Walpole, Me. 1988.  
Fisheries Population Dynamics, University of Maine, Orono, Me. 1984.

**Employment Experience:**

**Nov 2006 – present**                      **Marine Resources Scientist IV**  
**Maine Department of Marine Resources**  
**West Boothbay Harbor, ME**

- Directs and oversees the Biomonitoring and Assessment Division. Chief responsibilities are to oversee fishery monitoring programs for commercially important marine species; the commercial ; biological studies; population assessments; and gear research.
- Directs the collection and processing of Maine's Commercial Landings Program (CLP) statistics and processing.
- Program science manager for the Bureau's biological database Marine Resource and Environmental Information System (MARVIN).
- Directs and manages the laboratory's wet lab and sea water facility for holding and conducting experiments of marine organisms
- Promotes Maine's partnership with Atlantic Coastal Cooperative Statistical Program (ACCSP) through serving on the Biological Review Panel and developing and overseeing projects to bring the state into compliance with ACCSP.

**Jul 2000 – Nov 2006**                      **Marine Resources Scientist III**  
**Maine Department of Marine Resources**  
**West Boothbay Harbor, ME**

- Oversees the Atlantic herring resource monitoring, assessment and advisory group.
- Directs the collection and processing of Maine's Commercial Landings Program (CLP) statistics and processing.
- Program science manager for the Bureau's biological database Marine Resource and Environmental Information System (MARVIN).
- Directs and manages the laboratory's wet lab and sea water facility for holding and conducting experiments of marine organisms
- Promotes Maine's partnership with Atlantic Coastal Cooperative Statistical Program (ACCSP) through serving on the Biological Review Panel and developing and overseeing projects to bring the state into compliance with ACCSP.



Jan 1988 – Jul 2000

**Marine Resources Scientist II**  
**Maine Department of Marine Resources**  
**West Boothbay Harbor, ME**

- Provides direction for the Atlantic herring landings and sampling projects. Supervises personnel as to their duties and tasks in carrying out the needs of the projects.

**Scientific Publications:**

Kanwit, J. K., and D. A. Libby. 2009. Seasonal movements of Atlantic herring (*Clupea harengus*): results from a four year tagging study conducted in the Gulf of Maine and Southern New England. J. Northw. Atl. Fish. Sci., 40:29-39. doi:10.2960/J.v40.ms577

Townsend, D. W., Radtke, R. L., Corwin, S. and D. A. Libby. 1992 Strontium:calcium ratios in juvenile Atlantic herring *Clupea harengus* L. otoliths as a function of water temperature. J. EXP. MAR. BIOL. ECOL. vol. 160, no. 1, pp. 131-140

Chenoweth, S. B., D. A. Libby, R. L. Stephenson and M. J. Power. 1989. Origin and dispersion of larval herring (*Clupea harengus*) in coastal waters of eastern Maine and southwestern New Brunswick. CAN. J. FISH. AQUAT. SCI. 1989. vol. 46, no. 4, pp. 624-632

Creaser, E. P. and D. A. Libby, 1987. Seasonal movements of juvenile and adult herring, *Clupea harengus* L., tagged along the Maine and New Hampshire coast in 1976-1982. J. Northwest Atl. Fish. Sci. vol. 8(1).

Creaser, E. P. and D. A. Libby. 1986. Tagging of age 1 herring (*Clupea harengus* L.) and their movements along the Maine and New Brunswick coasts. J. Northwest. Atl. Fish. Sci., Vol. 7 No. 1: 43-46.

Batty, R. S., J. H. S. Blaxter and D. A. Libby. 1986. Herring (*Clupea harengus*) filter feeding in the dark. Mar. Bio. Vol. 91: 371-375.

Libby, D. A. 1984. A comparing of scale and otolith aging methods for the alewife, *Alosa pseudoharengus*. Fish. Bull., U.S. 84(4).

Creaser, E. P., D. A. Libby and G. D. Spiers. 1984. Seasonal movements of juvenile and adult herring, (*Clupea harengus*. L.), tagged along the Maine coast. J. Northwest. Atl. Fish. Sci. 5(1) pp. 71-78.

Libby, D. A. 1982. Decrease in predominant ages during a spawning migration of the alewife, *Alosa pseudoharengus*. Fish. Bull., U.S. 80(4):902-905.

Libby, D. A. 1981. Difference in sex ratios of the anadromous alewife, *Alosa pseudoharengus*, between the top and bottom of a fishway at Damariscotta Lake, Maine. Fish. Bull., U.S. 79:207-211.



STATE OF MAINE  
DEPARTMENT OF  
MARINE RESOURCES  
MARINE RESOURCES LABORATORY  
P.O. BOX 8, 194 MCKOWN POINT RD  
W. BOOTHBAY HARBOR, MAINE 04575-0008

PAUL R. LEPAGE  
GOVERNOR

PATRICK C. KELIHER  
COMMISSIONER

Atlantic Coastal Cooperative Statistics Program  
Operation and Advisory Committee  
1050 N. Highland Street, Suite 200A-N  
Arlington, VA 22201

August 30, 2014

We are pleased to submit the proposal entitled **“Portside commercial catch sampling and comparative bycatch sampling for Atlantic herring (*Clupea harengus*), Atlantic mackerel (*Scomber scombrus*), and Atlantic Menhaden (*Brevoortia tyrannus*) fisheries”**

After reviewing comments supplied by ACCSP we found that changes from our initial FY 2015 proposal were unnecessary. As such we are attaching our initial proposal for expediency in the review and funding decision process.

Sincerely,

Dr. Matthew Cieri and David Libby

Proposal for Funding made to:

Atlantic Coastal Cooperative Statistics Program  
1050 N. Highland Street, Suite 200A-N  
Arlington, VA 22201

**Portside commercial catch sampling and comparative bycatch sampling for Atlantic herring (*Clupea harengus*), Atlantic mackerel (*Scomber scombrus*), and Atlantic Menhaden (*Brevoortia tyrannus*) fisheries**

Total Cost: \$136,306

Submitted by:

Dr. Matthew. Cieri  
Maine Department of Marine Resources  
P.O. Box 8, McKown Point Road  
West Boothbay Harbor, ME 04575  
matthew.cieri@maine.gov  
(207) 633-9520

David A. Libby  
Maine Department of Marine Resources  
P.O. Box 8, McKown Point Road  
West Boothbay Harbor, ME 04575  
david.a.libby@maine.gov  
(207) 633-9532

June 30, 2014

**Applicant Name:** Maine Department of Marine Resources (ME DMR)

**Principal Investigator:** Matthew Cieri, Marine Resource Scientist

**Project Title:** Portside commercial catch sampling and comparative bycatch sampling for Atlantic herring (*Clupea harengus*), Atlantic mackerel (*Scomber scombrus*), and Atlantic Menhaden (*Brevoortia tyrannus*) fisheries

**Project Type:** Maintenance Project

**Requested Award Period:** One year after receipt of funds

**Change in Scope/Cost from Previous Year Project:**

This is a maintenance proposal which has not changed its scope from the previously funded project in 2014. The overall cost is ~4% more than the FY 14 award. This change is due to in changes in the pay structure for vehicles as well as unavoidable increases in personnel costs because of healthcare and merit increases.

**Objectives:**

To maintain and expand the biological sampling of primarily the Atlantic herring commercial fishery including Atlantic menhaden and mackerel and other incidentally retained species of interest.

A secondary objective is to continue the portside bycatch sampling with emphasis in increasing the number of co-occurring sampling trips targeting Atlantic herring between ME DMR's portside bycatch sampling and both the NMFS (National Marine Fisheries Service) at sea observer sampling and the MA DMF (Massachusetts Division of Fisheries) portside sampling program.

**Need:**

Each of the species involved in this study has been declared not overfished and not subject to overfishing. However each of these principle pelagic fisheries has recently become the focus of management action because of their status as forage species and because of potential bycatch problems associated with the directed fishery. In particular, Atlantic herring and Atlantic menhaden have been the focus of the emerging trend towards ecosystem management.

Atlantic herring (*Clupea harengus*), Atlantic menhaden (*Brevoortia tyrannus*) and Atlantic mackerel (*Scomber scombrus*) are three of the most ecologically and economically important fish species in the western Atlantic. All three are high volume, low value species utilized for bait, reduction, or human consumption. The three species are oceanic plankton-feeding fish that occur in large schools, inhabiting coastal and continental shelf waters from Labrador to Florida. With an estimated complex-wide biomass of 1.8 million metric tons (mt) of herring, 1+ million mt of mackerel, and 2.5+ million mt of menhaden, these species provide a significant forage base for other fish species, marine mammals, and birds. Additionally, they support the first, second and third largest commercial fisheries on the east coast in terms of volume. Atlantic herring landings in 2013 (the last year that NMFS data was available) were reported at approximately 106,000 mt with an estimated value in excess of \$30 million. In addition to the direct economic contribution of herring landings, this fishery supports a domestic value-added industry worth approximately \$60 million and the North Atlantic

lobster fishery estimated at over \$500 million. Atlantic mackerel landings in 2013 were reported at approximately 4,500 mt with an estimated value in excess of \$4.4 million. The domestic value added industry (frozen whole fish) for mackerel, based in Cape May, NJ, and Fall River, New Bedford and Gloucester, MA, is estimated at \$25 million. The Atlantic menhaden 2013 catch was 166,000 mt valued at \$30 million.

This study will continue the biological commercial catch sampling of Atlantic herring, Atlantic mackerel, and Atlantic menhaden. Additionally other species of interest, such as dogfish, both river herring species, and shad will be sampled as they are encountered.

This proposal will also continue to survey bycatch from Atlantic herring and mackerel catches at portside while primarily focusing on vessel trips that have been surveyed by NMFS At-Sea observers. This will provide additional comparisons between at sea (NMFS) and portside (MA DMF and ME DMR) bycatch sampling programs and further validate a recent change in portside sampling protocols.

Approximately seventy percent (70%) of project resources are needed to carry out the first and prime objective (or module) of the concurrent sampling portion of the project while thirty percent (30%) of resources are needed for the bycatch module.

#### ***Commercial catch sampling of Atlantic herring, Atlantic mackerel and Atlantic menhaden***

ME DMR has collected and processed Atlantic herring commercial catch samples since 1960. A significant focus of this proposal is a continuation of the commercial catch sampling program for Atlantic herring along the east coast. ME DMR maintains primary responsibility for fishery dependent sampling of the east coast Atlantic herring fishery. Duties include, processing biological samples, compiling catch data, and constructing the catch at age matrix for the age structured model. Currently, staffing and financial limitations prevent ME DMR from providing adequate commercial catch sampling coverage without ACCSP support. Furthermore, NMFS has reduced port agents and other staff, such that biological sampling of herring has become a lower priority. In an effort to improve the commercial catch sampling program, ME DMR has supported a dedicated northeast herring sampler.

The Atlantic herring fishery has recently undergone significant management changes as a result of federal and state action. These consist of changes brought about by the recent actions of the New England Fishery Management Council (NEFMC) during Amendment 5 to the Atlantic herring Fishery Management Plan (FMP). It is anticipated that fleet behavior will change markedly in response to management actions and it is important to quantify the level of bycatch and document changes in selectivity of the fishery. Without ACCSP support, samples would not be collected or aged, resulting in no catch-at-age information for the assessment. Atlantic herring would move from an age-structured stock assessment to one developed for data-poor species, and would be categorized as a data-poor species in need of sampling. Because ACCSP has funded this project, however, Atlantic herring are currently adequately sampled and are not scored by ACCSP. Given the most recent management changes, changes in the most recent stock assessment, ongoing litigation, and the importance to both state and federal partners, Atlantic herring would have scored very high in the process had it been part of the scoring for 2014.

Although ACCSP has not identified Atlantic mackerel as a priority, commercial catch sampling should be important given recent changes to the Squid, Mackerel, and Butterfish Plan as implemented in the Mid-Atlantic Council's Amendment 14. Like Atlantic herring, fleet behavior may change markedly, and changes in selectivity may result, confounding current model approaches if not adequately measured. Traditionally the commercial mackerel catch was sampled by NMFS; however, due to the closure of port offices and limited personnel, current mackerel sampling is limited. With the existing and predicted growth in the domestic mackerel harvest, additional sampling is necessary to adequately cover the fishery.

Continued commercial catch sampling has been put forth as an imperative research need in the most recent menhaden assessment. Further importance has been placed on increased commercial catch sampling in the northern portions of the stock's range and in the bait fishery in general. This is particularly important as the menhaden assessment team analyzes the possibility of a dome, rather than the existing logistic function in selectivity for the northern bait fishery.

### ***Comparative bycatch sampling***

During at-sea operations NMFS observers use basket sampling to document occurrence of other species during targeted Atlantic herring and mackerel trips. These non-target species are then included in the data as retained or "Kept"

([http://www.nefsc.noaa.gov/fsb/manuals/2013/NEFSC\\_Observer\\_Program\\_Manual.pdf](http://www.nefsc.noaa.gov/fsb/manuals/2013/NEFSC_Observer_Program_Manual.pdf)).

Normally, ten 50 lb basket sub-samples are taken at regular intervals during the pumping process from net to hold. These samples are then checked for bycatch and the results expanded. Because the Atlantic herring fishery is a high volume fishery much of the bycatch is retained during the pumping process, particularly for co-occurring pelagic species such as river herring.

Until the spring of 2011 this was in contrast to the methods employed during the ME DMR port sampling procedure (see the *Approach* section of this document). During Portside sampling, bycatch was measured in "lots" of ~40,000 lbs. During most sampling events, data were taken as a census of all bycatch in that lot. Only on rare occasions was a sub-sampling method, similar to NMFS protocols, used.

Analysis of more than five years (2005-2009) of both portside and at sea bycatch data and results from the DMR, DMF and NMFS databases has revealed that sampling only portions or lot sampling of herring catches is not useful when comparing the portside and at-sea programs. Recent changes in both project protocol and the herring fishery have significantly altered this project's methods. In an attempt to more closely align our data with both the at-sea observer data and DMF portside data, we (DMR) have moved away from the practice of "lot" sampling, or looking intensively at a portion of a vessel's landings. The reasoning behind this stems from variability of catch composition in vessels with multiple fish holds. Fish being partitioned into separate holds may be from the same, different, or a mixture of multiple tows or sets. While lot sampling has provided valuable spatial and temporal insights to bycatch distribution and frequency, it is unable to resolve variability between vessel holds. Sampling entire vessel offloads allows that variability to be reflected in the data.

MA DMF uses a different set of protocols when sampling the bycatch in the Atlantic herring and mackerel fisheries. Generally, this project examines the entire offloading at plants in New Bedford and Gloucester, MA. Sub sampling occurs during off loading for bait in a similar basket design as used in NMFS at-sea observations. However much of their sampling is a direct census (examining the entire catch without subsampling) of the entire off-loading, as both of those facilities are primarily geared to a food quality product. As such, all of the bycatch is measured from the entire trip for the majority of MA DMF bycatch monitoring.

During an Atlantic herring PDT (Plan Development Team) meeting for the NEFMC (June 15<sup>th</sup>, 2010), an examination of 52 co-sampled trips was performed by one of the authors of this proposal (Matt Cieri) and a collaborator from MA DMF (Steve Correia). It was noted that there was no correlation in river herring magnitude for co-sampled trips between at-sea and portside projects. Further, while the at-sea observers documented higher rates of bycatch of river herring, the frequency of occurrence was significantly higher in portside observations of the same trips. Analysis on transformed data suggested no significant differences using a pair t-test, but the power of that analysis was dramatically reduced because of low numbers of co-occurring sampled trips, and high degree of variability. This led to a discussion on the basket sampling methodology employed by NMFS and the lot sampling protocols by ME DMR. It was noted that some settling and stratification could occur between pumping into the hold and sampling of by portside monitors, either by truck or at the plant. It also led to a discussion on variability associated with the NMFS at-sea sampling protocols and if ten basket samples per haul were an accurate representation of the bycatch pumped on board.

Of the 52 co-occurring trips (2005-2009) between both portside and at-sea observers, only 28 had occurrences of river herring bycatch in one program or the other and were stretch across different gear types, areas, and seasons. This resulted in limited sample sizes to conduct a full analysis. Documented species in the other 24 trips were so variable that selection of another species for analysis was impossible. As such, analysis of this issue could be greatly enhanced with a directed portside study of trips which have been observed by NMFS at-sea samplers.

In 2012 ME DMR, with ACCSP funding, implemented concurrent sampling of Atlantic herring trips portside that had also been sampled by at sea observers. Because the project only started in January 2012 and given the lag time before data are finalized in the NEFOP (North East Fishery Observer Program) database, data from the co-occurring trips are not yet available for analysis. Preliminary results are shown in the FY 2013 completion report, but suggest that recent changes to the port side bycatch protocols have resulted in more precise results when compared to the at-sea observer sampling. Further analysis will be provided in the FY2014 completion report. Continued co-occurring sampling will help to better document the few differences that have occurred, and to solidify and further validate the changes made to the portside protocols.

## **Results and Benefits:**

### ***Commercial catch sampling***

This program collects all the Atlantic herring directed samples from the U.S East coast fishery and a portion of all the collected mackerel and menhaden samples use in assessments of the stocks and management of the fisheries. Regarding the need for the work as stated above, if this project was not

funded there are currently no other resources that would or could be shifted to collect samples for Atlantic herring or to perform the Atlantic herring and mackerel bycatch study. Menhaden is strictly an ASMFC managed species. The catch at age analysis would lack coverage for the full range of the fishery without this project.

Annually collected samples of Atlantic herring from the commercial fishery provide the cohort catch at age data for the SARC's periodic assessment of the herring population and are used to predict and define the ASMFC's (Atlantic States Marine Fisheries Commission) rolling spawning area closures and give evidence of overall health of the Coastal Stock Complex. All Atlantic herring sample data is uploaded to the ACCSP data warehouse. Commercial catch sampling can also provide insight into the biological and management processes that drive the stock and fishery. Recently an analysis was performed to examine changes in length at spawning for Atlantic herring. Results were presented to the ASMFC Atlantic Herring Section that is in the process of finalizing spawning relationship changes to account for a decrease in herring length at full maturation.

Maine DMR processes all commercial catch herring samples for the east coast fishery. DMR maintains a lab facility with the equipment and staffing necessary for processing more than 200 commercial herring samples a year. In addition, DMR provides staff oversight of the field sampling program and scientific analysis of the data generated from the program which is then fed directly into the assessment. Without the ACCSP funded program, samples would not be collected or aged, resulting in no catch-at-age information to inform the assessment. As such, Atlantic herring would move from an age-structured stock assessment to one developed for data-poor species, and would be categorized as a data-poor species in need of sampling. Because ACCSP has funded this project, however, Atlantic herring are current adequately sampled and are not scored by ACCSP.

In addition to sampling Atlantic herring and mackerel for the purposes of developing catch-at-age matrices, this program has provided biological samples for multiple research projects. Herring have been collected for the Gulf of Maine Research Institute acoustics project, the NEFSC's (North East Fishery Science Center) morphometrics study, genetics studies, and most recently stomach and fat content samples have been provided to various organizations to examine the role of climate change in nutritional content of herring. The commercial catch samples also provide the basis for determining the start date for the three Atlantic States Marine Fisheries Commission herring spawning closure areas (two along the Maine coast and one along the NH/MA coast).

Atlantic menhaden were added as a sample species in 2010. Menhaden can be collected as bycatch during herring operations as well as from a growing purse seine directed fishery for lobster bait in the Northeast. While the bulk of this fishery occurs in the Mid-Atlantic, there is a growing interest in menhaden as a result of recent management changes in the Atlantic herring fishery. Bait landings of menhaden in Southern New England and the Mid-Atlantic have tripled in the past two years. Because menhaden stratify in latitude by age, a more complete sampling of the menhaden catch in the northern parts of its range may improve our understanding of the population dynamics of this important forage species.

The commercial catch sampling program funded historically by ACCSP has proven extremely successful and has provided important information to the fishery managers. The biological information on size, age, and maturation of herring feeds directly into the stock assessments for Atlantic herring, Atlantic mackerel, and Atlantic menhaden. ASMFC has routinely used the data



collected from this project to implement management changes to herring spawning regulations, as well as to make other decisions with regards to allocation of quota among management areas.

### ***Comparative bycatch sampling***

The data collected through the bycatch survey supplements the federal at-sea observer coverage program and vastly increases the amount of information available on bycatch in the herring fishery. This project will maintain and expand an effective and scalable method for the long-term monitoring of bycatch in the Atlantic herring fishery. A portside bycatch sampling methodology has been developed and tested, and has demonstrated the ability to observe high volumes of landed herring catch. These efforts will complement but not replace the NMFS at-sea observer coverage. This proposed bycatch survey represents a unique opportunity to collect data in an inexpensive but efficient and accurate way.

Since 2005, ME DMR has been documenting bycatch in the Atlantic herring fishery using protocols outlined in the Approach section of this document. Meanwhile the NMFS at-sea observers have been documenting retained bycatch using another set of protocols outlined in the “Need” section of this document. Recent analysis has found discrepancies between identified and expanded bycatch when sampling occurs on the same trips. Similar discrepancies also occur between MA DMF sampling and NMFS.

Both portside sampling programs use a number of different methods to document landed bycatch. NMFS protocols, as well as some of the portside sampling techniques, are sub-samples of the entire landed bycatch, with varying degrees of statistical power. Lot sampling and basket sub-sampling allow for the efficient use of time and resources in documenting bycatch in this important fishery. Direct census methods would dramatically reduce trip coverage for the portside projects, but would represent an insurmountable obstacle to the at-sea observers

For preliminary analysis on river herring bycatch it had been assumed that the portside bycatch sampling conducted by ME DMR and MA DMF was comparable to each other and to the NMFS observer sampling. However this was not the case. Expansion of the NMFS and Portside data separately may give differing results, increasing the management uncertainty on magnitude and occurrence of bycatch in the directed herring and mackerel fisheries. Even if observer and portside estimates were statistically similar, the increase in variability due to lower sample sizes in two separate analyses would further decrease the confidence in those estimations.

Proposed work will continue to investigate what sampling protocols may be causing these differences, and what methodologies can be changed to limit these differences in the future, and correct for them in the past. A concerted effort to sample co-occurring trips is necessary to accomplish the above tasks. This proposal seeks to increase the number of co-occurring sampled trips to elucidate discrepancies, as suggested in the preliminary analysis. Sampling the same trip with a different monitoring program does not increase sample size in the final estimations of bycatch. As such, portside sampling of the co-occurring trip can only be used to examine the differences among monitoring programs, and is not useful in calculating overall coverage of the fishery.

This study will also validate if the recent changes to the portside sampling protocol are working to limit the differences with at-sea observations. Given the recent management changes calling for

industry funded 100% at-sea observer coverage as implemented by the NEFMC, portside sampling could provide a lower cost alternative if these protocols can be validated. With the recent implementation of River herring and Shad bycatch quotas for the directed herring and Mackerel fisheries, portside bycatch sampling and comparative studies with at-sea observations may become critical in estimation of status relative to the bycatch quota.

Beyond the immediate benefit to the NMFS, MA DMF, and ME DMR bycatch sampling in this fishery, the proposed project may provide guidance to other bycatch sampling programs in other fisheries. The resolution of possible discrepancies seen between these programs could be useful for other state and federal bycatch programs documenting bycatch in other fisheries; such as menhaden, and the small mesh bottom trawl fisheries for scup, sea bass and others. This proposed project represents the first known cross validation of high volume at-sea observer methods and portside sampling methodologies to estimate bycatch.

### **Review of Previous Results:**

This proposal is a continuation of an ACCSP funded herring sampling and combined portside bycatch survey. The project has evolved over the past several years in order to maximize the use of funds. Project history is shown in Attachment 2 and explains the evolution of the project, including the transition to an emphasis on portside bycatch sampling in conjunction to biological sampling along with a review of project costs. The Project for FY 14 is still ongoing, but the most recent semi-annual report is in Attachment 3.

### **Approach:**

#### ***Commercial catch sampling of Atlantic herring, Atlantic mackerel and Atlantic menhaden***

Commercial catch sampling will be conducted at herring and mackerel pumping and processing sites along the east coast. As a general rule commercial catch sampling occurs such that there is at least one sample per statistical area, per week, per gear type and generally meets NMFS protocols of one sample per 500 mt.

It should be noted that sampling is made regardless of permit category as long as the vessel called in as an Atlantic herring vessel for the day (as per NMFS protocols). In addition, and where practical, bottom trawl vessels are also sampled. However priority will be given to directed herring vessels (primarily purse seines and mid-water trawls) as they land the bulk of the quota.

The samplers will follow the existing protocol developed for commercial catch sampling of Atlantic herring (Attachment 4). This protocol complies with the guidelines laid out by ACCSP. Sample will be processed and aged by in-house staff, primarily Lisa Pinkham. Samples are processed for length; weight, maturity, and aged according to NMFS protocols (please see [www.nefsc.noaa.gov/publications/crd/crd0406/crd0406.pdf](http://www.nefsc.noaa.gov/publications/crd/crd0406/crd0406.pdf) Page 22). This information is uploaded to the ACCSP warehouse and is used for the assessment of Atlantic herring.

The same vessels that harvest Atlantic herring primarily pursue Atlantic mackerel on the east coast. Traditionally, when markets are available the pelagic fishing fleet transfers some of their effort from herring to mackerel in the winter and early spring. The samplers funded by this grant can easily collect mackerel by keeping in touch with the herring vessels that enter the mackerel fishery. Most of the ports where significant mackerel landings occur overlap with major herring ports; this is largely

due to the fact that herring processing facilities are also capable of freezing mackerel. Sampling will follow the existing NMFS protocol for mackerel and the guidelines established by ACCSP (Attachment 4).

### **Atlantic menhaden sampling**

Support for port sampling for Atlantic menhaden (*Brevoortia tyrannus*) is also requested. Currently, there have been increased menhaden catches in the New England Area when compared to previous years, and this trend is expected to continue. National Marine Fisheries Service in Beaufort, North Carolina has requested commercial samples from the northern extent of this stock's range (north of Cape Cod). Such sampling of the "snapper rig bait fishery" (Northeast purse seine) is also listed as a priority research initiative in the most recent menhaden assessment. Such samples are critical to the assessment process for Atlantic menhaden and in accurately estimating the catch at age. During our normal sampling of the Atlantic herring bait fishery, we will collect Atlantic menhaden samples primarily from purse seines using the protocols outlined by NMFS, Beaufort (Attachment 4) and forward scales and measurements for use in the next assessment. Sampling targets for menhaden could not be derived because of the exploratory nature of this sampling and the uncertainty in the effort placed on this stock north of Cape Cod; where our sampling effort will be directed.

### ***Comparative bycatch sampling***

The herring industry has changed tremendously in the last five years resulting in a much more centralized distribution structure. Generally the herring used for bait goes through a wholesale dealer to smaller dealers and lobster wharfs along the coast. The wholesale dealers have facilities where they sort, barrel, freeze and store bait for redistribution. It is at these sites where effective bycatch surveys can also be done, thereby including the bait sector in this study. Herring is also landed at larger centralized processing plants which may process for a food grade market for export or for direct sale into the regional bait market.

The sampling takes place at centralized processing plants and bait dealers in Maine, New Hampshire, Massachusetts, Rhode Island and New Jersey. A goal of observing 100+ mt per week will be targeted which should require three site visits. The mackerel fishery will be sampled if the target levels for the herring fishery have been reached in a given week or when herring samples are not available. This scenario is most likely to occur in the winter months when many of the herring vessels switch to the mackerel fishery. The samplers will quantify bycatch from individual lots that enter the processing and bait plants according to a NMFS specified protocol. The total weight of any observed bycatch will be recorded along with species identification, total species weight, individual lengths and weights of all fish or a representative sub-sample. The total estimated bycatch weight by species will then be compared to census sampling by MA DMF and/or at sea basket sampling conducted by NEFOP as appropriate.

Using existing ME DMR protocols (Attachment 5) and in close concert with NMFS observers and MA DMF portside samplers, staff will directly target trips that have been observed by either of those two programs. Where possible, and as practicable, staff will also conduct a full census of landed bycatch from full offloading events (trips) which have also been sampled at-sea; thereby allowing a direct analysis and validation of current at-sea bycatch monitoring methods. Particular emphasis will

be placed on sampling those trips, using current ME DMR methods that had both NMFS and MA DMF bycatch sampling.

Once the data are collected, they will be housed and archived in a ME DMR relational database. Data requests and queries will be performing on the MA DMF and NMFS databases to identify trips which were co-sampled. Data will then be joined into one full database for further statistical analysis. While the examination of potential methods to use in the final analysis are ongoing, possibilities include two-tailed paired t-tests after transformation, the Wald test with continuity, and an index method using a Jaccard coefficient.

**Geographic Location and Temporal Distribution of Effort:**

Sampling will occur in ports from Prospect Harbor, ME to Cape May, NJ, and reflect landings and effort from NC, through ME. Efforts will be coordinated with the NMFS NEFMC in Woods Hole, NMFS, Beaufort, NC, MA, MA DMF, NH F&G, and RI, DEM, and other state agencies throughout the range of the herring and mackerel fisheries. Staff will be based out of the ME DMR Boothbay Harbor lab facility. Because of herring and mackerel availability to the fishery, market conditions, and other factors, it is difficult to pinpoint where the fleet maybe landing at any given time. Sampling will thus occur after direct contact with vessel captains and plant managers to identify where sampling should take place.

In general herring bycatch sampling is primarily conducted spring, summer, and fall; mackerel sampling occurs primarily in the winter months; and it’s anticipated that menhaden sampling will occur in the late summer to early fall. Bycatch sampling and commercial sampling become more infrequent in the winter months, while travel to get to the landing sites increases. Report writing and data analysis occur in-between regular commercial and bycatch sampling.

**Data Management:**

Data collected through this study are regularly entered into the MARVIN biological database housed at ME DMR. Data are first entered into MARVIN and run through Quality Assurance/ Quality Control (QA/QC) routines to insure accurate reporting.

Metadata will be created with ArcCatalog in order to conform to the (Federal Geographic Data Committee (FGDC) standards and specifications. Created metadata will be available in text and XML formats.

**Milestone Schedule:**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Catch Sampling-HERR	x	x	x	x	x	x	x	x	x	x	x	x
Catch Sampling-MACK	x	x	x	x	x							x
Bycatch Sampling-co-occurring NMFS	x	x	x	x	x	x	x	x	x	x	x	x
Bycatch Sampling-co-occurring MA DMF	x	x	x	x	x	x	x	x	x	x	x	x
Analysis	x	x	x	x	x	x	x	x	x	x	x	x

\* - Upon request, ME DMR will provide bycatch sampling data on a state by state basis three times a year.

### **Project Accomplishment Measurement**

#### **Commercial Catch Sampling**

Atlantic herring	At Least 10% sampled trips by gear type and month
Atlantic mackerel	At Least 10% sampled trips by gear type and month

#### **Comparative Sampling**

With NMFS	At least 50 trips representing >25% of current NMFS coverage
With MA DMF	At least 15 trips representing >20% of current NMFS coverage
With both	At least 5 trips

**Cost Summary: FY15 Portside commercial catch sampling and comparative bycatch sampling**

<b>Personnel<sup>A</sup></b>	<b>Discription</b>	<b>Cost</b>
1 Specialist II (Becker)	full time position for 12 months	\$43,197
1 Specialist I (Pinkham)	full time position for 4 months	\$12,221
	<b>Subtotal</b>	<b>\$55,418</b>
<b>Fringe Benefits<sup>A</sup></b>		
	Includes health, dental, workers comp, FICA, life insurance and retirement	
1 Specialist II (Becker)		\$26,593
	Includes health, dental, workers comp, FICA, life insurance and retirement	
1 Specialist I (Pinkham)		\$7,974
	<b>Subtotal</b>	<b>\$34,567</b>
	<b>Total Personnel</b>	<b>\$89,985</b>
<b>Travel</b>		
1 seasonal vehicle <sup>B</sup>	1 pickup * \$295/mo * 12 mo	\$3,540
Mileage fee	1 pickup * 30,000 mi * \$.21/mi	\$6,300
Toll allowance	Estimated	\$150
35 Overnight stays <sup>C</sup>	35* \$102/night	\$3,570
Per diem (includes extended days)	20 * \$50/day	\$1,000
<b>Other</b>		
Sampling Gear	Electronic scales, baskets, etc.	\$1,200
Lab Supplies	Lab supplies	\$1,200
Telecommunication charges <sup>D</sup>	2 phones * \$50/mo * 12 mo	\$1,200
1 Air Card	\$75 * 12 mo	\$900
	<b>Subtotal</b>	<b>\$19,060</b>
<b>Total Direct Costs</b>		<b>\$109,045</b>
<b>Indirect Costs (25%)</b>		<b>\$27,261</b>
<b>Total Award to DMR</b>		<b>\$136,306</b>

A: Cost includes salary and benefits, which are dictated by contract with State of Maine and are non-negotiable.

B: All state agencies must rent vehicles through state's Central Fleet Agency which is non-negotiable. Vehicle costs include the following services and costs: maintenance, repairs, insurance, and gasoline.

C: DMR staff travel as far as New Jersey.

D: One cell phone for the Specialists II and one each for the project leader.

**Partner Contribution – For ACCSP Purposes**

Scientist IV (20% time)	\$20,000
Scientist III (25% time)	\$15,000
<u>Specialist I (25%)</u>	<u>\$12,000</u>
<b>Total</b>	<b>\$47,000</b>

**Future Project Needs:**

This project is designed to benefit all states from Maine to New Jersey, ASMFC and federal management agencies including the NEFMC and NMFS. This grant proposal's primary expense is for personnel to carry out the objectives of the study. ME DMR is pursuing long-term and permanent funding for this project through a commitment made by the participating states and the federal government; and has had some success. Additionally the New England Fishery Management Council

is examining industry funded at-sea observer monitoring in herring and other fisheries. Part of the discussion has also been directed at possibly funding port-side monitoring given its lower costs

### **Budget Narrative:**

**Personnel and Fringe Benefits:** One full time Specialist II (James Becker) funded at 100% and one part time Specialist I (Lisa Pinkham) funded at 33%. These positions are Department of Marine Resources' employees (not contract workers). Salaries and benefits for these employees are dictated by contract with the State of Maine and are non-negotiable. Benefits include retirement benefits, FICA, health insurance, dental insurance, workers compensation and life insurance. The benefits are determined by a formula the state uses which is variable dependent upon the position classification, the pay grade of the employee (e.g. the number of years the person has been employed by the State of Maine) and type of coverage the employee selects. Currently, the State of Maine has re-constituted merit increases for FY15. As such these costs are reflected in this budget.

From approximately July until October the fleet generally land s in Maine as well as NH/MA simultaneously. As such two people are required to adequately sample and perform bycatch duties during this time.

### **Travel and vehicles**

Travel is requested for 35 trips overnight. The exact number of trips will depend of fleet activity and port of landing. A small utility 4x4 truck is proposed for safety reasons during winter sampling in remote locations, as well as to haul equipment from time to time. Central fleet for the State of Maine stipulates rates, and private rentals are prohibited by state policies. Current request reflects a recent policy change by Central Fleet to charging less per month, but increasing the mileage rate for trucks.

### **Office Supplies & Minor Equipment**

Two cell phones and an "Air card" are requested. One cell phone is for the sampler to contact vessels and to coordinate with NEFOP personnel. A second phone is request for the supervisor to provide direction if needed and to allow for communication in case of an emergency. An air card is also requested which allows the user to connect to the State network from any location with cell phone coverage. Air cards allow for the efficient entry of data while waiting for vessels to land, along with allowing access to the VMS system to better pin point landing events.

Other Lab and Sampling supplies include baskets for sampling, scale calibration, rain gear, water proof paper, sample boxes, safety equipment, and other items

**Indirect costs:** The Department of Marine Resources has an indirect cost rate of 25%. See Attachment 6 for the Negotiated Indirect Cost Agreement.

**Attachment 1: FY 2014 Budget & Narrative**

**Cost Summary: Portable bycatch sampling**

Personnel Services <sup>A</sup>	Description	ACCSP
Salary 1 Marine Resources Specialist I (Becker) 12 months		\$ 42,373
Benefits 1 Marine Resources Specialist I (Becker) 12 months		\$ 21,128
Salary 1 Marine Resources Specialist I (Pinkham) 4 months		\$ 12,693
Benefits 1 Marine Resources Specialist I (Pinkham) 4 months		\$ 7,778
	<b>Subtotal</b>	<b>\$ 83,969.54</b>

**All Other**

<b>Field Equipment</b>		
PROJECT VEHICLE 12 months	360-mo	\$ 4,200
Mileage fee	30000 @ \$ 0.17/ml	\$ 6,100
<b>Travel Expenses</b>		
Toll allowance		\$ 160
36 Overnight stays	\$102-night	\$ 3,670
Per diem (includes extended days)	\$60-day	\$ 2,760
<b>Office Supplies &amp; Minor Equipment<sup>B</sup></b>		
2 Cell Phones	3 \$60-month	\$ 1,200
1 air card	1 \$76-month	\$ 900
Sampling Gear		\$ 1,340
Lab Supplies		\$ 1,300
	<b>Subtotal</b>	<b>\$ 20,510</b>
<b>Total Direct Costs</b>		<b>\$ 104,480</b>
<b>Indirect Costs (26%)</b>		<b>\$ 28,119</b>
<b>Award to DMR</b>		<b>\$ 130,599</b>

**A:** Cost includes salary and benefits, which are dictated by contract with State of Maine and are non-negotiable.

**B:** The state specifies that its employees have all IT expenses and support managed by the Office of Information Technology. Fees are non-negotiable.

**Partner Contribution – For ACCSP Purposes**

Scientist IV (20% time)	\$20,000
Scientist III (25% time)	\$15,000
Specialist I (25%)	\$12,000
<b>Total</b>	<b>\$47,000</b>

**Future Project Needs:**

This project is designed to benefit all states from Maine to New Jersey, ASMFC and federal management agencies including the NEFMC and NMFS. This grant proposal's primary expense is



for personnel to carry out the objectives of the study. ME DMR is pursuing long-term and permanent funding for this project through a commitment made by the participating states and the federal government; and has had some success. Additionally the New England Fishery Management Council is examining industry funded at-sea observer monitoring in herring and other fisheries. Part of the discussion has also been directed at possibly funding port-side monitoring given its lower costs'

### **Budget Narrative: 2014**

**Personnel and Fringe Benefits:** One full time Specialist II (James Becker) funded at 100% and one part time Specialist I (Lisa Pinkham) funded at 33%. These positions are Department of Marine Resources' employees (not contract workers). Salaries and benefits for these employees are dictated by contract with the State of Maine and are non-negotiable. Benefits include retirement benefits, FICA, health insurance, dental insurance, workers compensation and life insurance. The benefits are determined by a formula the state uses which is variable dependent upon the position classification, the pay grade of the employee (e.g. the number of years the person has been employed by the State of Maine) and type of coverage the employee selects. Currently, the State of Maine has re-constituted merit increases for FY14. As such these costs are reflected in this budget.

From approximately July until October the fleet generally land in Maine as well as NH/MA simultaneously. As such two people are required to adequately sample and perform bycatch duties during this time.

### **Travel and vehicles**

Travel is requested for 35 trips overnight. The exact number of trips will depend of fleet activity and port of landing. A small utility 4x4 truck is proposed for safety reasons during winter sampling in remote locations, as well as to haul equipment from time to time. Central fleet for the State of Maine stipulates rates, and private rentals are prohibited by state policies.

### **Office Supplies & Minor Equipment**

Two cell phones and an "Air card" are requested. One cell phone is for the sampler to contact vessels and to coordinate with NEFOP personnel. A second phone is request for the supervisor to provide direction if needed and to allow for communication in case of an emergency. An air card is also requested which allows the user to connect to the State network from any location with cell phone coverage. Air cards allow for the efficient entry of data while waiting for vessels to land, along with allowing access to the VMS system to better pin point landing events.

Other Lab and Sampling supplies include baskets for sampling, scale calibration, rain gear, water proof paper, sample boxes, safety equipment, and other items

**Indirect costs:** The Department of Marine Resources has an indirect cost rate of 25%. See Attachment 6 for the Negotiated Indirect Cost Agreement.

## Attachment 2: Project history

YEAR	TITLE	COST	Rational/Emphasis	RESULTS
2001	Commercial catch sampling of Atlantic herring	\$52,299	catch sampling, herring	expanded sampling of herring
2002	Commercial catch sampling of Atlantic herring	\$67,168	catch sampling, herring	herring and mackerel sampling
2003	Commercial catch sampling of Atlantic herring and other northeast fisheries	\$67,168	catch sampling, herring	herring, mackerel and halibut
2004	Commercial catch sampling and bycatch survey of the northeast Atlantic herring fishery	\$70,441	catch sampling, herring and mackerel	herring, halibut, mackerel and pilot portside bycatch sampling
2005	Commercial catch sampling and bycatch survey of two pelagic fisheries	\$69,949	catch sampling, herring and mackerel	herring, halibut, mackerel and pilot portside bycatch sampling
2006	Portside bycatch sampling and commercial catch sampling of the Atlantic herring and Atlantic mackerel fisheries	\$104,633	portside bycatch survey herring and mackerel catch sampling	herring and mackerel portside bycatch at 5% level and catch sampling
2007	Portside bycatch sampling and commercial catch sampling of the Atlantic herring and Atlantic mackerel fisheries	\$108,891	portside bycatch survey herring and mackerel catch sampling	herring and mackerel portside bycatch at 5% level
2008	Portside bycatch sampling and commercial catch sampling of the Atlantic herring and Atlantic mackerel fisheries	\$116,300	portside bycatch survey herring and mackerel catch sampling	herring and mackerel portside bycatch at 5% level
2009	Portside bycatch sampling and commercial catch sampling of the Atlantic herring, Atlantic mackerel, and Atlantic menhaden fisheries	\$105,985	portside bycatch survey herring and mackerel catch sampling	herring and mackerel portside bycatch and commercial catch sampling and bycatch at 5% level
2010	Portside bycatch sampling and commercial catch sampling of the Atlantic herring, Atlantic mackerel, and Atlantic menhaden fisheries	\$84,451	portside bycatch survey herring and mackerel catch sampling	herring and mackerel portside bycatch and commercial catch sampling and bycatch at 5% level
2011	Portside bycatch sampling and commercial catch sampling of the Atlantic herring, Atlantic mackerel, and Atlantic menhaden fisheries	\$174,778	portside bycatch survey herring and mackerel catch sampling	herring and mackerel portside bycatch and commercial catch sampling and bycatch at 5% level
2012	Portside commercial catch sampling and comparative bycatch sampling for Atlantic herring ( <i>Clupea harengus</i> ), Atlantic mackerel ( <i>Scomber scombrus</i> ), and Atlantic Menhaden ( <i>Brevoortia tyrannus</i> ) fisheries	\$0	portside bycatch survey herring and mackerel catch sampling	Funds were not requested because of previous cost saving measures; allowing for the continuation of the previous work with no added costs.
2013	Portside commercial catch sampling and comparative bycatch sampling for Atlantic herring ( <i>Clupea harengus</i> ), Atlantic mackerel ( <i>Scomber scombrus</i> ), and Atlantic Menhaden ( <i>Brevoortia tyrannus</i> ) fisheries	\$113,774	portside bycatch survey herring and mackerel catch sampling	herring and mackerel portside bycatch and commercial catch sampling and bycatch at 5% level
2014	Portside commercial catch sampling and comparative bycatch sampling for Atlantic herring ( <i>Clupea harengus</i> ), Atlantic mackerel ( <i>Scomber scombrus</i> ), and Atlantic Menhaden ( <i>Brevoortia tyrannus</i> ) fisheries	\$130,599	portside bycatch survey herring and mackerel catch sampling	Ongoing:

## Summary of Proposal for ACCSP Ranking

**Proposal Type:** Maintenance

### **Primary Program Priority and Percentage of Effort to ACCSP modules:**

*Biological Sampling (8 Points):* Although Atlantic herring is missing from the top quartile of the Biological Matrix a correct scoring would certainly adjust it to that level. The score would rise to the top of the matrix with the elimination of biological sampling.

*Bycatch/Species Interaction (6 Points):* Mid-Water trawl gear targeting Atlantic herring and mackerel is currently the most scrutinized for bycatch of river herring and groundfish. Amendment 5 of the Atlantic herring FMP is calling for added increase in bycatch monitoring.

*Metadata (2 Points):* will be created with ESRI ArcCatalog 10 in order to conform to the FGDC standards and specifications. Created metadata will be submitted to ACCSP in text and XML formats.

### **Project Quality Factors:**

*Regional Impact (5 Points):* all partners will benefit, as the all data collected will be uploaded to ACCSP. Regional management organizations, such as ASMFC, will benefit from the biological and bycatch information from the proposed project.

*Funding transition plan (4 Points):* ME DMR will continue to seek alternative sources of funding in order to further transition from ACCSP grant money. There maybe an opportunity for future funding of this project through congressional allocation to ME DMR, or through the New England Fisheries Management Council's Omnibus Amendment on Industry Funded Monitoring Programs.

*In-kind Contribution (2 Points):* the partner contribution is listed below the budget.

*Improvement in Data Quality/Timeliness (4 Points):* Data collected through this study are regularly entered into the MARVIN biological database housed at ME DMR. Data are first entered into MARVIN and run through QA/QC routines to insure accurate reporting. The biological sampling data is uploaded to the ACCSP data warehouse on a regular basis.

*Potential secondary model (4 Points)* Data collected through this proposed project is used in assessment and management of river herring, Atlantic herring, Mackerel, and menhaden as outlined to the expected benefits section

*Impact on Stock Assessment (3 Points):* Regional management organizations which carry out stock assessments would benefit from the detailed biological sampling and bycatch data. This information could be used in stock assessments for many species that are managed by regional agencies.

*Properly Prepared (5 Points):* ME DMR followed ACCSP guidelines and pertinent documents when preparing this proposal.

**Attachment 3: FY2014 semi Report**

**Maine Department of Marine Resources  
Bureau of Resource Management  
West Boothbay Harbor, Maine**

**Atlantic Coastal Cooperative Statistics Program  
Grant No. NA13NMF4740203  
(DMR#4077)**

**Portside Bycatch Sampling and Comparative Sampling  
for Atlantic Herring (*Clupea harengus*), Atlantic  
Atlantic Mackerel (*Scomber scombrus*),  
and Atlantic Menhaden (*Brevoortia tyrannus*) fisheries**

**Semi-Annual Report**

**August 1, 2013 – January 31, 2014**

**Submitted by:**

**James Becker  
Maine Department of Marine Resources  
P.O. Box 8, 194 McKown Point Road  
West Boothbay Harbor, ME 04575  
[james.becker@maine.gov](mailto:james.becker@maine.gov)  
(207)633-9545**

**February 15, 2014**

## **Project Background**

The Atlantic herring is one of the most biologically and economically important species in the Gulf of Maine. Herring are oceanic plankton-feeding fish that occur in large schools, and inhabit coastal and continental shelf waters from Labrador to Cape Hatteras. Adults (age 3+) migrate south from summer/fall spawning grounds in the Gulf of Maine to overwinter off southern New England and the Mid-Atlantic states. Important commercial fisheries for juvenile herring (ages 1 to 2) have existed since the last century along the coasts of Maine and New Brunswick up until the mid-1980's. Development of large-scale fisheries for adult herring is comparatively recent, primarily occurring in the Gulf of Maine (GOM), on Georges Bank (GB), southern New England and Mid-Atlantic waters. Herring are an important food source for many species of fish, mammals, and seabirds. Commercial landings are currently around 150 million pounds annually with 90 percent going to the lobster bait market and 10 percent to processing facilities.

The Maine Department of Marine Resources (DMR) has collected and processed Atlantic herring commercial catch samples since 1960. Sampling was historically carried out with the cooperation of processors (canneries) and the National Marine Fisheries Service (NMFS). This system of sampling the commercial catch resulted in incomplete coverage of the fishery and insufficient collection of population data. DMR secured funding to hire a dedicated sampler in an effort to improve the commercial catch sampling program.

After the completion of a successful pilot study in late 2003, the DMR initiated an exploratory portside bycatch survey of the Atlantic herring fishery in 2004. This project was created in response to the lack of bycatch data available for the directed herring fishery. Interestingly, in 2004, NMFS received funding to expand their at-sea observer coverage of the herring fishery. In 2008 following in suit, Massachusetts Department of Marine Fisheries (MADMF) began their own portside bycatch program. Still, in a large volume fishery statistically significant sampling levels are hard to achieve. The Maine DMR portside bycatch program now complements both the MADMF portside program and the NMFS at-sea observer program by providing expanded coverage of the herring fishery and validation of the at-sea observer data.

Upon accruing and analyzing more than eight years of both portside and at-sea bycatch data, results have revealed that sampling only portions or lot sampling of herring catches is not significantly different ( $P=0.05$ ) when comparing the three independent programs. In the spring of 2011 changes to both project protocol and the herring fishery significantly altered this project from its initial focus. In an attempt to more closely align our data with MADMF's portside bycatch program and NMFS at-sea observer data, we moved away from the practice of "lot" sampling, or looking intensively at sometimes a portion of a vessel's landings. The reasoning behind this stems from variability of catch composition in vessels with multiple fish holds. Fish being partitioned into separate holds may be from the same, different, or a mixture of multiple tows or sets. While lot sampling has provided valuable spatial and temporal insights to bycatch distribution and frequency, it is unable to resolve variability between vessel holds. Sampling entire vessel offloads eliminates that variability.

In accordance with these changes, our sampling efforts have shifted to sampling direct vessel offloads, targeting sites with accessible dewatering boxes or offload pipes (used to distribute fish into a processing facility). This was problematic at first, as few sites offered adequate working space, and concerns over safety eliminated some options. We currently have 11 sampling sites. In September of 2011 the completion of a safe and accessible sampling platform was attached to a dewatering tower in Portland and has allowed for increased sampling coverage to our domain. Successful offload sites in Maine where whole boatloads can be studied are currently: Jonesport, Prospect Harbor, Stonington, Rockland, Phippsburg, and Portland. More suitable sites for sampling entire offloads for the winter herring fishery (Southern New England to Cape May, NJ) are being compiled and assessed for feasibility. In November of 2011 the fabrication and installation of another sampling platform was completed and attached to a dewatering box in New Bedford, MA, in time for the Area 2 winter herring/mackerel fishery.

In addition to our already modified dewatering tower in Point Judith, RI, which has been part of the portside bycatch sampling rotation since 2009, a second accessible tower was completed in Point Judith in December of 2012, bringing our total sampling sites to eleven. Lund's, LLC, in Cape May, NJ has had a suitable facility for one person to sample entire herring and mackerel offloads since 2005 and will continue be part of our winter sampling rotation.

Coordination and execution of the portside bycatch survey started in 2004. Fifteen sites from Maine to Cape May, NJ were originally identified and then visited to assess suitability. Since the recent shift in protocol in the spring of 2011, a total of 11 sites are currently part of the bycatch survey (Figure 1). At each site the survey method details were explained to industry members, including what data are collected and how the data are processed and released.

Because of changes in protocols and because of a reduction in the number of possible sampling sites from 15 to 11, our original goal of covering 5% of the landings has been a challenge. Focusing sampling efforts on entire boat loads has limited our sampling locations. To add to this challenge, in the last three years we began focusing more sampling effort on the small mesh bottom trawl (SMBT) fleet out of Point Judith, RI. These particular vessels hold a fraction of the volume the off shore trawlers can hold, therefore focusing sampling on SMBT limits the amount of tonnage sampled. For example if an off shore trawler brings in 500,000lbs of herring on the same day a SMBT is sampled that brings in only 50,000, then the sample volume is a significantly smaller.

NOAA conducted a series of workshops to gather more information on the status of alewife and blueback herring, collectively known as river herring, in the Northeast. NOAA has been working closely with the Atlantic States Marine Fisheries Commission (ASMFC) to use information contained in their river herring stock assessment (May, 2012) and the best available information to help make a determination as to whether these species should be listed under the Endangered Species Act. Several areas where additional information was needed included stock structure, extinction risk, and the impact of climate change on these species. NOAA held three workshops in June and July of 2013 to gather more information on each of these areas (NOAA Fisheries Northeast Regional Office: Protected Resource Division, Aug 2013).

Due to the potential listing of river herring as an endangered species, an analysis and comparison between overlapping trips from at-sea and portside observed trips (see results of objective 1a) was

added to this project in 2012 looking exclusively for significance of the presence of river herring. This test and comparison was also useful to examine methodological differences between the two programs and addressing which methods could be aligned to better document bycatch of many species.

## **Objectives**

1. Continuation of the portside bycatch survey
  - a. Expand the coverage of landed herring, and mackerel monitored for bycatch.
  - b. Increase the number of co-occurring sampling trips between ME DMR's portside bycatch sampling and the NMFS at sea observer sampling program.
  
2. Continuation of commercial catch sampling and species upon request
  - a. Collection of herring, mackerel, and menhaden
  - b. Collection of river herring for UC Santa Cruz

## **Methods**

All bycatch sampling events were arranged with the participating sites along with a request of their processing schedule. A sampling event started when the fish were delivered either by boat or on occasion truck to the dewatering tower and or facility. As the fish were sorted, the bycatch was removed and set aside. Each boat load was processed separately with the catch amount, gear type, NMFS Statistical Area and date of capture recorded or the VTR number was collected as suitable.

After the bycatch was sorted, all species were identified and separated. Each species was then weighed and a random sub-sample (n=50) was taken if necessary. All individuals (of the entire sample or sub-sample) were measured and recorded on a length frequency log.

It is important to note that for the purpose of this progress report all non-targeted species (i.e. anything but Atlantic herring) are referred to as bycatch. This includes species such as shad, alewives and blueback herring (river herring), Atlantic mackerel, and squid that are classified as incidental catch in the herring fishery.

For the analysis and comparison of the co-occurring trips (herring trips which were both sampled portside and at-sea) multiple criteria were used to determine the significance between the trips. The first was a two tailed t-test assuming unequal variances, with a hypothesized difference of zero between the percent composition of the common species found between the two programs (P=0.05). The second criteria was used if the species was absent in the sample baskets between both programs for the same trip (see 2013 proposal for details of basket sampling). For example, if a certain trip lacked alewife in the sample baskets for portside data and the at-sea data, then the results would state there was no significant difference between the two trips. Lastly, one scenario arose where the at-sea program was unable to identify what type of river herring species was landed, therefore nullifying the possibility of a comparison.

Atlantic herring commercial catch samples that were collected during either portside bycatch surveys or directly from the fishing vessel's hold were transported to DMR where they were processed for length, weight, age (using otoliths), sex, gonad stage/maturity, and stomach contents/weight. Data are then entered into a database and are available for statistical analysis as part of an ongoing NOAA interstate fisheries grant.



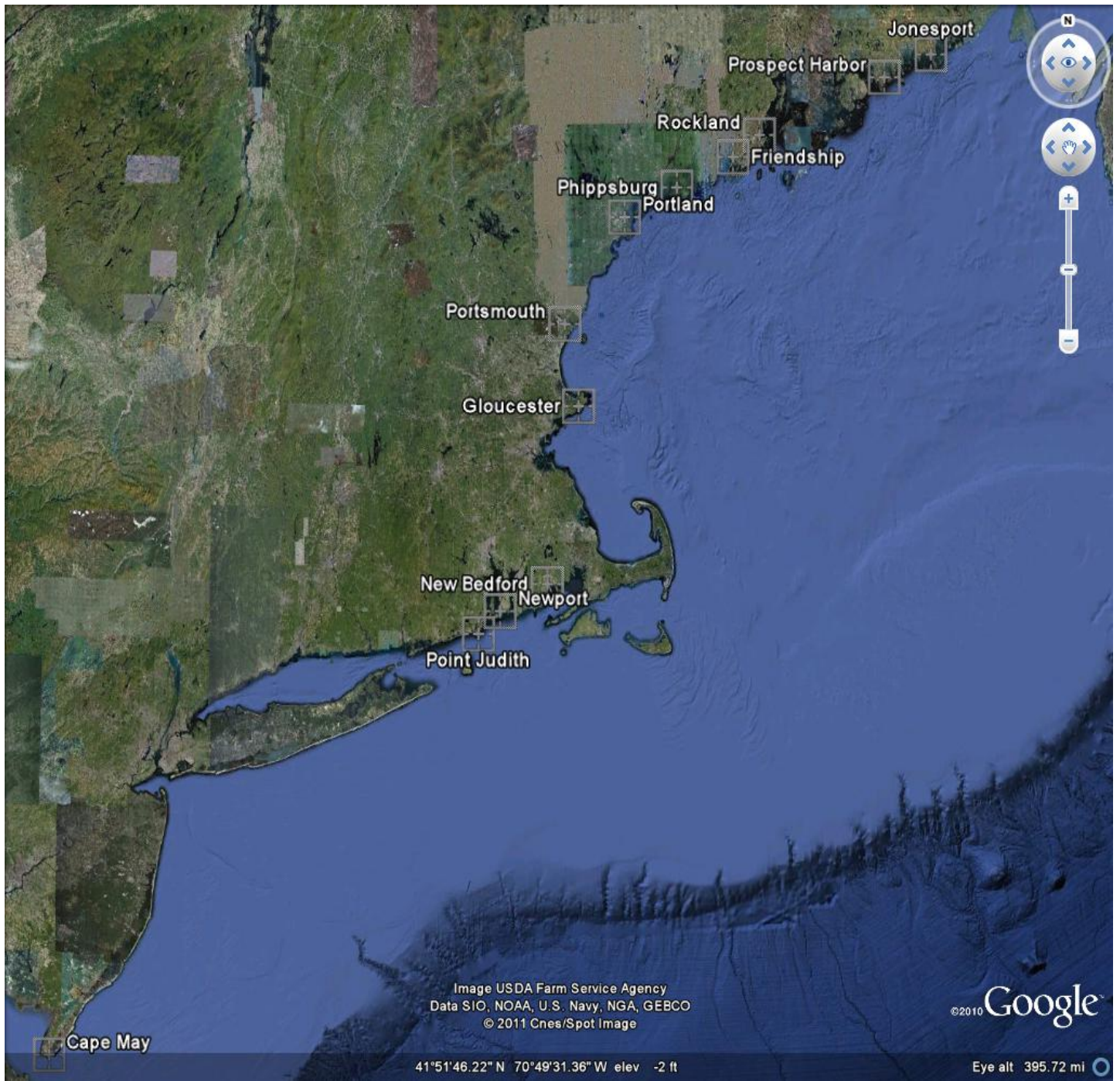


Figure 1: Range and locations of herring catch samples and bycatch studies.

## Results

### *Objective 1a: Portside Bycatch sampling of Atlantic Herring and Mackerel*

#### *Atlantic herring*

Twenty three herring bycatch studies were completed from August 1, 2013–January 31, 2014, of which at least 9 were observed at-sea (remaining observed trip information still pending), offering approximately 40% joint coverage (data on the co-occurring trips are not yet available for analysis). Over the course of this time period three gear types were sampled; small mesh bottom trawl (SMBT), purse seine (PS), and single mid-water trawl (SMWT). Eleven bycatch studies were executed on SMBT, 9 on PS, and 3 on a SMWT (Figure 2).

For this specific time period the Atlantic herring fishery landings were approximately 54,292 t (NOAA Quota Monitoring Website 2012) and a total of 1,431t of herring was sampled for bycatch (Table 1a). The total weight of documented bycatch (including all incidental catches) was 23.9 t. The total percent of documented bycatch was 1.67%. The overall mean percentage of bycatch per individual study was 1.22%, with a standard deviation of 2.32%, a minimum of 0.00% and a maximum 8.72% (Table 1b). Ten species of bycatch were documented (Table 2).

Seven NMFS Statistical Areas were sampled for Atlantic herring bycatch for this particular timeframe (Figures 3 and 5). Area 561 on GB contained the largest amount of bycatch, approximately 70.04% of the total documented bycatch. Area 611 in Long Island Sound contained the least amount, approximately 0.37% of the total documented bycatch.

Haddock (*Melanogrammus aeglefinus*) was the most abundantly encountered bycatch species, accounting for approximately 61.15% of the total bycatch, and roughly 1.02% of the total weight sampled. Bycatch was documented entirely on GB with the bulk in Area 561 and the remaining portion in Area 522 (Table 2 and Figure 3).

Silver hake (*Merluccius bilinearis*) accounted for approximately 25.85% of the total documented bycatch and 0.43% of the weight sampled (Table 2 and Figure 3). The majority was landed off shore on GB in both Areas 561 and 522, in shore in Area 513, and a small portion near Block Island in Area 539.

River herring, a combination of two anadromous species; alewife (*Alosa pseudoharengus*) and blueback herring (*Alosa aestivalis*) made up about 4.09% of the bycatch and 0.07% of the total sampled Atlantic herring (Table 2 and Figure 3). The majority of river herring were landed in Rhode Island Sound in Area 539. Interestingly, for the first time since the inception of this project, alewife made up 100% of the river herring composition, with zero blueback herring documented for this time period.

Spiny dogfish (*Squalus acanthias*) accounted for about 3.48% of the total bycatch composition, and approximately 0.06% of the total weight sampled. Statistical Areas 513 in GOM contained all of the documented dogfish (Table 2 and Figure 3).

Atlantic mackerel (*Scomber scombrus*) surprisingly, accounted for an unusually smaller percentage of the total documented bycatch than in prior years, only comprising 2.91% of the documented bycatch and roughly 0.05% of the total weight sampled. Mackerel were distributed relatively equally around the Northwest Atlantic, with landings found in-shore in the GOM in Areas 512 and 513, off-shore on GB in Area 561, and off Southern New England in Area 539 (Table 2 and Figure 3).

Unclassified squids a combination of two cephalopods; northern short-fin squid (*Illex illecebrosus*) and long-fin squid (*Doryteuthis pealeii*) accounted for approximately 1.14% of the documented bycatch and about 0.02% of the total weight sampled. Squid were documented in relatively small percentages in all statistical areas sampled except for Area 512 in GOM (Table 2 and Figure 3).

The remaining four species of bycatch were pooled together into a category called All Other Species, which contained species whose individual bycatch percentage was less than or equal to 1%. This group is also highlighted by a black box in Table 2.

Please note that all length frequencies of bycatch species will be made available in the next corresponding annual report.

The species encountered as bycatch varied spatially by NMFS Statistical Area, however conclusions drawn from this regarding the spatial nature of the bycatch encountered should be interpreted cautiously due to the small sample size (Figure 3). It is important to remember that bycatch in the herring fishery can be episodic, and isolated to one fishing event in one specific spatial location.

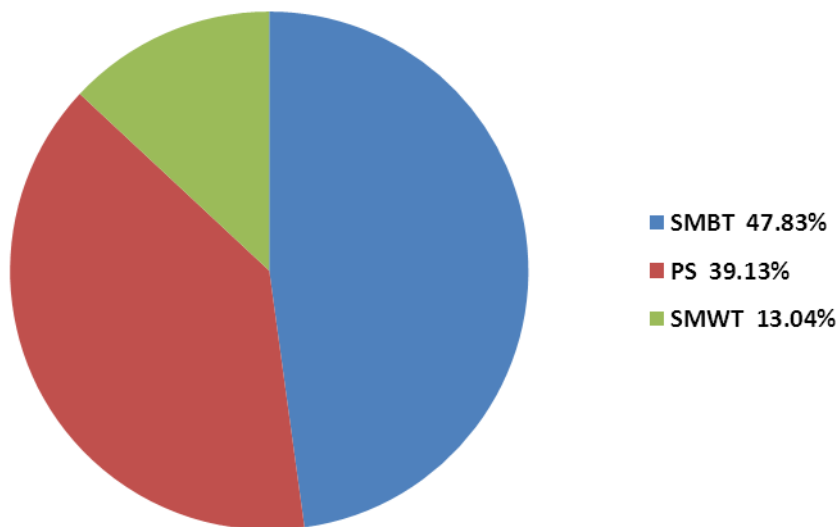


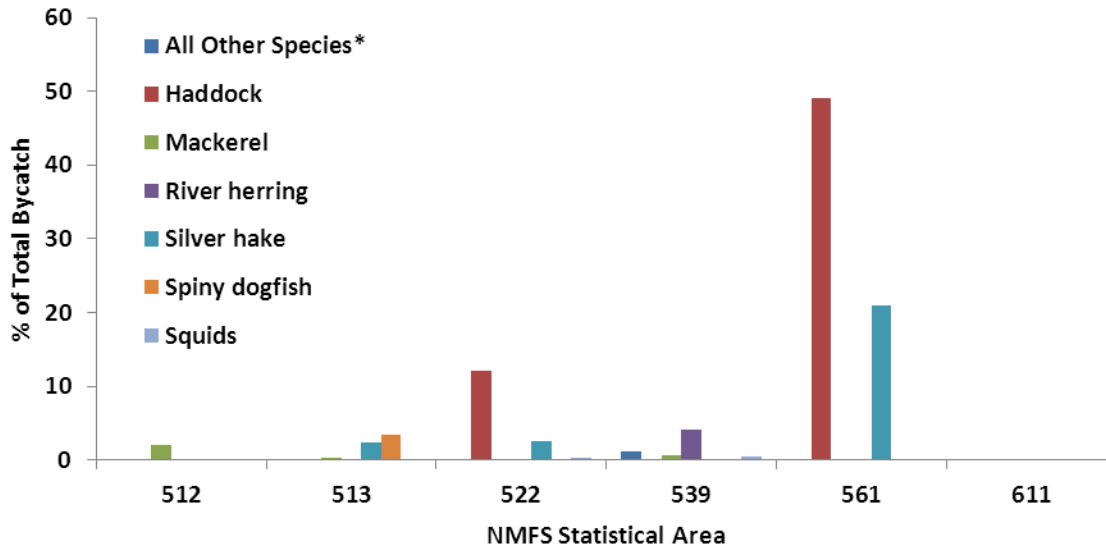
Figure 2. Percentage of herring bycatch studies by gear type August 1, 2013-January 31, 2014

Table 1. Atlantic herring bycatch data August 1, 2013– January 31, 2014

<b>a. Bycatch Data by Total Landings and Total Sampled</b>	
Total Landings (t)	54,292.25
Total Sampled (t)	1,430.46
% of Total Landings Studied	2.63
Total Bycatch (t)	23.90
% Bycatch in Total Sample	1.67
<b>b. Bycatch Data per Sampling Event</b>	
Mean % Bycatch	1.22
Maximum % Bycatch	8.72
Minimum % Bycatch	0.00
Standard Deviation	2.32

Table 2. Documented bycatch including incidental species August 1, 2013- January 31, 2014

Species	Total Weight (kg)	% Total Bycatch	% Bycatch in Herring
Haddock	14,616.583	61.151	1.022
Silver hake	6,179.092	25.851	0.432
River herring	977.655	4.090	0.068
Spiny dogfish	832.406	3.483	0.058
Atlantic mackerel	694.935	2.907	0.049
Squids	272.789	1.141	0.019
Skates	191.243	0.800	0.013
American shad	89.119	0.373	0.006
Sculpins	40.303	0.169	0.003
Butterfish	8.331	0.035	0.001
Total	23,902.455	100.000	1.671



\*All Other Species represents individuals whose bycatch composition made  $\leq 1.00\%$

Figure 3. Documented bycatch species percentages by NMFS Statistical area August 1, 2013-January 31, 2014

### Atlantic mackerel

It is important to note that over the past seven years Atlantic mackerel landings have been relatively low. The Atlantic mackerel season is a winter fishery that usually starts in late December. According to the NOAA Quota Monitoring Website for this specific time period the Atlantic mackerel fishery landings were approximately 2,114,530 lbs (960 t), less than 3% of the total quota (Figure 4). Due to very low mackerel landing activity, zero portside bycatch studies were conducted.

### Atlantic Mackerel Quota Monitoring Report

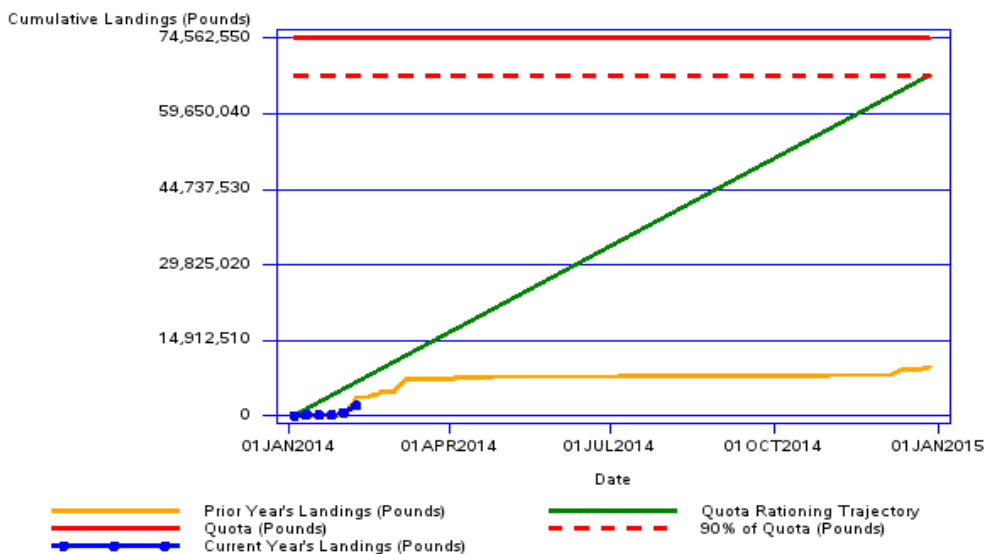


Figure 4. Atlantic mackerel landings for the 2014 fishery

**Objective 1b: Co-occurring trips**

Bycatch data from the at-sea trips for this report period is not yet available. Once the data is released by NMFS analysis and comparisons of the data will be conducted and compiled in the next annual report.

**Objective 2a: Commercial catch sampling of herring and mackerel**

*Atlantic Herring Sampling (Commercial Catch Samples)*

Forty eight samples were collected from August 1, 2013 through January 31, 2014, from catches in the Gulf of Maine (GOM), offshore on Georges Bank (GB), and southern New England. Approximately 58% of the herring samples were acquired from Maine ports: Fourteen were sampled from Rockland; 10 from Portland; 2 from Prospect Harbor, and 1 from Jonesport (Figure 5). The remaining samples were collected from Newington, NH, Boston, Gloucester, and New Bedford, MA, and Davisville and Point Judith, RI. These samples were transported to DMR where they were processed for length, weight, age (using otoliths), sex, gonad stage/maturity, and stomach contents/weight. Sampling for the Atlantic herring fishery occurs routinely during the course of bycatch sampling at many of the same locations. Data are then entered into a database and are available for statistical analysis as part of an ongoing NOAA interstate fisheries grant.

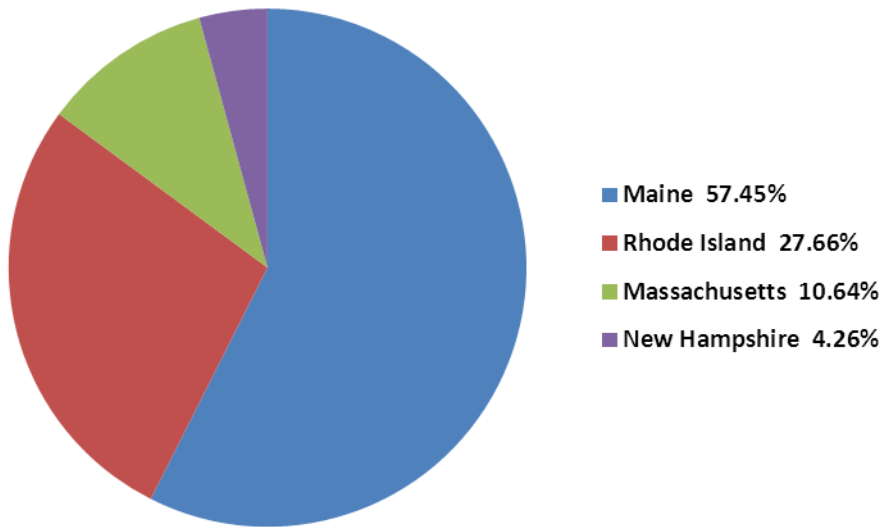


Figure 5. Percentage of herring samples collected by state August 1, 2013–January 31, 2014

*Atlantic Mackerel Sampling*

Zero Atlantic mackerel commercial catch samples were collected due to relatively low landings.

*Objective 2b: Collection of river herring for UC Santa Cruz*

Sample collection for UC Santa Cruz was put on hold upon their request until further notice. Therefore zero samples were collected for this time frame.

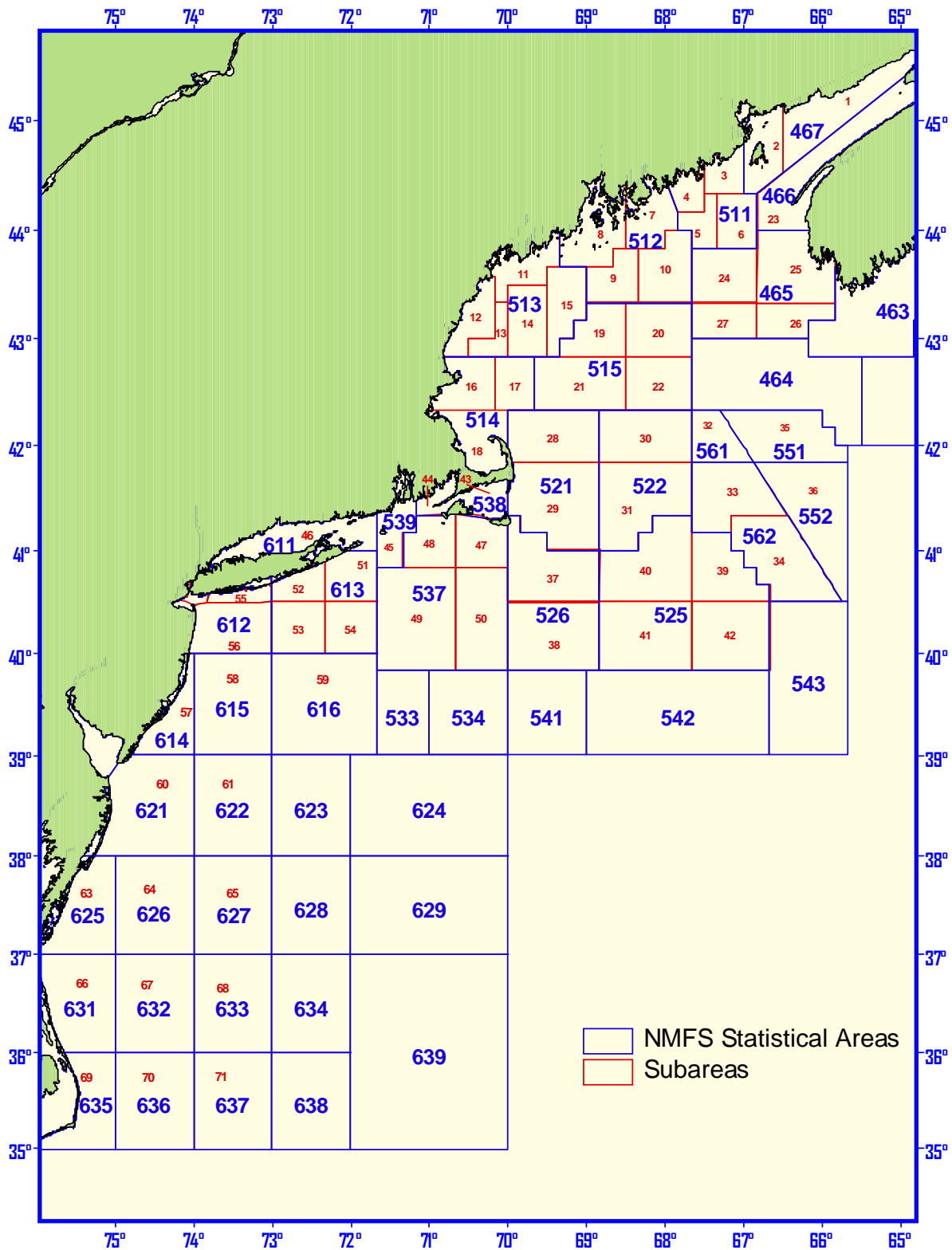


Figure 6. NMFS Statistical Areas.



## *Conclusions*

The portside bycatch survey has continued to prove very successful since its inception in August of 2003. The results of this survey have revealed extremely small levels of bycatch in the directed herring fishery, minor levels of bycatch in the Atlantic mackerel fishery, and no bycatch in the Atlantic menhaden fishery for all gear types sampled. The results of this project are useful in quantifying and understanding the extent of retained bycatch in the Atlantic herring fishery and should prove as useful in the Atlantic mackerel and menhaden fishery.

Atlantic herring, mackerel, and menhaden are harvested as large volume fisheries, which results in mass handling techniques like pumping the catch from the nets into the vessel holds and again into the processing facilities. Because of the nature of these fisheries there are limited opportunities to observe and/or sample bycatch at-sea. However, vessels can discard some or all of the catch at-sea and there are some methods of sorting out large bycatch before or during the pumping process. For these reasons the portside component is not designed to quantify all bycatch in the herring, mackerel, and menhaden fisheries, but only retained and landed bycatch.

Since the spring of 2011 the portside bycatch sampling protocol shifted towards analyzing entire boat loads only and eliminating partial boat or lot sampling. This new approach has made aligning portside data between Maine DMR, and Massachusetts DMF and the NMFS at-sea data more statistically useful for comparing bycatch percentages and to increase the coverage of landed herring, and mackerel, trips across both fisheries. These efforts will complement but not replace the National Marine Fisheries Service (NMFS) at-sea observer coverage. This bycatch survey represents a unique opportunity to collect data in an inexpensive but efficient and accurate way.

The data collected from both the Commercial Catch Sampling Program and the Portside Bycatch Program were useful for the Atlantic herring stock assessment in June of 2011. In particular the Atlantic herring samples used for the catch-at-age matrix helped to determine spawning stock biomass and the 2013 and 2014 area fishing quotas.

## Attachment 4

### **Protocol for the Atlantic Herring Commercial Catch Sampling**

#### **Project description:**

The sampler collects herring (n=50/vessel) in ports throughout the north and mid-Atlantic coasts, encompassing an area from Maine to New Jersey. At each port, random herring samples are collected directly off the incoming vessels and brought back to the lab at ME DMR in Boothbay Harbor, Maine. Fish are processed in the lab and data are collected on gonad development, age (determined from otoliths), length, and weight.

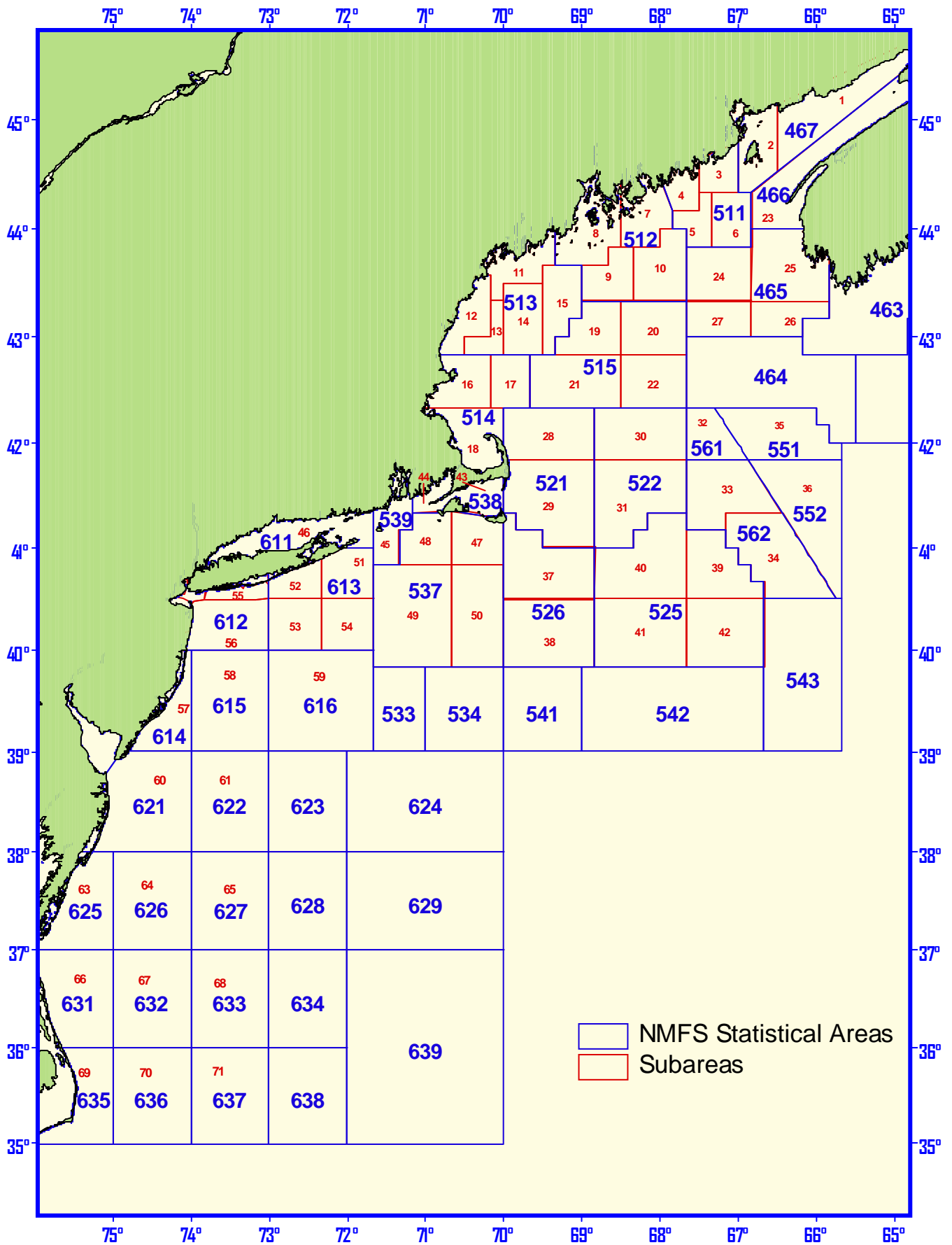
During the beginning of the year (January-March), the majority of the herring sampling is done in Gloucester and New Bedford, MA; Point Judith, RI and Cape May, NJ. These ports experience the largest landings from the winter fishery due to their proximity to the fishing grounds and accessibility to markets. As the herring migrate north along the coast, the sampling rotation includes ports along the Maine and New Hampshire coasts. During the “peak” season (June-October), the sampler will collect fish from fixed gear, seiners and Mid-water trawlers in up to 15 ports.

The ports the sampler will collect in **Maine** are: Lubec, Prospect Harbor, Stonington, Rockland, Sebasco, Bath, and Portland. **New Hampshire:** Newington and Portsmouth. **Massachusetts:** Gloucester, Fall River and New Bedford. **Connecticut:** Stonington and New Haven. **Rhode Island:** Point Judith and North Kingston. **New Jersey:** Cape May.

#### **Parameters for sample collection:**

1. Herring must have been caught in U.S. waters.
2. Two samples per week from each statistical area where the fish were caught (see chart).
3. One sample per week from each type of fishing gear where possible (mid-water trawl, pair trawl, purse seine, stop seine, weir).
4. 50 herring are to be randomly selected from the load (plus a couple to allow for damaged or otherwise useless fish). The fish are placed in ME DMR herring sample boxes.
5. The sample boxes are then stored in a freezer until time allows them to be brought to ME DMR headquarters in W. Boothbay Harbor. Samples should be delivered to ME DMR headquarters at a minimum of once per week.
6. The following information should be recorded on the sample boxes:
  - a. Amount of herring landed (lbs or metric tons)
  - b. Date of Catch
  - c. Catch location: NMFS Statistical Area #, and Sub-Area #
  - d. Port landed
  - e. Fishing vessel
  - f. Location of where sample was collected (sometimes different than where fish were landed)
  - g. Name of collector

- h. Under remarks note gear type (purse seine, midwater/pair trawl, stop seine, gillnet or weir)



## Protocol for the Atlantic Mackerel Commercial Catch Sampling

### Project description:

Commercial catch samples of mackerel are collected by randomly selecting 100 fish from each fishing vessel. These fish are measured and weighed and then a subsample (n=25/vessel) is frozen and transported to the Northeast Regional Science Center, where they are aged and logged onto a database.

Currently the mackerel sample locations in **Maine** are: Bath, and Portland. **Massachusetts:** Gloucester, Fall River and New Bedford. **Rhode Island:** Point Judith and North Kingston. **New Jersey:** Cape May. As proposed new plants become operational the number of sampling ports will increase.

### Parameters for sample collection:

1.) A length sample of mackerel will consist of **100** randomly selected fish from which a minimum of **25** fish should be taken for aging. Stratification for selecting fish for aging is as follows:

<u>Centimeter interval</u>	<u>Number of fish</u>
$\leq 35$	<b>1 or more</b>
$> 35$	<b>2 or more</b>

2.) Atlantic mackerel must have been caught in US waters.

3.) The following data should accompany each sample:

- a. Amount of mackerel landed (lbs, metric tons)
- b. Date of catch
- c. Catch location: NMFS Statistical Area #, and Sub-area
- d. Port landed
- e. Fishing vessel
- f. Location of where sample was collected (sometimes different than where fish where landed)

## Instructions for Sampling Atlantic Menhaden from the Maine Bait Fisheries

### Acquiring the 'Sample'

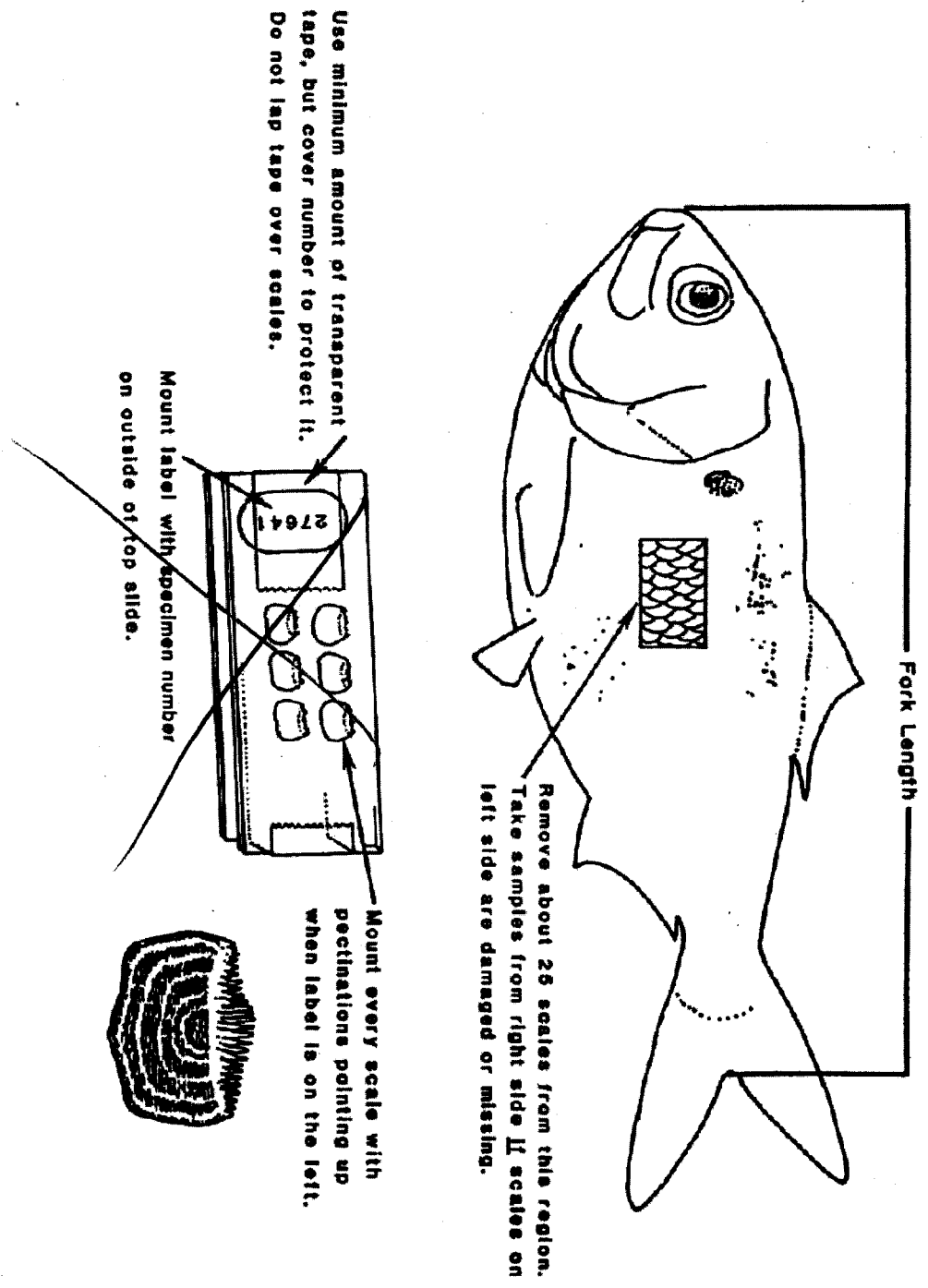
- Ideally, scoop a bucket of menhaden at random from the top of the fish hold.
- If the menhaden have already been packed out in flats or fish boxes, take 15-20 fish at random from the container.
- If available, record date of capture, location of capture, and vessel name. Usually we write this info on a waterproof tag and toss it in with the bagged menhaden sample.

### Processing the 'Sample'

- Select a data sheet from the top of the pile. Write-in pertinent sample info on left half of data sheet:
  - Year Caught - last two digits
  - Vessel Name - just a name; we'll assign a vessel number at Beaufort
  - Location Caught - write location above the boxes; we'll assign a location code at Beaufort
  - Month and Day
  - LEAVE BLANK - Species and Scale Reader
  - Initial the data sheet (bottom right), and write any miscellaneous comments in the 'Remarks' box of the data sheet, eg, gear type, port of landing.
- Before you begin to handle the fish for lengths and weights, lay out ten coin envelopes on the counter-top and label each on the back with the unique 5-digit 'Specimen Number' found on the right side of the data sheet.
- From the plastic bag, bucket, etc. holding the menhaden sample, randomly draw out 10 fish. Process each of these 10 fish for fork length (in mm), weight (to the nearest whole gram), and remove a scale patch. Write fork lengths and weights for each of the 10 sample fish in the appropriate boxes on the right side of the data sheet.
- Scale patches are removed from mid-body, just below the start of the dorsal fin. See illustration in sampling manual.
  - Place scale patches in the appropriately labeled coin envelope, ie, scale patch from the first fish in the sample goes in the coin envelope labeled with the specimen number ending in '1'; scales from second fish go in coin envelope ending with specimen number ending in '2', etc.
- Re-bind ten coin envelopes with a rubber band. Paper-clip the coin envelopes to the top of the data sheet.
- Mail data sheets and coin envelopes to Beaufort via Dr. Matt Cieri.

Questions?? - Call Joseph W. Smith, NMFS Beaufort, 252-728-8765

FIGURE 2



Attachment 5

# COMMERCIAL PORTSIDE BYCATCH SURVEY PROTOCOL





## **EXPLANATION:**

The bycatch survey represents a unique opportunity to collect data in an inexpensive but efficient and accurate way. The program takes advantage of normal processing plant operations by quantifying bycatch that enters the facilities. Processing plants have to manually remove other species from the production line before the fish are sorted and cut or frozen. In normal operations, bycatch removed from the product is segregated into xactix bins or totes and removed from the processing floor at the end of each lot. Plants process one lot (fish caught by one vessel on a particular trip, delivered by truck or boat) at a time and then reset the plant in preparation for the next lot. Therefore, the bycatch removed from each lot can be documented and assigned to a catch location, gear type, date and a total lot amount. Additionally, the plants generally buy herring from vessels throughout the fishery and therefore cover multiple gear types, vessel sizes and individual fishing practices.

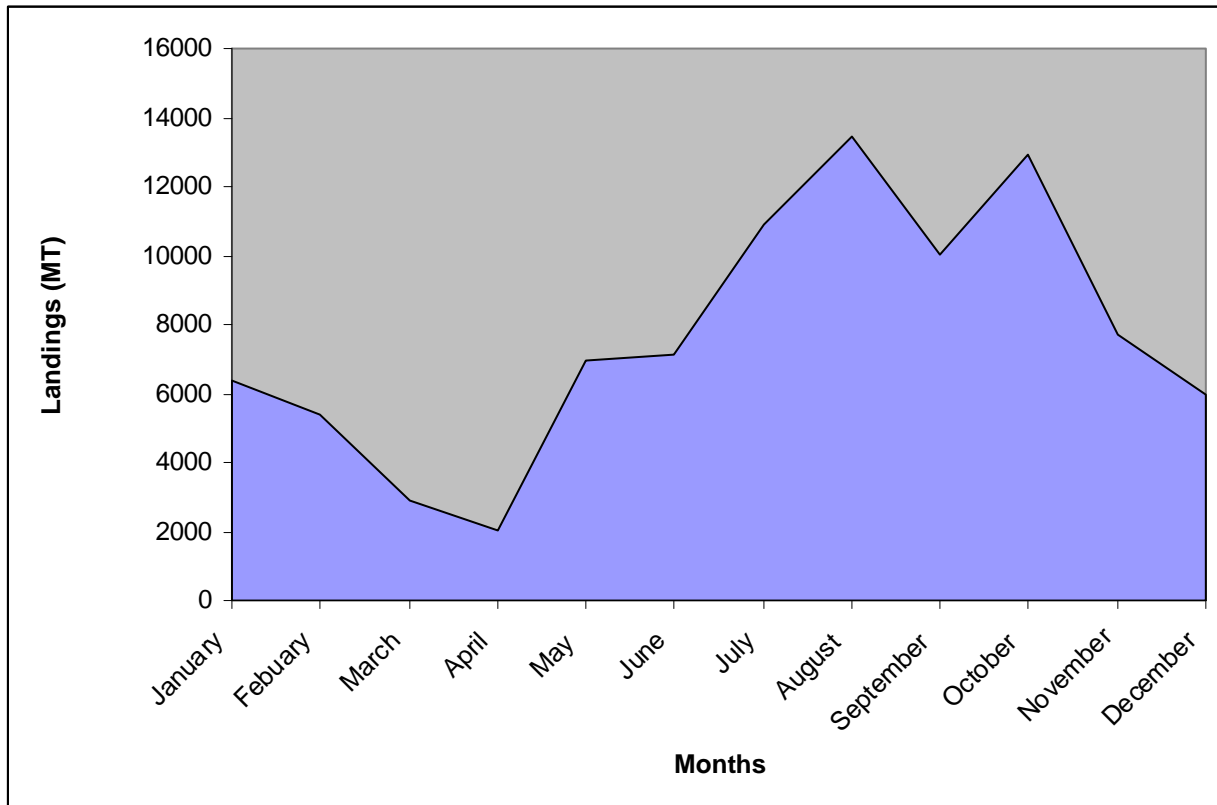
The bait industry has changed tremendously in the last five years resulting in a much more centralized distribution structure. Generally the herring used for bait goes through a large wholesale dealer to smaller dealers and lobster wharfs along the coast. The wholesale dealers generally have facilities where they sort, barrel, freeze and store bait for redistribution. It is at these sites where effective bycatch surveys can also be done, thereby including the bait sector in this study.

The sampling takes place at processing plants and bait dealers in Maine, New Hampshire, Massachusetts, Rhode Island and New Jersey. Sampling sites are selected by targeting Tier 1 locations first and then relying on Tier 2 locations to meet weekly goals. A sampling level of five percent of the entire herring fishery is targeted (Table 1). The mackerel fishery will be sampled if the target levels for the herring fishery are being reached or when herring samples are not available. This scenario is most likely to occur in the winter months when many of the herring vessels switch to the mackerel fishery. The samplers quantify bycatch from individual lots that enter the processing and bait plants according to a NMFS specified protocol. The total weight of any observed bycatch are recorded along with species identification, total species weight, individual lengths and weights of all fish or a representative sub-sample.

From 2004 thru 2008 the average annual herring landings were 91,803 metric tons. Over this five year period, April averaged the lowest landings of 2,033 metric tons, yielding about 2% of the annual landings (Figure 1). August averaged the highest landings of 13,438 metric tons, and yielded about 15% of the annual landings.

**Table 1: Target sampling levels for herring**

Month	5% Herring landings
January	319.82
February	270.91
March	144.92
April	101.63
May	346.8
June	355.3
July	544.18
August	671.9
September	502.18
October	646.28
November	386.65
December	299.61
Totals MT	4590.18



**Figure 1: Five year average (2004-2008) of monthly herring landings**

## **COMPLETE SAMPLING PROTOCOL:**

The samplers collect and quantify all bycatch from individual lots of fish (transported by trucks or vessels) that enter the processing facilities. Samplers position themselves at the point of entry into the facility along an assembly line or at the base of the hoppers where the fish are unloaded. Sampling is conducted before grading or sorting of the catch occurs. All bycatch is removed from the assembly line or hopper and placed in bushel baskets or buckets specific to each species. Species identification is accomplished by examination and the use of identification keys when appropriate as outlined in NMFS and NEFOP protocols. The total weight of any observed bycatch is recorded along with species identification, total species weight, individual lengths and weights of all fish according to a NMFS and ACCSP specified protocol. If there is a large amount of one species, the total weight is recorded and then length frequencies and weight are gathered from a sub sample of  $n=50$ . The information collected for each bycatch study is recorded on the data sheets (see "Data Sheets" section of packet) and entered into the ME DMR biological database.

## **SUB-SAMPLING PROTOCOL:**

A sub-sampling protocol is utilized when sampling a large volume of catch, determined as greater than 80,000 lbs (~40 mt). Instances where this is likely to occur include sampling sites where vessels land an entire catch (as much as one million pounds) to a single facility. Sub-sampling is also appropriate in instances when there is an overwhelming amount of bycatch and/or non targeted species mixed in with the lot of fish. In these cases it can be impossible to use the complete sampling protocol regardless of the amount inspected (< 80,000 lbs.). These situations are likely to occur when vessels are fishing mixed groups of herring and mackerel, some of which have a 50-50 composition.

Sub-samples are to be collected using bushel baskets at timed intervals during the pumping or unloading process following the NMFS at-sea observer sampling protocol. To accomplish this type of sub-sampling one needs to know the total lot weight and the duration of time it will take to unload the catch. After sampling the bushel basket of fish should be sorted by species, and total weight of each species and length frequencies should be recorded (sub sample  $n=50$ , for length frequencies if more than fifty of any species occurs).

**Example:**

Lot size = 120,000 lbs (3 Trucks)

Pumping or unloading time = 3 hours (180 minutes)

If a sample basket is to be collected for every 10,000 lbs of fish, then **12 sample baskets** need to be collected over the entire pumping or unloading process.

$$120,000 \text{ lbs} / 10,000 \text{ lbs} = 12$$

If the entire pumping or unloading process takes an estimated 180 minutes, then **a basket sample needs to be taken every 15 mins.**

If the catch composition from the bushel baskets is 99% Atlantic herring, then one can extrapolate that out of the 120,000 lbs unloaded, then 118,800lbs is Atlantic herring.

$$99\% \text{ Atlantic herring} = 120,000 \text{ lbs} \times 0.99 = 118,800 \text{ lbs of Atlantic herring}$$

If the remaining 1% of the catch composition is Atlantic mackerel, then one can extrapolate that out of the 120,000 lbs unloaded, 1,200lbs is Atlantic mackerel

$$1\% \text{ Atlantic mackerel} = 120,000 \text{ lbs} \times 0.01 = 1,200 \text{ lbs of Atlantic mackerel}$$

## Attachment 6: Negotiated Indirect Cost Agreement



UNITED STATES DEPARTMENT OF COMMERCE  
Chief Financial Officer  
Assistant Secretary for Administration  
Washington, D.C. 20230

April 20, 2012

Mr. Gilbert Bilodeau  
Deputy Director  
State of Maine, Department of Marine Resources  
155 State House Station  
Augusta, Maine 04333-0155

Referenced: Indirect Cost Rate Proposals for State and Local Government Entities

Dear Mr. Bilodeau:

This letter is to confirm that no further action is required under Department of Commerce Financial Assistance Standard Term & Condition A.05, *Indirect Costs*. Pursuant to OMB Circular A-87, Cost Principles for State, Local, and Federally-recognized Tribal Governments, your organization is not required to submit an indirect cost allocation proposal or plan narrative to its cognizant agency. These plans are to be prepared and retained at the local government level. OMB Circular A-87, Attachment E, section D(1)(a) states, in part:

All department or agencies of the governmental unit desiring to claim indirect costs under Federal awards must prepare an indirect cost rate proposal and related documentation to support the costs. The proposal and related documentation must be retained for audit in accordance with the records retention requirements contained in the Common Rule.

When actual costs are known at the end of your fiscal year, you are required to account for differences between estimated and actual indirect costs by means of either: a) making an adjustment to the next year's indirect cost rate calculation to account for carry-forward (the difference between the estimated costs used to establish the rate and the actual costs of the fiscal year covered by the rate); or b) making adjustments to the costs charged to the various programs based on the actual charges calculated. Since OMB Circular A-133, Audits of States, Local Governments and Non-Profit Organizations, requires the independent auditor to determine the allowability of both direct and indirect costs, the organization's indirect cost charges will be subject to audit.

It is important to note that your organization is still required to submit to the U.S. Department of Commerce (DOC) an annual Certificate of Indirect Costs. The DOC acknowledges receipt of your most recent certificates pertaining to your rate for Fiscal Year 2012. The submission of this form is due to our office within six (6) months after the close of your fiscal year. Therefore, your next certification will be due on December 31, 2012.

A copy of this letter will be retained in your official award file. If you have any questions, please email Greg Coss of my staff at [gcoss1@doc.gov](mailto:gcoss1@doc.gov) or call him at (202) 482-3134.

Sincerely,

A handwritten signature in cursive script, appearing to read "Gary W. Johnson".

Gary W. Johnson  
Senior Grants/Cooperative Agreement Specialist  
Office of Acquisition Management

David Alton Libby  
Maine Department of Marine Resources  
(207) 633-9532  
[david.a.libby@maine.gov](mailto:david.a.libby@maine.gov)

July, 2012

**EDUCATION:**

Waterville Senior High School, Waterville, Me. 1967.

Ricker College, Houlton, Me. B.A., Biology, December 1971.

Benthic Ecology, University of Maine Darling Center, Walpole, Me. 1988.

Fisheries Population Dynamics, University of Maine, Orono, Me. 1984.

**Employment Experience:**

**November 2006 – present**

**Marine Resources Scientist IV**

Maine Department of Marine Resources,  
Fisheries Research Station, P.O. Box 8  
West Boothbay Harbor, Me. 04575  
Bureau of Resource Management

- Directs and oversees the Biomonitoring and Assessment Division. Chief responsibilities are to oversee fishery monitoring programs for commercially important marine species; the ACCSP commercial landings program; biological studies; population assessments; and gear research.
- Directs the collection and processing of Maine's Commercial Landings Program (CLP) statistics and processing.
- Program science manager for the Bureau's biological database Marine Resource and Environmental Information System (MARVIN).
- Directs and manages the laboratory's wet lab and sea water facility for holding and conducting experiments of marine organisms
- Promotes Maine's partnership with Atlantic Coastal Cooperative Statistical Program (ACCSP) through serving on the Biological Review Panel and developing and overseeing projects to bring the state into compliance with

**July 2000 – November 2006**

**Marine Resources Scientist III**

Maine Department of Marine Resources,  
Fisheries Research Station, P.O. Box 8  
West Boothbay Harbor, Me. 04575  
Bureau of Resource Management  
Biomonitoring & Assessment Division

- Oversees the Atlantic herring resource monitoring, assessment and advisory group.
- Directs the collection and processing of Maine's Commercial Landings Program (CLP) statistics and processing.
- Program science manager for the Bureau's biological database Marine Resource and Environmental Information System (MARVIN).

- Directs and manages the laboratory's wet lab and sea water facility for holding and conducting experiments of marine organisms
- Promotes Maine's partnership with Atlantic Coastal Cooperative Statistical Program (ACCSP) through serving on the Biological Review Panel and developing and overseeing projects to bring the state into compliance with ACCSP.

**January 1988 – July 2000 Marine Resources Scientist II,**  
 Assessment and Statistics Division  
 Interjurisdictional Resource Monitoring and Assessment Project

- Provides direction for the Atlantic herring landings and sampling projects. Supervises personnel as to their duties and tasks in carrying out the needs of the projects.

**July 1982- January 1988 Marine Resources Scientist I**

- Herring tagging and migration study conducted in the Gulf of Maine. Performed the field tagging and planned and evaluated statistical analysis of the returned tag data.
- Sabbatical in Scotland, UK at the Dunstaffnage Marine Biological Laboratory, Oban. Reared herring and investigated juvenile herring feeding and swimming behavior
- Designed and assembled a hatching and rearing facility for herring used in various studies.
- Participated in herring larvae and britt surveys conducted in the Gulf of Maine for the Transboundary Herring Project.

**November 1976-July 1982 Marine Resources Specialist.**

- Anadromous alewife (*Alosa pseudoharengus*) project. Investigated the dynamics of adult immigration and juvenile emigration of alewife populations.
- Planned, analyzed, evaluated an alewife otolith and scale study pertaining to ageing.

**December 1974-November 1976 Marine Resources Technician.**

- Lobster (*Homarus americanus*) tagging project. Performed the tagging, release and recovery of commercial lobsters. Compiled and analyzed tag return data.
- Lobster trap vent escapement study. Planned, administered trap vent experiments and analyzed compiled data.

**MATTHEW D. CIERI**  
Maine Department of Marine Resources  
McKown Point Rd.  
West Boothbay Harbor, ME 04575  
(207) 215-3709  
(207) 380-5016 (cell)  
Matthew.D.Cieri@gmail.com

## **EDUCATIONAL EXPERIENCE**

B.S.	Marine Science, Stockton College of New Jersey	1993
M.S.	Biology (Marine Ecology), Rutgers University	1995
Ph.D.	Oceanography, University of Maine	1999

## **PROFESSIONAL EXPERIENCE**

<b>Marine Resource Scientist</b> , Maine Department of Marine Resources	2/01-present
<b>Post-Doctoral Scientist</b> , The Ecosystem Center, Marine Biological Laboratory	9/99-2/01
<b>Graduate Research Assistant</b> , School of Marine Science, University of Maine	5/95-9/99
<b>Research Technician</b> , Cranberry/Blueberry Research Laboratory, Rutgers /USDA	5/95-9/95
<b>Graduate Teaching Assistant</b> , Department of Biology, Rutgers University	9/93-9/95
<b>Graduate Research Assistant</b> , Institute of Marine Sciences, Rutgers University	10/93-4/94
<b>Animal Laboratory Technician</b> , Department of Natural Sciences, Stockton College	10/92-9/93

## **CURRENT DUTIES**

### **Atlantic Herring: New England Fishery Management Council (NEFMC) and Atlantic States Marine Fisheries Commission (ASMFC)**

- Oversee catch and landings reporting. Use of VTR (Vessel Trip Reports), Dealer Reports, & IVR (Interactive Voice Reports) to analyze and report landings and catch data to NMFS (National Marine Fisheries Service) regional office, NEFMC, and ASMFC
- Monitor IVR system: Query IVR database and report landing weekly to interested parties. Design and execution of a catch and effort model to predict appropriate “Days Out” needed to extend the fishery in some areas
- Commercial and Bycatch Sampling: Oversee the collection, inventorying, processing, and ageing of herring samples, also verify data entry. Make data available to interested parties. Supervise two full-time and one part-time technician. Produce compliance reports for ASMFC
- Monitor Herring spawning condition: Analyze biological sample data to determine spawning activity status. Indicate when areas should be closed to fishing to protect spawning herring
- Herring PDT (Plan Development Team) & Stock Assessment Subcommittee member (NEFMC & ASMFC): Participate in Stock assessments and analysis of catch and landings statistics for the Herring SAFE report. Develop the catch at age matrix for use in Virtual Population Analysis (VPA) and Age Structure Assessment Program (ASAP) models. Provide technical advice to management; Current Technical Committee Chair (ASMFC)



**Whiting and Small mesh Multispecies (NEFMC):**

- **PDT & Stock Assessment Subcommittee member (NEFMC):** Participated in stock assessment activities; Revision of overfishing and biomass reference points; Analysis of catch and landings statistics; Provide technical advice to management.

**Spiny Dogfish (ASMFC):**

- Participated in stock assessment activities and management analysis; Revision of overfishing and biomass reference points; Analysis of catch and landings statistics; Provide technical advice to management.

**Assessment Science Committee (ASMFC):**

- Provide stock assessment and technical advice to ASMFC Policy board including; Sampling targets for fishery independent and dependent sampling; Workload and scheduling for ASMFC stock assessment and participating scientists; coordinate Advanced Stock assessment training workshops

**Multispecies Technical Committee Chair (ASMFC):**

- Provide stock assessment and technical advice to ASMFC Policy on predator/prey relationships; Update and Expand MS-VPA (Multispecies Virtual Population Analysis) model as appropriate; Assist in incorporating Predator/prey and natural mortality estimates in the Atlantic Menhaden Assessment. Current Chair

**Atlantic Menhaden (ASMFC)**

- **Stock Assessment Subcommittee:** Provide estimates of natural mortality and participate in general assessment activities.

**Biological Review Panel (ACCSP):**

- Provide recommendations of priority and scope of fishery dependent and independent sampling for East Coast Fisheries

**PREVIOUS DUTIES****Monkfish**

- **PDT & Stock Assessment Subcommittee member (NEFMC):** Participated in stock assessment activities; Revision of overfishing and biomass reference points; Analysis of catch and landings statistics; Provide technical advice to management.

**Atlantic Menhaden (ASMFC)**

- **Technical Committee Chair:** Writing consensus documentation from technical meetings; Provide analysis of catch and landings data; Analyze current assessment methods; Present findings to the Menhaden Management Board. Produced compliance reports for the state of Maine
- **Multispecies Subcommittee Chair:** Provide technical guidance on conceptualization and implementation of the Menhaden Multispecies ecosystem model; Report progress to the Menhaden Management Board.

**American Eel (ASMFC)**

- **Stock Assessment Subcommittee Chair:** Organized and lead meetings with both scientific and stakeholder participants. Writing consensus documentation from technical meetings. Provided analysis of catch and landings data. Analyzed assessment methods for use in the stock assessment. Presented results during ASMFC external peer review and Eel Management Board.

**Proposal for funding made to the  
Coordinating Council and the Operations Committee  
Atlantic Coastal Cooperative Statistics Program  
1050 N. Highland St., Ste. 200A-N  
Arlington, VA 22201**

**FY15: Maintenance and Coordination of Fisheries Dependent Data Feeds to ACCSP from  
the State of Rhode Island**

Submitted By:  
Thomas Rosa  
State of Rhode Island Department of Environmental Management  
Division of Fish and Wildlife  
Marine Fisheries  
3 Fort Wetherill Rd  
Jamestown, RI 02835  
Tom.Rosa@dem.ri.gov

**Applicant Name:** Rhode Island Department of Environmental Management,  
Division of Fish and Wildlife, Marine Fisheries

**Project Title:** **FY15: Maintenance and Coordination of Fisheries  
Dependent Data Feeds to ACCSP from the State of Rhode  
Island**

**Project Type:** Maintenance

**Requested Award Amount:** \$79,719

**Requested Award Period:** FY 2015 (May 1, 2015 to April 30, 2016)

**Primary Program Priority:** Commercial and Recreational Catch and Effort Module

**Date Submitted:**

**Project Supervisor:** Jason McNamee, [jason.mcnamee@dem.ri.gov](mailto:jason.mcnamee@dem.ri.gov)

**Principal Investigator:** Thomas Rosa, ACCSP Coordinator , [tom.rosa@dem.ri.gov](mailto:tom.rosa@dem.ri.gov)

**Project Staff:** Nichole Ares, Fisheries Specialist I, [nichole.ares@dem.ri.gov](mailto:nichole.ares@dem.ri.gov)  
Kevin Smith, Principal Biologist, [kevin.smith@dem.ri.gov](mailto:kevin.smith@dem.ri.gov)  
Nicole Lengyel, Principal Biologist, [nicole.lengyel@dem.ri.gov](mailto:nicole.lengyel@dem.ri.gov)  
Seasonal Interns

## Atlantic Coastal Cooperative Statistics Program (ACCSP) Proposal for the State of Rhode Island 2015

### Objectives:

- Continue to provide new and existing RI seafood dealers with technical support to maintain and improve dealer electronic reporting to the Standard Atlantic Fisheries Information System (SAFIS) pursuant to RI Marine Fisheries Statutes and Regulations.
- Provide technical and analytical support to the RI Marine Fisheries Quota Monitoring Program as well as maintain dealer compliance monitoring protocols for both quota and non-quota managed species by utilizing commercial landings data from SAFIS.
- Continue to collect and enhance trip-level catch and effort data through the RI Marine Fisheries Commercial Harvester Catch and Effort Logbook Program and the RI Electronic Recreational Logbook (eLOGBOOK) Program, and continue to transition commercial fishers' primary reporting method to eTRIPS.
- Maintain and improve the existing data feed of RI supplemental fisheries data to the ACCSP data warehouse.

### Need:

Between 2006 and 2007 the Rhode Island Division of Fish and Wildlife, Marine Fisheries Section (RIDFW) completed a statewide implementation of the marine fisheries commercial data collection program. Prior to 2007, RIDFW collected data from the commercial lobster sector through a mandatory catch and effort logbook. Rhode Island meets the ACCSP standard by establishing a two-ticket system for the crustacean, squid, finfish, and whelk fishery sectors and a one-ticket system for the shellfish fishery sector. This program collects trip level landings data from all of the 139 dealers licensed in Rhode Island through direct dealer entry into the eDR SAFIS application. Catch and effort data are currently collected from 100% of the fishers in the state finfish, squid, whelk, and crustacean sectors either via paper logbooks that are uploaded to the eTRIPS SAFIS application by RIDFW staff or through direct eTRIPS entry by the fishers. In addition, crustacean dockside sales are collected through a supplementary logbook which captures trip level data of all sales. These data are transferred to the ACCSP data warehouse in the proper format annually. Between 2007 and 2010, catch and effort logbook data was entered into an in-house database, and since 2011, all logbooks submitted to the RIDFW were entered directly into eTRIPS by RIDFW staff. Beginning in 2012, RIDFW began an outreach program to transition fishers to using eTRIPS as their primary reporting method and to date, approximately 26% of fishers with a logbook requirement are using eTRIPS, with that number expected to rise throughout 2014.

Maintenance and coordination of the SAFIS data entry is critical for successful fisheries management in Rhode Island. The collection of this data has been essential for the determination of commercial catch and effort statistics, establishing an efficient quota monitoring process, as well as tracking active versus latent license holders. Quota monitoring is one of the most time-sensitive and labor-intensive processes utilizing this data as Rhode Island ACCSP staff members are responsible for daily tracking and monitoring of landings for quota managed species in

Text highlighted in yellow indicates changes from the previous version of this proposal.

**Bold text indicates sections that help with the ranking process as outlined on page 14**

Rhode Island. This is accomplished through analysis of trip level data on quota monitored species entered by dealers into SAFIS eDR. ACCSP staff then use these analyses to make decisions regarding seasonal closures and possession limit changes.

In addition to providing and maintaining the ACCSP commercial catch and effort (eTRIPS) and landings data feeds (eDR), the ACCSP staff is responsible for outreach and support of the voluntary eLOGBOOK program in Rhode Island. This SAFIS application is used to enter and house recreational catch and effort data and is used by Rhode Island fisheries managers to determine possession limits and minimum sizes of important recreational species. Furthermore, RI ACCSP staff continues to provide data feeds for lobster at-sea and port sampling data via the ASMFC Lobster Database and supplemental horseshoe crab and aquaculture data for the Fisheries of the United States via ACCSP. Also, data feeds for finfish sampling to the ACCSP warehouse will continue to be developed.

With these programs established and planned enhancements scheduled for 2015, the goal of this project is to maintain these data feeds to the ACCSP while continuing to improve data quality as well as maintaining outreach to dealers and fishers. The plan detailed below is similar to the scope of work proposed for the past several years.

#### Results and Benefits:

Collecting high quality, comprehensive fisheries data is essential to successful fisheries assessment and management. This project allows the current level of oversight and coordination of the ACCSP to continue in Rhode Island by providing funding for the staff necessary to maintain the project. **The state relies on comprehensive SAFIS eDR and the RI Commercial Harvester Logbook data for fisheries management programs including quota monitoring, resource assessment, license tracking, and resource allocation. The state also relies on eLOGBOOK data as it enhances and adds to the existing MRIP dataset with regard to landings and discards, and most notably it increases our understanding of the length frequency distribution of recreational harvest. This comprehensive and timely data allows RIDFW to establish higher latitude in management programs which is encouraged by the fishing industry. Additionally, once in the ACCSP data warehouse, the catch and effort and biological sampling data provided by Rhode Island can be utilized by other partners as well as stock assessment scientists for regional scientific assessment of important fish populations. Although the work outlined in this proposal is specific to Rhode Island, the presence of RI ACCSP staff provides many benefits to regional partners. These benefits include increased coordination between state and federal program partners, increased technical assistance, as well as the sharing of data collection methodology and troubleshooting techniques.**

#### Approach:

**Currently all 139 licensed seafood dealers in Rhode Island are electronically entering trip level data into SAFIS. This is mandated by Rhode Island Marine Fisheries Regulation 19.14, which states that dealers must enter all required data into SAFIS at least twice weekly (Monday and Thursday).** Dealers that hold Federal and/or state dealer permits

Text highlighted in yellow indicates changes from the previous version of this proposal.

**Bold text indicates sections that help with the ranking process as outlined on page 14**

are provided support and initial SAFIS training regarding the SAFIS eDR system. Support is provided to dealers who call or walk-in on a daily basis for questions regarding licensing, quotas, and possession limits, vessel and license searches, SAFIS enhancements, “favorites” improvements, file upload assistance, and other computer issues. Site visits are conducted if further support and training are necessary.

**In order to ensure data quality and proper SAFIS reporting, the RIDFW strictly monitors dealer compliance.** Dealers who do not report complete landings reports are not allowed to renew their dealer license for the following year. The Rhode Island Department of Environmental Management (RIDEM) Division of Law Enforcement becomes involved when a dealer has repeatedly violated compliance regulations. This model has been very successful in bringing problematic dealers into compliance and needs to continue in order to collect the highest quality data in a timely manner consistent with Marine Fisheries Regulations. **To summarize a dealer’s compliance performance, dealer “report cards” assigning qualitative grades are mailed quarterly to all dealers. These report cards detail the reporting history of each dealer from the previous quarter and help RIDFW track improvements in data quality.** It contains information such as:

- # of reports made within the period
- # and percentage of reports without price
- # and percentage of reports without vessel
- # and percentage of reports without proper license
- # and percentage of tardy reports broken into 3 categories (1-5, 6-10, and 10+ days late).

**Landings entered by dealers require quality control and assurance measures, which are carried out via SAFIS audit protocols daily. These plus additional audit queries run on a weekly basis highlight issues in data quality;** these issues are routinely addressed with dealers and corrected via National Marine Fisheries Service (NMFS) JIRA or through eDR directly. Licensing and commercial vessel data generated from RIDEM must be kept up to date in SAFIS tables, and these updates occur via the SAFIS Management System (SMS) as needed and during scheduled monthly updates. These audits and updates are of great importance and are necessary to maintain high standards of data quality.

Quota monitoring relies solely on accurate and up to date SAFIS data. Data are downloaded from SAFIS on a daily basis and appended to an in-house Microsoft Access database. The RI ACCSP staff also closely monitors the Research-Set-Aside (RSA) program and landings to maintain the accuracy of state landings of quota monitored species. In 2012, RI ACCSP staff initiated discussions with the commercial technical committee to add disposition codes for RSA landings. In 2013 a disposition code was added in as a temporary solution while a new field was being implemented. In June 2014 a new field “catch source” was deployed. This new field defines the type of landing that is being reported and can include a designation of Standard, Car, RSA, or Aquaculture. This field was introduced to dealers and fishermen alike as it affects both eDR and eTrips, and further training was made available if needed. This successful implementation allows RSA landings to be captured at the SAFIS level and eliminates the need to rely on adjustments made to landings data from biweekly reports from the NMFS IVR phone system. Landings records are now more accurate, timely, and the quota management

Text highlighted in yellow indicates changes from the previous version of this proposal.

**Bold text indicates sections that help with the ranking process as outlined on page 14**

process is more streamlined particularly in the peak summer season. Additionally, as in 2012, 2013, and 2014 there will not be a fluke sector program in RI and therefore sector landings will not need to be considered. However, discussions on this program continue and if re-established, the ACCSP Coordinator would need to monitor the associated additional data elements and re-incorporate them into the quota monitoring process. Once state landings data are in the Access database, the data are sorted and filtered to detail daily landings of fluke, scup, black sea bass, striped bass, tautog, menhaden, and bluefish. Non-confidential, graphical updates of cumulative Rhode Island landings are then posted weekly to the RIDFW webpage as public information. The staff's role in maintaining a high level of accuracy and timeliness for quota managed species data is essential for successful management.

Data requests from fishers, academics, and the RIDEM Licensing Division are also completed on a daily basis by RI ACCSP staff, which support fisheries science and management decisions. These requests are necessary to maintain the level of support required by the RIDEM and other regional fisheries managers. **Both in-house and external data requests of SAFIS-generated data have been increasing as the data quality and quantity improves. The data obtained becomes available to support state and regional stock assessments, economic analysis, and research.** All requests include only non-confidential data unless confidential access is granted through ACCSP channels. RIDFW expects that increasingly rigorous management schemes in development will result in further heavy usage of the data.

**In addition to monitoring SAFIS landings data, metadata and socio-economic data are also collected by RI ACCSP staff.** Examples of such data include but are not limited to water temperature from inshore and offshore data buoys, wind data, number of participants in specific fisheries by week or day, average price per week of quota monitored species, number of participants in different fisheries by gear type, and possession limits. This data continues to be used in generalized linear models to project landings of quota managed species. Another source of metadata is generated from weekly "Team Quota" meetings. "Team Quota" was established by the RIDFW in 2011 to track fisheries openings, closures, and possession limit adjustments. Meeting minutes also include landings data from SAFIS, opinions from RIDFW staff on quota management decisions, and dates for regulation filings. "Team Quota" has replaced the quota decision making document that has been used in the past to document all of these changes. Additionally, economic data entered by the dealers are used in monthly summaries for Rhode Island's two largest ports, Point Judith and Newport. The data are used to justify funding for port improvements and maintaining shoreside operations that enhance the commercial fisheries. Data are also used to highlight seafood availability and provide the basis for public outreach promoting local seafood consumption and improving the state's economy through support of the fishing industry.

Catch and effort data for all fisheries are essential for the RIDFW to provide efficient and effective management. **Harvesters in all commercial fisheries are required by Rhode Island laws to submit catch and effort data to the RIDFW. Currently, all finfish, crustacean, squid, and whelk commercial fishers are required to fill out a catch and effort logbook and submit it to RIDFW quarterly or enter their catch and effort data directly into eTRIPS. Logbooks submitted to RIDFW are entered into eTRIPS by RI ACCSP staff via eTRIPS Upload. Shellfish fishers are not required to submit catch and effort logbooks because the**

Text highlighted in yellow indicates changes from the previous version of this proposal.

**Bold text indicates sections that help with the ranking process as outlined on page 14**



**data is captured via a one-ticket system. Dealers record and submit shellfish landings information such as quantity landed, gear type, area harvested, etc.** In 2012, RIDFW successfully implemented a new endorsement for whelks in licensing regulations. This new license endorsement identifies all participants in the whelk fishery and enables the RIDFW to require logbooks from these participants. In 2014, a total of 154 fishers obtained the whelk endorsement. As whelks are traditionally harvested by traps, data such as number of traps hauled, soak time, and total gear fished are captured by these fishers on their catch and effort logbooks and then entered into eTRIPS by RI ACCSP staff or by the fisher directly. Over the next year, another enhancement for collection of more complete catch and effort data in Rhode Island will require shellfish dealers to collect and enter hours fished information into the eDR with all shellfish landings at the trip level.

**In order to standardize the reported catch and effort data, RIDFW provides harvesters with logbook forms to report landings on a quarterly basis. Postage-paid envelopes are provided by the RIDFW to ensure timely return of the logbooks. The Rhode Island catch and effort logbook meets the ACCSP standard and completes the two-ticket system for finfish, crustacean, and whelks by collecting complete trip level data on catch, effort, gear, and area fished for all relevant species.** Submitted logbooks are processed by RIDFW staff and entered into eTRIPS. Harvester license number, dealer, and sale date are used to match records with dealer reports for quality control and assurance of the landings data. **Audits identifying issues with catch and effort data reporting are conducted routinely, and fishers are contacted to amend logbooks when necessary via telephone or email.** Any logbook not completed in full is returned to the fisher for correction. Rhode Island commercial licensees may not renew their licenses unless they have completed their catch and effort logbooks for the entire year. Providing these logbooks was paramount to the initial success of the program.

The large number of records makes the logbook program the most labor and fiscally intensive resource component of implementing the two ticket system; however **utilizing the eTRIPS upload feature in 2013 has greatly improved efficiency and accuracy in data entry.** RI ACCSP staff is needed to oversee and conduct data entry and quality control of the catch and effort logbooks. The staff is also needed to communicate with ACCSP programming staff to suggest enhancements and to identify issues in the eTRIPS program, which aid in more efficient and accurate data entry. RIDFW also fields many technical support phone calls and walk-ins from the fishing community regarding the catch and effort logbook. In 2014, quarterly logbook reports were required from approximately 1600 license holders, and that number is expected to remain constant for 2015. ACCSP has provided funding for the printing and mailing of the logbook since its inception through 2010. In 2011, in an effort to transition from ACCSP funds to state funds, the state of RI paid for the mailing of the logbook. RIDFW also provides a link to a PDF version on the website to reduce the cost of printing extra logbooks. In 2013, RIDFW began an outreach program to transition fishers to using eTRIPS as their primary reporting method through an advertising campaign in public offices as well as providing eTRIPS information with the 2013 logbooks that were mailed to each fisher. Staff also encourages any fisher who uses eTRIPS to spread the word amongst colleagues. This program has resulted in approximately 375 new registrants to date. Beginning in 2013 and continuing into 2015, RI ACCSP staff will dedicate time to develop further outreach and training materials for the

Text highlighted in yellow indicates changes from the previous version of this proposal.

**Bold text indicates sections that help with the ranking process as outlined on page 14**



commercial fishers interested in utilizing eTRIPS including holding training workshops, providing web-based tutorials, as well as providing easy ways to sign up for an account. Furthermore, RIDFW intends to assume more of the cost of printing and distributing logbooks moving forward. In 2014, a new paper logbook endorsement was passed for commercial license holders in 2014 that helps subsidize the cost of printing the logbooks. Those fishers who choose not to get the endorsement would be required to use eTRIPS as their primary reporting method.

**To ease duplicative reporting between logbooks and VTRs, federal permit holders required to submit VTRs to the NMFS are exempt from the Rhode Island catch and effort logbook. VTR submissions are only necessary to monitor compliance with RIDFW reporting standards for those federally permitted fishermen in RI. In 2012 RIDFW developed a partnership with NMFS that enables RIDFW to track compliance of those federal permit holders utilizing Fish Online and eVTRs. For a federal permit holder who does not participate in the eVTR program to be exempt from the logbook requirements they must submit all state paper copies of their VTRs to RIDFW if they contain RI landings.** RIDFW is investigating the possibility of converting to a paperless monitoring system for federal VTRs through further partnership with the NMFS database. A completely paperless system will eliminate some of the data entry burden of the RIDFW staff allowing them to concentrate on data quality assurance, data requests, and other timely matters.

**In addition to the harvester catch and effort logbook, fishermen who hold a RIDEM crustacean dockside sales endorsement must fill out a dockside sales logbook which details the quantity, market, grade, disposition, and price of all crustaceans sold at the dock and submit it to RIDFW quarterly.** These data fields were originally included as part of the 2007 logbook format but have been relegated to a separate logbook for ease of reporting. This dockside sales logbook is mailed to the 264 dockside endorsement holders and must be completed regardless of federal permit status. The dockside sales data captures Rhode Island's important economic data such as price on all dockside transactions. This dockside sales data is transmitted to the ACCSP as supplementary data for the Fisheries of the US data feed. RI ACCSP staff is needed to oversee data entry, perform quality control checks, and transfer the dockside sale data to ACCSP in the proper format. In 2015, RIDFW will assume the mailing costs of these logbooks as in previous years. Staff will also investigate possibilities for direct SAFIS entry of this data.

In 2015, Rhode Island will continue to utilize and promote the voluntary eLOGBOOK program. This program enables recreational fishers to enter complete trip level catch and effort data online. This data can be used for recreational effort estimates as well as for important management decisions in Rhode Island. Currently there are 239 registered users and 9,275 reports entered in the Rhode Island eLOGBOOK application with many users entering catch data regularly. Based on the number of saltwater recreational fishing licenses issued in 2011, 2012, 2013 and the number issued so far in 2014, RIDFW estimates ~50,000 licenses will be purchased in 2015. **In July of 2010, the RIDEM adopted Marine Fisheries regulation 7.9.1-2 that made the use of eLOGBOOK mandatory by all Rhode Island party and charter vessels participating in the tautog fishery.** Compliance will continue to be monitored for party and charter fishers in the tautog fishery in 2015. Comparing the 2010 eLOGBOOK entries for party

Text highlighted in yellow indicates changes from the previous version of this proposal.

**Bold text indicates sections that help with the ranking process as outlined on page 14**

and charter harvested tautog in Rhode Island with MRFSS estimated figures produced a noticeable discrepancy in the number of fish harvested. As the eLOGBOOK is considered a census for the party and charter tautog fishery, logically the data can be considered more robust than MRIP (formally MRFSS) estimates. The eLOGBOOK data also contains lengths of all fish harvested and released. This data proved very useful for fisheries managers in Rhode Island, specifically when it was utilized in a model to liberalize recreational size limits for the fluke fishery. While the use of the eLOGBOOK does not claim to fulfill any minimum data element of an ACCSP standard, it is useful for fisheries managers and a unique tool for recreational fisherman to log their catch. In 2015, the RI ACCSP staff will continue to oversee usage of the eLOGBOOK system by all users, provide assistance, and participate in outreach programs particularly at public saltwater fishing events.

**RIDFW has both port and at-sea sampling programs for selected commercial fisheries within the state. The port sampling program focuses on collecting biological samples required by ASMFC fishery management plans. These species include striped bass, scup, weakfish, black sea bass, tautog, bluefish, menhaden, summer flounder, and lobster. RIDFW's at-sea lobster sampling program focuses on ASMFC management needs as well as state specific data needs. RIDFW provides the data feed of lobster port and at-sea sampling data to ACCSP via the ASMFC Lobster Assessment Database.** This feed is sent upon request via a flat file. Finfish port sampling data is scheduled to be fed into the data warehouse in 2014 and will continue in 2015. Neither the lobster sampling programs nor the finfish sampling programs receive funding from ACCSP. ACCSP Staff is needed to organize this data and maintain the data feed to the ACCSP.

From 2002 through 2011, Rhode Island had a full-time state coordinator to manage and implement the ACCSP data collection program. The state coordinator's duties were to develop, monitor, and update ongoing and long-term programs relative to implementing the standards of the ACCSP in Rhode Island. For the majority of 2013, there was one Fisheries Specialist, 100% ACCSP funded. In the fall of 2013, an administrative officer was hired to help with data entry and other ACCSP tasks. The administrative officer was transitioned in to the coordinator role in 2014 at a 33% funding level through ACCSP, and a new ACCSP fisheries specialist was hired, and is 100% funded through ACCSP. RIDFW staff, the ACCSP Coordinator, and the contract fisheries specialist work closely on the quota monitoring, recreational monitoring, and biological sampling portions of this proposal. The ACCSP fisheries specialist is an Atlantic States Marine Fisheries Commission employee under the direct supervision of the RIDFW. Project staff will continue to provide support with processing and data entry of harvester logbooks, aiding ACCSP staff with compliance monitoring and data auditing, quota monitoring and compliance issues relevant to SAFIS, SAFIS technical support and outreach, ACCSP committees, eTRIPS and eLOGBOOK outreach, grant management, and long term program development.

This proposal represents a recurring project funded by ACCSP for the past fifteen years. Figure 1 provides a graphical representation of the total budget of \$221,976. Table 1 provides a brief project history of ACCSP Implementation in Rhode Island. ACCSP has funded the majority of Rhode Island RIDFW's data collection to date. Cost details for fiscal year 2015 are outlined in the requested budget while last year's requested funding is presented in Appendix A.

Text highlighted in yellow indicates changes from the previous version of this proposal.

**Bold text indicates sections that help with the ranking process as outlined on page 14**

In a RIDFW white paper, Gibson and Lazar (2006), documented the deficiencies of the Rhode Island Marine Fisheries program and argued that significant infusion of funding and staff is needed. The RIDFW Marine Fisheries section has undergone a peer reviewed evaluation and need assessment, which concluded that RIDFW Marine Fisheries requires more staff to effectively maintain its services (Boreman et al., 2006). **However, like many other states on the Atlantic Coast, the state of Rhode Island is experiencing fiscal shortfalls and is running a large budget deficit. RIDFW is starting to actively assume some of the costs of ACCSP programs by devoting more staff time to the project and continues to seek alternate funding sources for the project. In 2010 the state of Rhode Island implemented the Rhode Island Recreational Saltwater License. Funds from license receipts are dedicated to the salary of a recreational biologist as well as improving data quality. The recreational biologist sits on the ACCSP recreational technical committee and does outreach for eLOGBOOK, thus these funds now help support the ACCSP program. Additionally, encouraging commercial fishers to transition from paper logbooks to the eTRIPS reporting method through incentives, training programs and regulations ultimately will eliminate some of the costs surrounding the distribution and data entry required for paper logbooks. This will reduce the RIDFW's dependence upon ACCSP funds for maintaining timely and accurate data feeds and will be completed as funding and staff time allows.**

#### **Geographic Location:**

The project will be administered out of the Rhode Island Division of Fish and Wildlife office in Jamestown, RI. The scope of the project covers all of RI and adjacent state and federal waters fished by RI license holders.

#### **Program Accomplishment Measurement Metrics:**

The success of the project will be measured by the following metrics:

- Dealer landings from SAFIS effectively used to monitor quota species, track fishing license activity, and support management programs.
- Catch and Effort and Dockside Sales Logbook program maintained through the eTRIPS program.
- Quality controlled data feeds to ACCSP to be delivered on time.
- Improved quality in data submitted to the ACCSP.

**Table 1. Project History.**

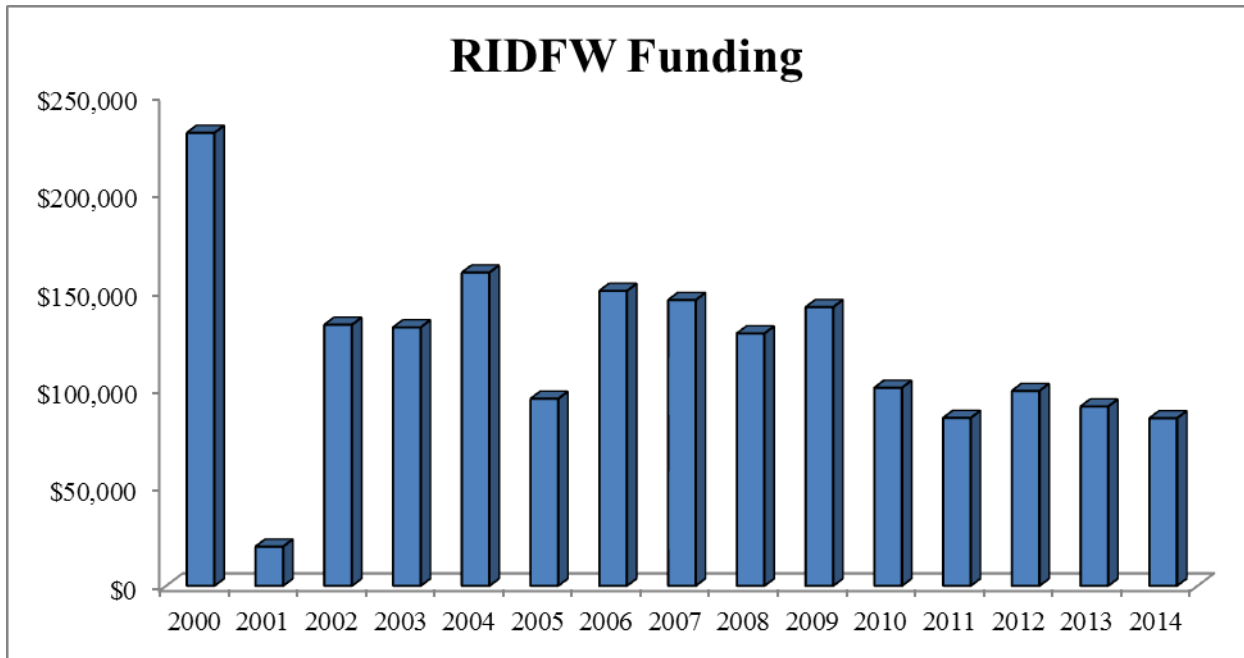
<b>Year</b>	<b>Title</b>	<b>Cost</b>	<b>Results</b>
2000	Implementation of the ACCSP Program in Rhode Island	230,938	Planning and development of ACCSP commercial module implementation
2001	Implementation of ACCSP Continuation	20,000	Implementation of trip level reporting for all RI lobster harvesters, Commercial fishing license reconstruction
2002	Implementation of Phase 2 of ACCSP in the State of Rhode Island	133,084	ACCSP coordinator hired, planning and development of electronic dealer reporting system (RIFIS)
2003	Implementation of Phase 3 of ACCSP in the State of Rhode Island	131,760	Phased Implementation of RIFIS with focus on high volume dealers
2004	Continued Implementation of the ACCSP Program in the State of Rhode Island	159,716	Transition of RIFIS to SAFIS, implementation of federally permitted dealers
2005	Continued Implementation of the ACCSP Program in the State of Rhode Island	95,365	Quota monitoring system developed using SAFIS data, regulation created requiring all RI dealers to report landings via SAFIS
2006	Continuation of SAFIS and Finfish Logbooks in Rhode Island	150,365	Implementation of SAFIS completed, Development of harvester logbook for finfish and crustacean fishery sectors
2007	Coordination and Development of Fisheries Dependent Data Feeds to ACCSP from the State of Rhode Island	145,697	Implementation of harvester logbook for finfish and crustacean fishery sectors
2008	Maintenance and Coordination of Fisheries Dependent Data Feeds to ACCSP from the State of Rhode Island	128,647	Implementation of Dockside Sales Logbook, work begun on feeding data to ACCSP, maintenance of Data collection programs
2009	Maintenance and Coordination of Fisheries Dependent Data Feeds to ACCSP from the State of Rhode Island	142,075	Data feeds of Logbook data and lobster biological sampling developed.
2010	Maintenance and Coordination of Fisheries Dependent Data Feeds to ACCSP from the State of Rhode Island	100,983	eREC developed and eTrips pilot program started , data feeds continued, Fluke sector monitoring database developed, dealer report card system developed
2011	Maintenance and Coordination of Fisheries Dependent Data Feeds to ACCSP from the State of Rhode Island	85,584	Automatic data feed for catch and effort data established via eTRIPS, eREC maintained and developed, data feeds continued
2012	Maintenance and Coordination of Fisheries Dependent Data Feeds to ACCSP from the State of Rhode Island	99,379	Maintenance of automatic data feed for catch and effort data via eTRIPS on a real time basis, maintenance of eLOGBOOK, data feeds continued
2013	FY13: Maintenance and Coordination of Fisheries Dependent Data Feeds to ACCSP from the State of Rhode Island	91,416	RSA tracking improved, maintenance of automatic data feed for catch and effort data via eTRIPS upload, maintenance of eLOGBOOK, data feeds continued
2014	FY14: Maintenance and Coordination of Fisheries Dependent Data Feeds to ACCSP from the State of Rhode Island	85,408	RSA tracking improved, maintenance of automatic data feed for catch and effort data via eTRIPS upload, maintenance of eLOGBOOK, data feeds continued

Text highlighted in yellow indicates changes from the previous version of this proposal.

**Bold text indicates sections that help with the ranking process as outlined on page 14**

**Table 2. Milestone Schedule**

Activity	Month														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
SAFIS Support to RI Dealers	X	X	X	X	X	X	X	X	X	X	X	X			
Quota Monitoring	X	X	X	X	X	X	X	X	X	X	X	X			
ETrips support to industry	X	X	X	X	X	X	X	X	X	X	X	X			
ETrips logbook Data Entry	X	X	X	X	X	X	X	X	X	X	X	X			
Data Feeds to ACCSP	X	X	X	X	X	X	X	X	X	X	X	X			
Semi and Annual Report Writing							X					X	X	X	X



**Figure 1.** RIDFW past funding from ACCSP.

**References:**

Boreman, J., Diodati, P., O’Shea, and E. Smith. 2006. Assessment of the Rhode Island Department of Environmental Management’s Marine Fisheries Section. RIDEM Internal Document, October 2006.

Gibson M. and N. Lazar. 2006. Rhode Island Division of Fish and Wildlife, Marine Fisheries Section 2006: Current Activities, Funding, and an Appraisal of Future Needs. RIDEM Internal Document, August 2006.

**Requested Budget FY 2015 (May 1, 2015 to April 30, 2016)**

**PERSONNEL COSTS:**

Item	ACCSP Share	Direct State Share	Total
Supervising Biologist (FTE 10%)	\$0	\$11,633	\$11,633
Principal Biologist (FTE 30%)	\$0	\$30,967	\$30,967
Assistant Admin Officer (FTE 40%)	\$30,840	\$46,250	\$77,090
Fisheries Specialist (Contract 100%)	\$40,300	\$0	\$40,300
Indirect Charges (RIDEM FTE 15%)	\$3,038	\$0	\$3,038
Seasonal Interns - 2 (RIDEM 50%)	\$4,041	\$4,041	\$8,082
<b>Total Personnel</b>	<b>\$78,219</b>	<b>\$92,891</b>	<b>\$171,110</b>

**EQUIPMENT & SUPPLY:**

Item	ACCSP Share	Direct State Share	Total
Logbook Printing at \$5.91/logbook	\$0	\$9,456	\$9,456
Logbook Mailing @ 4.75 per logbook	\$0	\$7,600	\$7,600
Business reply envelope printing	\$0	\$2,500	\$2,500
Business reply account	\$0	\$1,500	\$1,500
Website development and updating	\$0	\$2,400	\$2,400
Outreach mailing	\$0	\$3,000	\$3,000
Office supplies	\$0	\$1,000	\$1,000
Telephone & Fax Usage	\$0	\$500	\$500
Vehicle Usage and Travel	\$1,500	\$1,500	\$3,000
<b>Total Supply</b>	<b>\$1,500</b>	<b>\$29,456</b>	<b>\$30,956</b>

**TOTAL:**

Item	ACCSP Share	Direct State Share	Total
Total Direct Charges	\$79,719	\$122,347	\$202,066
Percentage	39%	61%	

Text highlighted in yellow indicates changes from the previous version of this proposal.  
**Bold text indicates sections that help with the ranking process as outlined on page 14**

## COST DETAILS:

### 1. Personnel Costs

#### a. From ACCSP:

- i. **Fishery specialist:** 100% ACCSP funded contract position to act as support to the ACCSP Coordinator; Salary plus fringe and benefits for one year = \$40,300.
- ii. **Assistant Administrative Officer:** Partial support for one RIDEM employee to act **as ACCSP Coordinator**; 33% of salary plus fringe and benefits = \$77,090 split between ACCSP (33%) and RIDEM (66%).
- iii. **Indirect charges** (15%) are associated with RIDEM state employees (FTE) funded by ACCSP.
- iv. **Seasonal Interns:** Partial support for 2 Seasonal Interns to assist with data entry= 8,082 split between ACCSP (50%) and RIDEM (50%).

#### b. From RIDEM:

- i. **Supervising biologist:** 10% of salary plus fringe and benefits = \$11,633.
- ii. **Principal Biologists** working on ACCSP related tasks (quota, port sampling and data management, ACCSP and MRIP committee meetings, eLOGBOOK outreach, etc.); 30% of an average salary plus fringe and benefits = \$30,967.

### 2. Equipment and Supply Costs:

#### a. From ACCSP:

- i. **Logbook Printing:** RIDEM will assume all costs of the printing.
- ii. **Travel:** \$1,500 used for mileage, tolls for site visits and meetings, and to subsidize vehicle usage by ACCSP staff as well as any incurred travel expenses for dealer visits; RIDEM will assume half of the costs.

#### b. From RIDEM:

- i. **Logbook Printing:** 1,600 logbooks @ 5.91/logbook – \$9,456.
- ii. **Logbook Mailing:** 1,600 logs @ 4.75/book = \$7,600
- iii. **Business Reply Envelope Printing:** 20,000 Envelopes @ \$0.125/envelope
- iv. **Business Reply Account:** \$100/month Mar-Nov; \$200/month Dec-Feb
- v. **Website Development and Updating:** Costs associated with maintaining current website and creating a website section dedicated to online reporting.
- vi. **Miscellaneous and outreach mailing:**
  1. **Compliance mailing:**  $1,600 * \$0.50 = \$800$
  2. **License renewal mailing to notify license holders of renewal regulations and changes:**  $3,000 * \$0.50 = \$1,500$
  3. **Dealer Report Cards:**  $140 * 4 * \$0.50 = \$280$
  4. **Returned Logs:** ~2% per month of 1,600 =  $32 * 12 = 384 * \$0.50 = \$192$
  5. **RSA Program:** 50 vessels \* 2 mailings/vessel =  $100 * 0.50 = \$50$
  6. **Miscellaneous/Outreach mailings:** ~\$200
- vii. **Office Supplies:**
  1. Paper goods, miscellaneous office supplies, etc.

Text highlighted in yellow indicates changes from the previous version of this proposal.

**Bold text indicates sections that help with the ranking process as outlined on page 14**

**viii. Telephone and Fax Usage:**

1. Dealer phone calls, fisher phone calls, dealer faxes of possession limit changes or closures, etc.



## Summary of Proposal for Ranking

**Proposal Type:** Maintenance

**Primary Program Priority:** Catch and Effort (100%)

- 100% of dealers report trip level landings data for all species.
- 100% of commercial fishers report trip level catch and effort data via logbook entered directly into eTRIPS (except federal permit holders that report on VTRs to NMFS) or via a 1-ticket system for shellfish entered at trip level by the dealer in the eDR.
- Metadata that is detailed on page 6 is also collected to enhance and describe data sets that are important to Rhode Island's commercial fisheries.

**Project Quality Factors:**

**Partners**

- **Multi-Partner/Regional impact including broad applications** – This proposal outlines plans to collect and manage catch and effort, landings, and recreational data in Rhode Island, however data on many species such as American lobster, striped bass, black sea bass, and scup is collected. As these species are regionally managed and other partners will benefit from having access to this data.

**Funding**

- **Contains funding transition plan** – this proposal contains a transition to funding plan on page 10. In these difficult economic times it is difficult to determine when this transition can be fully implemented.
- **In-kind contribution-** 61% of this project is funded by the RIDFW.

**Data**

- **Improvement in data quality/quantity/timeliness** – This proposal highlights many ways that Rhode Island provides timely catch and effort data and landings data to the ACCSP. This is done by fully utilizing all ACCSP data entry products (eTRIPS, eDR, and eLOGBOOK) as well as having standards backed up by Marine fisheries regulations that require reporting that meets ACCSP standards.
- **Potential secondary module as a by-product** – Social and economic data that is described on page 6 is collected regularly and used in fisheries models to characterize and understand Rhode Island fisheries. This data has also been made available to regional partners upon request.
- **Impact on stock assessment-** Data that is collected in this program is regularly used for many “in-house” stock assessments done on local species such as whelk, quahog, and soft shell clam. This data also includes information on regionally or jointly managed species, and is used for their science and management programs as well. Partners, like surrounding states, the ASMFC, and the NOAA Fisheries can and do use this information for various stock assessments.

Text highlighted in yellow indicates changes from the previous version of this proposal.

**Bold text indicates sections that help with the ranking process as outlined on page 14**

**Appendix A: FY 2014 (May 1, 2014 to April 30, 2015)**

**PERSONNEL COSTS:**

<b>Item</b>	<b>ACCSP Share</b>	<b>Direct State Share</b>	<b>Total</b>
Supervising Biologist (FTE 10%)	\$0	\$11,633	\$11,633
Principal Biologist (FTE 30%)	\$0	\$30,967	\$30,967
Technical Staff Assistant (FTE 40%)	\$20,250	\$11,750	\$32,000
Fisheries Specialist (Contract 100%)	\$55,892	\$0	\$55,892
Seasonal Intern (RIDEM 75%)	\$0	\$8,083	\$8,083
Indirect Charges (RIDEM FTE 15%)	\$3,038	\$0	\$3,038
<b>Total Personnel</b>	<b>\$79,180</b>	<b>\$62,433</b>	<b>\$141,613</b>

**EQUIPMENT & SUPPLY:**

<b>Item</b>	<b>ACCSP Share</b>	<b>Direct State Share</b>	<b>Total</b>
Logbook Printing @5.91 per logbook	\$4,728	\$4,728	\$9,456
Logbook Mailing @ 4.75 per logbook	\$0	\$7,600	\$7,600
Business reply envelope printing	\$0	\$2,500	\$2,500
Business reply account	\$0	\$1,500	\$1,500
Website development and updating	\$0	\$2,400	\$2,400
Miscellaneous and Outreach mailing	\$0	\$3,000	\$3,000
Office supplies	\$0	\$1,000	\$1,000
Telephone & Fax Usage	\$0	\$500	\$500
Vehicle Usage/Travel	\$1,500	\$1,500	\$3,000
<b>Total Supply</b>	<b>\$6,228</b>	<b>\$24,728</b>	<b>\$30,956</b>

**TOTAL:**

<b>Item</b>	<b>ACCSP Share</b>	<b>Direct State Share</b>	<b>Total</b>
Total Direct Charges	\$85,408	\$87,161	\$172,569
Percentage	49%	51%	

**Cost Details:**

**Personnel Costs:** Program Coordinator contract salary plus a portion of the Technical Staff Assistant salary

Indirect charges are associated with RIDFW state employees (FTE).

**Logbook Printing:** 2000 logbooks @5.91/logbook = \$11820

**Logbook Mailing:** 1750 logbooks @3.68/logbook = \$6440

Text highlighted in yellow indicates changes from the previous version of this proposal.

**Bold text indicates sections that help with the ranking process as outlined on page 14**

**Travel:** \$3000 used for travel to ACCSP committee meetings by program coordinator and staff as well as travel expenses for dealer visits.

## Thomas J Rosa

60 Dundas Avenue, Warwick, RI 02889 ♦ (c) 401-497-3015 ♦ thomasj.rosa@gmail.com

---

### Education

---

#### Community College of Rhode Island

Graduated May 2008 - Law Enforcement

#### Warwick Veterans Memorial High School

Graduated June 2002 – College Prep

### Professional Experience

---

#### **State of Rhode Island, Department of Environmental Management, Fish & Wildlife Marine Fisheries**

##### Assistant Administrative Officer/ACCSP Coordinator

October 2013 – Present

3 Fort Wetherill Road

Jamestown RI 02835

- Collection of fisheries dependent data for use in coast wide statistic programs
- Monitor state commercial fisheries quotas daily to prevent overages/underages of state quotas
- Perform projections to determine early closures/possession limit changes for quota monitored species
- Assist commercial fishers, and commercial seafood dealers with data entry and compliance
- Maintain contact with individuals involved in the Rhode Island fishing industry
- Review and process confidential data requests from industry partners

#### **Beavertail Museum Association**

##### Security Presence/Caretaker

October 2011 – Present

Beavertail Road

Jamestown RI 02835

- Maintain property including painting, trash pick up, inspection of sub-pump system
- Various electrical and plumbing tasks as needed
- Maintain contact between Museum Association, US Coast Guard, and RI DEM
- Onsite security for Beavertail Lighthouse including Caretakers residence and Museum
- Assist in planning of special events related to Museum Association

#### **State of Rhode Island, Department of Environmental Management, Parks & Recreation**

##### Seasonal Policy Intern

March 2011 – Present

2321 Hartford Avenue

Johnston, RI 02919

- Responsible for representing Division at multiple outreach events
- Prioritize and manage numerous ongoing projects
- Assist in various special projects, studies and research
- Design outreach and education materials for the public
- Communicate rules and regulations to general public in a professional and courteous manner

Text highlighted in yellow indicates changes from the previous version of this proposal.

**Bold text indicates sections that help with the ranking process as outlined on page 14**

## Thomas J Rosa

60 Dundas Avenue, Warwick, RI 02889 ♦ (c) 401-497-3015 ♦ thomasj.rosa@gmail.com

---

### Assistant Park Ranger Coordinator

April 2008-2010

2321 Hartford Avenue

Johnston, RI 02919

- Train, and Certify the safe use of a Personal Transportation Vehicle for both fulltime and seasonal employees within the Division of Rhode Island State Parks
- Assist the Park Ranger Coordinator by reviewing, screening and interviewing applicants for the Seasonal Park Ranger Program
- Process new seasonal employees
- Maintain a professional working relationship with state and municipal agencies as well as community organizations and vendors

### **Computer Skills**

---

- Microsoft Access
- Microsoft Excel
- Microsoft Word
- Microsoft Power Point
- Microsoft Publisher

### **Additional Training**

---

- American Heart Association CPR/AED Certified
- Certified Segway Instructor
- OC Spray Training
- OSHA Oiled Wildlife Workshop
- 2009 Park Ranger Institute

References available upon request

Text highlighted in yellow indicates changes from the previous version of this proposal.

**Bold text indicates sections that help with the ranking process as outlined on page 14**

Proposal for Funding made to:  
Atlantic Coastal Cooperative Statistics Program  
Operations and Advisory Committees  
1050 North Highland Street, Suite 200 A-N  
Arlington, VA 22201

**Improving Trip-level Reporting and Quota Monitoring for New  
York Commercial Permit Holders**

Submitted by:  
Julia Socrates  
Bureau of Marine Resources  
Division of Fish, Wildlife and Marine Resources  
New York State Department of Environmental Conservation  
205 N Belle Mead Rd, STE 1  
East Setauket, NY 11733

**Applicant Name:** New York State Department of Environmental Conservation  
205 North Belle Mead Road, Suite 1  
East Setauket, New York 11733

**Project Title:** Improving trip-level reporting and quota monitoring for state  
licensed participants in New York's marine fisheries

**Project Type:** Maintenance

**Project Investigator:** Julia Socrates, Biologist 2 Marine

**Requested Amount:** \$143,477

**Requested Award Period:** March 1, 2015 to February 28, 2016

## Objective

The objective of this proposed project is to continue to improve the collection, processing, and auditing of fishery-dependent data collected from New York state licensed fishers and dealers; monitor and document reporting compliance by license holders, and facilitate the transition to electronic reporting in New York State. The accomplishment of these objectives will facilitate the collection and processing of fishery data in a more timely fashion than currently possible, and lead to improved quota management in New York State. The fishery-dependent data collected and processed during this project will provide the New York State Department of Environmental Conservation (NYSDEC) with the best available scientific information needed to carry out the State's research and fisheries management mission and bring New York State closer to meeting the Atlantic Coastal Cooperative Statistics Program's (ACCSP) data standards. The term of work for the proposed project is one year, from March 1, 2015 through February 28, 2016.

## Need

New York State initiated trip-level reporting for fishers and dealers in 2003, working cooperatively with NOAA National Marine Fisheries Service (NMFS) and Cornell Cooperative Extension Marine Program (CCE). New York developed its own state vessel trip reports (VTR) in 2008 and the full implementation of standardized trip-level (catch, effort, landings and purchasing) reporting for all harvested species began in 2011. Up until this point, reporting had ranged from trip level reports to annual recall surveys. The NY VTR is designed similar to the 2008 version of the NMFS VTR, where each form is used to report the landings for only one effort of a trip.

New York State executed several contracts with CCE to carry out marine fishery data processing tasks: data collection, data entry, and auditing. The last contract expired in March 2009 and New York had been unable to successfully execute a contract to carry out these tasks until 2013. In 2012, ACCSP provided support for CCE to carry out data entry on backlogged trip reports. NYSDEC executed a contract with CCE in June 2013 to continue to process the remaining backlog of trip-level data collected during 2008-2011. During the intervening years, 2009 – 2013, NYSDEC staff members collected and processed a portion of the VTRs and all dealer purchase reports submitted to NYSDEC.

Most trip and purchasing reports are submitted on paper forms which require manual entry into a database. A small number are entered into SAFIS by individual fishers and dealers. Electronic reporting for NY dealers through SAFIS eDR became mandatory on January 1, 2012, while commercial fishers have the option to submit electronically through SAFIS eTRIPS or on paper VTRs.

Over the last four years, New York has had an average of 1,685 state-licensed fishers that are required to report their landings. Approximately 20% of them are also federally-licensed, so 337 of the fishers are not required to report to New York, unless they hold a horseshoe crab or commercial striped bass permit. As a result of the remaining 1,348 state-licensed fishers that are required to report their landings to NYSDEC, and those federally-licensed individuals that hold a horseshoe crab or commercial striped bass permit, it is estimated that approximately 18,000 to



20,000 VTRs are submitted to NYSDEC each year. As efforts increase to improve reporting compliance, the number of VTRs being submitted and needing to be processed by NYSDEC staff will grow. Currently, tasks associated with reporting, data entry, compliance monitoring, quota management, and biological sample processing are spread across a number of programs at NYSDEC, which decreases efficiency and the ability to fully comply with ACCSP standards. New York does not have sufficient staff to adequately manage data processing tasks at the current level of reporting. New York State needs an individual to help coordinate the VTR and data processing activities of NYSDEC and CCE staff to appropriately utilize NYSDEC resources to process fishery-dependent data, and function as an additional liaison between New York State and ACCSP. In addition, as New York State continues to develop and enforce a reporting compliance program for fishers and dealers, NYSDEC faces a corresponding increase in reports to process. Additional personnel will be needed to handle and process these incoming reports. This proposal details a plan to improve NYSDEC's ability to fully implement ACCSP standards for data collection and processing. In addition, it is hoped that regular data feeds to ACCSP can be developed and maintained for inclusion in SAFIS and the Data Warehouse in a timelier manner.

## **Approach**

New York State's marine fisheries regulations currently require all state licensed commercial fishers and recreational for-hire operators to report trip-level data and submit them monthly within 15 days after the end of each month. This program of data collection is modeled after the federal vessel trip reports distributed by NOAA Fisheries Service. Fishers can currently submit trip-level data on paper VTR forms or electronically online. In a similar manner, state-licensed food fish and crustacean dealers must report their purchases within 3 days after the end of each week. Dealers have been required to submit these reports online since January 2012. Holders of federal fishing and dealer permits must, instead, satisfy reporting requirements as specified by NOAA Fisheries Service.

New York State is focused on collecting and processing fishery-dependent data from all (100%) state-licensed fishers who harvest and land marine species in New York State and all (100%) the state-licensed dealers who buy marine species from them. This data collection task is applied to all (100%) finfish, crustacea, gastropod and horseshoe crab species harvested and landed in New York State. The only species excluded from this task are the bivalve mollusks. DEC submits bivalve landings to SAFIS in an annual summary of landings compiled from monthly shellfish dealer reports.

Only a small portion of state-licensed fishers and dealers currently enter fishery data directly into ACCSP's SAFIS. The remainder of state license-holders submits their fisheries data using paper forms. The tasks involved with processing this large volume of paper reports include: review of each form for completeness and correctness, follow-up with the submitting license-holder to correct omissions or incorrect data, data entry, auditing, archiving, and filing. The data reports are entered into a NYSDEC proprietary database and uploaded to SAFIS periodically. The responsibilities for the above tasks, in addition to compliance monitoring and database maintenance, are spread across a number of programs in the NYSDEC Bureau of Marine Resources. Unfortunately, current staffing levels cannot keep up with the volume of reporting.

NYSDEC proposes to hire an ACCSP Fisheries Specialist II to oversee the daily processing of vessel trip and dealer reports, monitor compliance, and promote electronic reporting. NYSDEC also requests that two data entry workers be hired to assume the tasks of data entry and auditing of the current year's reports. NYSDEC staff will continue to participate in data processing tasks as their other responsibilities allow. Consistent staffing levels, with staff members dedicated to the handling and processing of fishery data, will provide reliable support for the NYSDEC data collection and processing program. State-licensed fishers, dealers, and data users will also benefit from the efficient and timely processing of collected fishery data. In particular, the accomplishment of several tasks, such as follow-up on problematic VTRs, compliance issues, and training of license holders who wish to report electronically, will be improved by having staff dedicated to handling fishery data reports.

The Fisheries Specialist II will be responsible for the handling and processing of submitted state VTRs, monitoring quality control of submitted forms, data auditing, and assigning tasks to the data entry workers. The specialist will also help monitor reporting compliance of state license holders, send out delinquent reporting notices, and forward information about non-compliant licensees to their state supervisor. The Fisheries Specialist II will function as a source of reporting information and support to fishers and dealers. The specialist will also be responsible for promoting online reporting and training fishers and dealers to use electronic reporting. In addition, the ACCSP fisheries specialist will be able to fully participate in meetings and confer with ACCSP to identify and troubleshoot issues, participate in technical committee meetings, and enhance New York State compliance with evolving fishery data standards.

The ACCSP Fisheries Specialist II will be supervised by the NYSDEC biologist currently working with ACCSP on SAFIS, eTRIPS and eDR issues. The specialist, in turn, will supervise the two data entry workers.

NYSDEC has recently increased the frequency of general reminders to state-licensed fishers and dealers requesting compliance with reporting requirements. NYSDEC mailed letters to 820 delinquent reporters in June of 2013, 435 delinquent reporters in September of 2013, and 348 delinquent reporters in February of 2014. In response, trip level reporting for 2013 has increased by 55% as compared to 2012. It is anticipated that, as New York's compliance program is finalized and enforced, reporting compliance by license holders will continue to increase. This will result in a significant increase in the volume of trip reports submitted to NYSDEC. The additional staff requested in this proposal will allow NYSDEC to maintain a high level of compliance monitoring and improve data processing.

Diminishing the volume of paper reports that must be entered by staff has efficiency, storage, and environmental benefits. A major benefit of having the ACCSP Fisheries Specialist II on staff will be the time they will be able to commit to encouraging, training, and assisting commercial fishers and dealers to report electronically through SAFIS. In addition to paperwork reduction, the data entry of required fields, already built into the online interface, will cut down on staff time spent dealing with data omissions that often occur on the paper forms.

Fishery-dependent data collected by NYSDEC will be uploaded to ACCSP for eventual placement in its Data Warehouse where the data will be utilized in stock assessments, by the Atlantic States Marine Fisheries Commission, and by the regional Fishery Management Councils in their deliberations and decisions. It is essential that New York State fishery data be accurate and processed in a manner that complies with all ACCSP standards. The assessment of data quality includes not only in-house data entry QA/QC, but also auditing and data verification utilizing NY's two-ticket system of separate dealer and harvester reports. The ACCSP Fisheries Specialist II and the two data entry workers will be able to conduct full and complete audits of New York State fishery data. The specialist can audit dealer reports against vessel trip reports, checking for concurrence across landings, gear types, areas, and individual fishers. This will ensure that New York State data are complete and accurate and will serve as valued data inputs where needed.

## **Results and Benefits**

Implementation of the proposed project will allow New York to adequately staff its fishery data collection and processing program, enhance the State's ability to process fishery data in a timely fashion, and to continue to bring the State fishery-dependent data collection program up to ACCSP standards. The program proposed here will provide support for complete and timely processing of data collected from state licensed dealers and fishers in the state.

The major benefits of this proposal include:

- Enhancement and maintenance of New York's program for collecting and processing fishery data, bringing the program closer to full compliance with ACCSP data standards;
- Complete processing of the current year's VTRs collected from state licensed fishers, making this data available for inclusion in SAFIS and the Data Warehouse;
- Increase in the accuracy of collected data as catch (eTRIPS) and landings (eDR) data reconciliations are conducted;
- Support a reporting compliance program that will promote reporting by state licensees by documenting levels of compliance among licensees, and providing documentation on non-compliant licensees, if needed for administrative or legal measures;
- Enhancement and maintenance of a program to promote electronic reporting by fishers and dealers that will reduce the costs of printing and mailing VTRs, reduce paper handling by NYSDEC staff and fishers, reduce retention and storage needs for paper VTR and dealer report records, and enhance the timeliness of the submission of fishery data into SAFIS.

Most species targeted by New York State licensed fishers are managed on a regional basis. Collected and processed data on these species may have broad-reaching regional impacts or benefits. Until all New York State fishery-dependent data are entered into SAFIS, as proposed in this project, catch data for the State and the region are incomplete. Any improvement in the completeness and quality of the data, collected and processed by the proposed addition of staff

dedicated to these tasks, has the potential to impact many commercially and recreationally harvested species managed at the regional Council and Commission level.

### 5. Geographic Location

The project will be administered from the New York Department of Environmental Conservation Bureau of Marine Resource’s headquarters in East Setauket, New York. The location and scope of this project will include all the marine and coastal waters of New York State.

**Table 1. Month Milestone Schedule** (start date depending on time of grant award):

Task	Month														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Data Entry	x	x	x	x	x	x	x	x	x	x	x	x			
QA/QC	x	x	x	x	x	x	x	x	x	x	x	x			
Compliance						x						x			
Electronic reporting training	x	x	x	x	x	x	x	x	x	x	x	x			
ACCSP Committees	As needed														
Data Uploads to SAFIS	x	x	x	x	x	x	x	x	x	x	x	x			
Grant Report Writing						x						x	x	x	x

## Project Goals and Metrics

The goal of the proposed project is to improve the collection and processing of trip level fishery-dependent data submitted to NYSDEC by state-licensed fishers and dealers. New York State seeks to collect and process fishery related information for all species targeted by New York license holders, including those species not monitored by National Marine Fishery Service such as American lobster, Atlantic menhaden, American eel, tautog, and weakfish. An additional project goal is to facilitate the transition to electronic reporting and the training of fishers and dealers to enter their fishery data directly into ACCSP's various online databases. The ultimate goals of this project are to have all trip and purchase report data submitted to NYSDEC entered into SAFIS, the achievement of 100% reporting compliance, and the transition of all state dealers to online reporting. Table 2 summarizes these project goals and the accomplishment measures for these goals.

**Table 2: Project Goals and Accomplishment Measure Summary**

<b>Project Goal</b>	<b>Accomplishment Measure</b>
Collection and processing of VTRs	Numbers of VTRs collected, reviewed and processed monthly
Collection and Processing of dealer reports	Numbers of dealer reports collected, reviewed and processed monthly
Correspondence with fishers and dealers for correction of submitted reports.	Numbers and summaries of contacts with fishers and dealers for report corrections monthly
Auditing of data entered into NYSDEC database and SAFIS	Summaries of audit results for VTR and dealer purchase data entered into NYSDEC database and SAFIS
Promoting compliance with New York State reporting requirements	Monthly analyses of reporting rates and the number of licensed fishers and dealers contacted by NYSDEC for failure to submit reports monthly
Promoting the transition to electronic reporting	Number of fishers and dealers who submit reports online Number of fishers and dealers who are trained in the use of SAFIS for submitting reports for each month

## Cost Summary

The NYSDEC Bureau of Marine Resources is supported by both state and federal funds. DEC contributions to this project include telecommunications, office space, general office supplies, postage, project oversight, existing VTR infrastructure; and the time that NYSDEC staff will commit to supervision, data collection, data entry, and compliance monitoring. In addition,

vehicle use, mileage, and travel costs associated with training fishery participants in electronic self-reporting will be supported by NYSDEC.

New York State has made funds available for the collection and processing of fishery-dependent data through the Environmental Protection Fund (EPF) Ocean and Great Lakes Program. The State has committed \$500,000 for the tasks of collecting fishing trip and dealer data, collecting biological samples, and for providing outreach and education to the State licensed fishers and dealers. Using the EPF funds, NYSDEC executed a three year contract with CCE (2013 – 2016) to carry out these tasks. CCE will be responsible for review and processing of state VTRs collected during 2008 – 2011 and resuming the collection of biological samples. DEC staff members will continue to collect and process dealer reports and current state VTRs.

In Table 3a is a summary of the budget for the proposed project and, in Table 3b, is a summary of the budget for the previously accepted project.

**Table 3a: Cost Summary**

<b>(a) Personnel:</b>	
ACCSP Fisheries Specialist II	57,505
ACCSP Data Entry Workers (2 items)	55,469
<b>Total Salaries</b>	<b>112,974</b>
(b) ACCSP Fringe (0.27)	30,503
<b>Total Personnel Services</b>	<b>143,477</b>
<b>Non-Personnel Costs</b>	
(c)Travel	
<b>Total Non-Personnel Services</b>	<b>0</b>
<b>Total</b>	<b>\$143,477</b>

**Budget Narrative**

- a. The Fishery Specialist II and data entry workers are all full-time positions. The salaries were determined by comparing the tasks and workloads to NYSDEC job responsibilities. The Fisheries Specialist II is most similar to the Biologist 1 title at NYSDEC with a starting salary of \$55,712 for New York State fiscal year 2014/2015 and an annual increase of 3% before a job-rate step increase which makes the 2015/2016 salary \$57,505. The data entry worker is most similar to the NYSDEC laborer position with a starting salary of \$27,027 for fiscal year 2014/2015 and an annual increase of 3% which

makes the 2015/2016 salary \$27,734. The salaries will be supported in total by funding from the ACCSP grant.

- b. The ASMFC Fringe rate is 27% on all salaries.
- c. Travel costs related to tasks described in the proposal will be supported by NYSDEC, such as vehicle use to visit dealers for training in electronic reporting. Other travel will be to attend ACCSP committee meetings and will be covered by ACCSP.

**Table 3b: Previously Accepted Cost Summary**

<b>(a) Personnel:</b>	
Fisheries Specialist II (NYSDEC Biologist grade 18)	55,712
Data Entry Workers (2 items) (NYSDEC Laborer)	54,054
<b>Total Salaries</b>	<b>109,766</b>
(b) Fringe (0.25)	27,441
(j) Indirect (0.2364)	32,436
<b>Total Personal Services</b>	<b>169,643</b>
<b>Non-Personal Costs</b>	
(c) Travel	
(d) Equipment (computers)	3,000
<b>Total Non-Personal Services</b>	<b>3,000</b>
<b>Total</b>	<b>\$172,643</b>

**History of New York State Projects Funded by ACCSP**

New York State is requesting \$143,477 in funding to support fishery data collection and data processing efforts in 2015. The State has received 8 previous ACCSP grants, as listed in Table 4. These grant awards supported the development of New York’s fishery-dependent data collection program, as the State sought to work cooperatively with NMFS and CCE to collect and process fishery information collected from fishers and dealers. In 2007, NYSDEC used the grant award to fund a contract with CCE to collect, process, and audit New York State fishery-dependent data. Under that two-year contract, CCE processed 12,295 vessel trip reports, 2,518 seafood dealer purchase reports, and collected 18,499 biological samples (fish body length measurements and scale, otolith, and spine samples for ageing).

The 2007 grant award was the last award New York State was able to utilize as proposed. None of the funds from the two subsequent grants (2010, 2011) were expended. After being awarded

the grants, NYSDEC was not able to successfully complete the contract process for either year. A reduction in the state workforce, especially in administrative support, and an increase in the fiscal and justification criteria for contracts significantly increased the time needed for the processing of contracts. At NYSDEC, the contract process was delayed until after the administrative unit was reorganized and staff reassigned and trained. Yet six months after NYSDEC received the 2011 grant award, it had become clear that a contract would not be executed with CCE before the end of the award period. At that six month point, DEC requested that the 2011 grant be terminated and the funds re-obligated to ACCSP. Unfortunately, the funds were not re-obligated to ACCSP.

The inability to draft and execute a NYSDEC/CCE contract in a timely fashion was a major setback for the fishery data collection and processing program in New York. VTRs submitted by New York State licensed fishers in 2008 and 2009 are being stored until they can be processed by CCE(2010 VTRs are now being processed by CCE and 2011 VTR processing is complete). In 2014, NYSDEC's proposal for ACCSP to hire personnel to collect and process fishery data was approved. NYSDEC is now seeking funding to continue the support from ACCSP for the processing of any remaining 2014 VTRs and maintain the collection and processing of the current year's VTRs. To prevent the reoccurrence of the past events, described above for the current grant proposal, New York State will work cooperatively with ACCSP to ensure the grant funds are used as described and the proposed tasks are accomplished.



**Table 4: History of New York State Projects Funded by ACCSP**

<b>FY</b>	<b>Project Name/Project Dates</b>	<b>Amount Funded</b>	<b>Description/Results</b>
2001	Development of New York's Fishery Dependent Data Collection Program/ 2001 - 2003.	\$195,200	NYSDEC and NMFS sought to implement vessel and dealer reporting in NY's commercial food fish and crustacean fisheries through a contract with CCE.
2002	Implementation of New York's Fishery Dependent Data Collection Program and Development of a State Biological Sampling Program./ 2002 - 2003	\$256,800	NYS adopted regulations requiring reporting by commercial fishers and dealers. VTRs and dealer reports entered into NMFS database (NMFS Codes).
2005	Continuation and Expansion of NY State Fishery Dependent Data Collection and Continuation and Expansion of NY State Biological Sampling Program./ 2005 – 2006	\$218,900	11,000 VTRs and 3,900 dealer reports were entered in NMFS database by CCE. 13,000 biological samples were collected.
2006	NY State Fishery Dependent Data Collection and Continuation and Expansion of NY Biological Sampling Program. 2006 – 2007	\$193,783	16,000 VTRs and 5,200 dealer reports were entered into NMFS database by CCE. 13,000 biological samples were collected.
2007	Continuation and Expansion of Fishery Dependent Data Collection and Biological Sampling in the State of NY./ 2007 – 2009	\$113,967	12,000 VTRs and 2,500 dealer reports were entered into SAFIS/Cygnnet. 18,000 biological samples were collected
2008	No funding requested		NYSDEC implements state VTRs. VTR data entered into eTRIPS. Dealer data entered into SAFIS.
2009	No funding requested		Contract with CCE expires. NYSDEC staff assumes dealer data entry tasks. VTR forms are collected from fishers.
2010	Continuation and Expansion of Fishery Dependent Data Collection and Biological Sampling in the State of NY.	\$174,816	Funding not disbursed. NYSDEC continues to enter dealer data and collect VTRs.
2011	Continuation and Expansion of Fishery Dependent Data Collection and Biological Sampling in the State of NY.	\$104,500	Funding not disbursed. NYSDEC continues to enter dealer data and collect VTRs.
2012	No funding requested		NYSDEC develops in-house VTR database. All 2012 VTR data uploaded into eTRIPS. Dealer data entered into eDR
2013	No funding requested		Fishery data entered into state database and uploaded into eTRIPS. Dealer data entered into eDR.
2014	Improving Trip-level Reporting and Quota Monitoring for New York Commercial Permit Holders	\$172,643	ACCSP Fishery Specialist II and 2 data entry workers will be hired to process and audit NY fishery data.

## **Proposal Summary for Ranking Criteria**

**Proposal Type:** Maintenance

### **Primary Program Priority:**

Data Collection and Processing - NYSDEC seeks to collect and process 100 % of the VTRs submitted during the 2015/2016 project period and process 100% of dealer reports submitted. New York State regulations stipulate that 100% of species landed in NY by state-licensed party/charter fishers, commercial food fish, crab, and lobster fishers and purchased by state-licensed dealers must be reported to NYSDEC.

Compliance - NYSDEC seeks to increase reporting compliance by state-licensed fishers and dealers to 100%, and increase the number of licensed dealers that submit dealer reports online into SAFIS eDR to 100%. New York State regulations stipulate that all state licensed dealers must submit purchase reports online into eDR. There is considerable reluctance on the part of the industry.

### **PROJECT QUALITY FACTORS (Partners, Funding, and Data):**

#### **Partners/Multi-Partner/Regional Impact Including Broad Application-**

The goal of this proposed project is to continue to collect and process trip-level data from all state-licensed party/charter, food fish, crab, and lobster fishers and dealers participating in New York's marine fisheries. These data will include information concerning regionally managed species such as American lobster, Atlantic menhaden, American eel, tautog, and weakfish and have the potential to impact many commercial and recreational fisheries managed at the regional Council and Commission level. This proposed project can result in improved management of these important species.

#### **In-kind Contribution-**

NYSDEC will provide telecommunications, office space, general office supplies, postage, project oversight, existing VTR infrastructure, and the time that NYSDEC staff will commit to supervision, data collection, data entry, data auditing, compliance monitoring and quota monitoring. In addition, vehicle use, mileage, and limited travel costs directly related to the project goals will be funded by NYSDEC. While these contributions may have value, an amount cannot be assigned at this time because NYSDEC cannot provide any specific monetary in-kind contribution.

#### **Data: Improvement in Data Quality/Quantity-**

NYSDEC entered 100% of 2012 & 2013 VTR data into an in-house fishery database, where all state VTR data are being entered and audited, and uploaded into SAFIS eTRIPS. 100% of New York State's submitted dealer data has been consistently entered into SAFIS in a timely manner for the past 5 years. Through the proposed project, NYSDEC seeks to continue to process 100% of each year's collected data to improve quota management, provide timely data to NMFS, the Councils and ASMFC and facilitate suitable management of the shared marine fisheries.

## Curriculum Vitae for Principal Investigator-

# JULIA B SOCRATES

New York State  
Department of Environmental Conservation  
Bureau of Marine Resources  
205 N Belle Mead Rd, STE 1  
East Setauket, NY 11733  
(631) 444-0473  
[jbsocrat@gw.dec.state.ny.us](mailto:jbsocrat@gw.dec.state.ny.us)

**EDUCATION:** **Bachelor of Science**, Marine Biology  
Southampton College of Long Island University, Southampton, NY  
Graduated Summa cum Laude and with Honors: May 21, 2000

**EXPERIENCE:** **Biologist II (Marine)** –New York State Department of Environmental Conservation, Bureau of Marine Resources, East Setauket, NY; Jan. 2014 – present.

Fisheries Data Management Unit Leader:

- Collection and management of NYS commercial and recreational fisheries data.
- Database design and management.
- Marine Permit reporting compliance.
- ACCSP Operations Committee member.
- Grant applications: proposals, budgets, applications, completion reports.
- Hiring, supervising, and training of unit staff.

Fishery Disaster Recovery Liaison:

- Federal grant applications: proposals, budgets, applications.

**Biologist I (Marine)** – Diadromous Fisheries Unit, New York State Department of Environmental Conservation, Bureau of Marine Resources, East Setauket, NY; Sept. 2004 – Jan 2014.

- Chief scientist for a beach seine survey of juvenile striped bass in western Long Island bays.
- Principal manager of the Striped Bass Cooperative Angler Program.
- Administrator of New York State's striped bass commercial fishery
- Principal manager Striped Bass Commercial Fishery Monitoring
- Principal manager of the Juvenile American Eel Survey
- Hiring, supervising, and training of 2-4 technicians/seasonal laborers per year.
- Data collection, management, analysis, and report preparation.
- Operation and maintenance of all field equipment, including 2 boats with outboard engines.
- Federal grant applications: proposals, budgets, applications, completion reports.
- Provide support for other unit program: Ocean Haul Seine/Trawl Survey.
- Technical liaison for the Hudson River young-of-the-year striped bass survey contracted to the Marine Sciences Research Center of SUNY Stony Brook (2004 – 2010).
- Acting Unit Leader October 2007 – April 2008

**Sr. Marine Resources Technician II-** Diadromous Fisheries Unit, New York State Department of Environmental Conservation, East Setauket, NY; Oct. 2000 – Sept. 2004

- Principal field investigator for a survey of juvenile striped bass in western Long Island bays.
- Hiring, supervising and training of 2-4 technicians/seasonal laborers per year.
- Data collection, management, analysis, and report preparation.
- Operation and maintenance of all field equipment, including 2 boats with outboard engines.
- Project proposal and budget preparation; voluntary refinement and implementation of the Striped Bass Cooperative Angler program.
- Provide support for other unit programs: Striped Bass Commercial Fishery Monitoring, Ocean Haul Seine, American Eel Survey

#### **ACCOMPLISHMENTS:**

- Collaborated with the Atlantic Coast Cooperative Statistics Program (ACCSP) to design and implement an on-line recreational fishing log book (eLOGBOOK) for NY recreational fishers of the Hudson River and marine district.
- Collaborated with the Commercial Fisheries Unit and the Crustaceans Unit to design and implement an all-inclusive database for NY's commercial fishery and party/charter data.
- Collaborated with multiple Marine Resources units and administrators to write and implement vessel trip report (VTR) handling protocols and data-entry instructions.
- Helped to facilitate the uploading of NY's commercial fishery data into ACCSP's on-line coast-wide fishery database.
- Collaborated with multiple Marine Resources units and administrators to write and implement a compliance program for NY's marine commercial permits.

#### **SKILLS:**

- Computer: Windows, MS Office, database design and management, mail merging, ArcView GIS, MARK, DOS, File Management, E-mail/Internet, Macintosh, Adobe Acrobat, Adobe Photoshop.
- Laboratory techniques: filtration, titration, microscopy, dissection, distillation, digestion, fish scale pressing and aging, otolith extraction.
- Oceanographic equipment: YSI multiprobe, salinometer, fluorometer, 200-500 foot beach seine, otter trawl, gill net, fyke net, dredges, grabs.

#### **PUBLICATIONS:**

- Dunning, D.J., Q. Ross, K.A. McKown, and J.B. Socrates. 2009. Effect of Striped Bass Larvae Transported From the Hudson River on Juvenile Abundance in Western Long Island Sound. *Marine and Coastal Fisheries: Dynamics, Management, and Ecosystem Science*. 1:343–353.
- Young, B., K.A. McKown, and J.M. Brischler. 2005. Long-term Fisheries Monitoring with Emphasis on the Striped Bass (*Morone saxatilis*) from the Hudson River. In: Solbé, J., editor. Long-term Monitoring: Why, What, Where, When & How? Proceedings of a workshop and conference "The Importance of the Long-term Monitoring of the Environment"; 2003 Sept. 14th-19th; Sherkin Island, Co Cork, Ireland. Co Cork (Ireland): Sherkin Island Marine Station. p132-139.

Proposal for Funding made to:  
Atlantic Coastal Cooperative Statistics Program  
Operations and Advisory Committees  
1050 North Highland Street, Suite 200 A-N  
Arlington, VA 22201

## **Electronic Reporting and Biological Characterization of New Jersey Commercial Fisheries**

Submitted by;  
Peter J. Clarke  
New Jersey Division of Fish and Wildlife  
P.O. Box 418  
Port Republic, NJ 08241

# **Proposal for FY2015 ACCSP Funding**

**Updated August 27, 2014**

**Applicant Name:** New Jersey Division of Fish and Wildlife  
Bureau of Marine Fisheries  
P.O. Box 418  
Port Republic, NJ 08241

**Project Title:** Electronic Reporting and Biological Characterization of New Jersey Commercial Fisheries

**Project Type:** Maintenance

**ACCSP Program Priorities:** 1) Catch/Effort (55%), 2) Biological (45%)

**Project Supervisor:** Thomas Baum, Supervising Biologist (NJDFW)

**Principal Investigator:** Peter Clarke, Senior Biologist (NJDFW)

**Project Staff:** Chad Power, NJ ACCSP Fisheries Specialist I  
Lloyd Lomelino, NJ ACCSP Fisheries Specialist I

**Requested Amount:** \$158,740

**Requested Award Period:** September 1, 2015 to August 31, 2016

**General Comment:**  
P. 15 (Transition Plan)

## 1. Objective

To continue New Jersey's trip level catch and effort data collection, dependent at-sea observer coverage, and biological characterization of commercial fisheries, a program started in 2001.

## 2. Need

Since 2001, several programs have been implemented by the New Jersey Division of Fish and Wildlife (NJDFW) through funds provided by the Atlantic Coastal Cooperative Statistics Program (ACCSP). These funds have been vital in proactive management of the marine resources in New Jersey (NJ). Loss of funding for these critical programs would result in a significant loss of commercial fisheries data collection for the State of NJ, the ACCSP, and the Atlantic States Marine Fisheries Commission (ASMFC).

NJ programs currently funded under the ACCSP grant include at sea observer coverage for American lobster off the NJ coast; port sampling of the Atlantic croaker, weakfish, American eel, American shad, and Atlantic menhaden fisheries; commercial trip level data collection via eTRIPS for blue crab, American eel, Atlantic menhaden and tautog, and trip level dealer reporting and quota management through the Standard Atlantic Fisheries Information System (SAFIS) electronic Dealer Reporting (eDR). Seven of the species that NJ collects biological data for occur in the upper quartile of the ACCSP Biological Priority Matrix. The major scope of work for the current FY 2015 proposal has not changed from the accepted FY 2014 proposal. As part of the ACCSP funding process, NJ has submitted all progress reports covering the FY 2013 project to the ACCSP and the National Marine Fisheries Service (NMFS) Grants Online ([Progress Reports](#)). The final 2013 Report will be due on November 30, 2014. The NJ FY2014 project will begin on September 1, 2014

### 2.A. Fisheries Dependent At-Sea Observer Program

NJ ACCSP staff has used at-sea observer coverage to describe fishing activities and aid in biological characterization of American lobster, and tautog. The information collected is critical to accurate stock assessments and ultimately sustainable harvest practices for these species. Characterization of the NJ commercial tautog fishery began in 2007 and will continue into 2015 to document sex ratios, length:weight relationships and age information. NJ ACCSP staff have been sampling federally and State permitted American lobster pot vessels since 2008 and will continue to do so based on Addenda VIII and X of the American Lobster FMP, which mandates at-sea observer coverage as a means of describing the fishing activities in southern New England. The ASMFC American Lobster Technical Committee encourages sampling at sea as a way of monitoring commercial by catch and discards in the fishery. In addition, port sampling is also recommended as a source of characterizing the commercial landings.

## **2.B. Biological Characterization of Commercial Fisheries**

The NJ biological characterization sampling program provides accurate length, weight, age, and temporal data for stock assessment and management of commercial harvest for the NJDFW, ASMFC, and NMFS. Target sample sizes identified through the ASMFC's Fishery Management Plans (FMPs) achieved from 2006 through the present are found in Table 1 of the Appendix. Sampling is conducted through port of landings intercepts and will be continued in FY2015 for weakfish, Atlantic croaker, Atlantic menhaden, American shad, tautog, and American eel. NJ will continue sampling for Black Sea Bass, Summer Flounder, and River Herring through independent sampling on the NJ Ocean Trawl Survey. Data collected will provide information on sex ratios/mean length/weight as identified by the Stock Assessment Review Committee (SARC) on June 20, 2008.

## **2.C. ACCSP Data Feeds**

NJ is currently conducting several projects under the auspices of the ACCSP, most of which are mandates from the ASMFC and require compliance by the State of NJ in order to fulfill various ASMFC's FMPs. Equally important to the collection of fisheries dependent data is the assurance of accurate data entry and quality assurance before these data are used as fisheries management tools. The ACCSP has increasingly taken on more duties as the data depot starting with SAFIS and moving to Fisheries of the US for the NMFS. As such, it is advantageous to the success of not only the ACCSP but to all 23 ACCSP partners that partner data be supplied to the ACCSP in a timely and accurate fashion facilitating the movement of data into fisheries management.

## **2.D. Electronic Vessel Trip Reporting (eTRIPS) & Electronic Dealer Reporting (eDR)**

The importance of a standardized trip and dealer reporting system is clear. The effort put forth to use an all-inclusive standardized data entry program is critical for the NJDFW to provide a single location to find harvest data for multiple fisheries/species/years. Further, the importance of single source harvest data is similar to that for dealer data entry and warehousing: allowing managers and scientists to pull accurate landings data through a query database using common ACCSP data formats. The NJ ACCSP Fisheries Specialists' provide support to federal/state permitted dealers facilitating weekly eDR reporting. Additionally, it is the responsibility of the NJ ACCSP staff to monitor landings through eDR, correct erroneous data when trip landings and dealer reports are inconsistent, and recommend closures when seasonal quotas are reached within the state.



### 3. Results and Benefits

The ACCSP Coordinating Council approved NJ's proposal "Continued Dealer Reporting, Trip Level Reporting, and Biological Sampling for Commercial Fisheries in NJ" for FY2014. Included again in the FY2015 proposal is the request for salary for staff on the project with a small amount of funds allocated towards aging summer flounder and black sea bass otoliths by the NMFS Woods Hole Laboratory. The FY2015 proposal will ensure that ongoing projects in NJ will continue to maintain NJ's participation in the ACCSP/ASMFC's mandated compliance programs. In kind state match has averaged over 50% for the past four fiscal years (2010-2013) for the NJ ACCSP Program and continues to be the case for FY2015 (Table 3).

#### 3.A. Fisheries Dependent Sampling Program

**Lobster At-Sea Observer Coverage.** In January 2008, at-sea sampling commenced aboard lobster vessels fishing in Lobster Conservation Management Areas (LCMA) 4 and 5 off the coast of NJ. Staff will continue at sea observer coverage in FY2015 to characterize the NJ lobster fishery. All data collected resulting from this program will be delivered to the ACCSP for inclusion into the Lobster Database. As this is the only at-sea observer program in LCMAs 4 and 5, it is imperative to continue at sea sampling.

#### 3.B. Biological Characterization of Commercial Fisheries

Biological sampling for weakfish, Atlantic croaker, American shad, Atlantic menhaden, American eel, summer flounder, black sea bass, tautog and river herring is a maintenance project for 2015. Sampling targets were near 100 % of set goals during the first 7 years (2006-2013, Table 2) and will be similar for 2015.

Commercial weakfish, American eel, Atlantic croaker, tautog, river herring, and American shad samples collected are processed and aged at the NJDFW Nacote Creek aging facility in Port Republic, New Jersey. Atlantic menhaden bait samples collected from the NJ commercial purse seine, pound net, and gillnet fisheries are processed at the NJDFW Nacote Creek facility and forwarded to the NMFS Beaufort Laboratory for aging. Summer flounder and black sea bass collections made on the NJDFW Ocean Trawl Survey are processed for length, weight, and sex at the NJDFW facility, hard parts are sent to the NMFS Woods Hole Laboratory for processing and age determination. Future samples collected will be processed and aged using the same protocol as in previous years. A current summary of species processed and aged by the NJDFW staff in support of this proposal are found in Table 2 of the Appendix.

A NJDFW Biological Characterization data entry system was developed in 2006 to warehouse all data collected under the commercial biological characterization program. The NJ biological database consists of trip level effort information from which the samples were taken and biological data taken from each individual sample. To date, all biological data collected for tautog, weakfish, Atlantic croaker, American shad, and

Atlantic menhaden have been entered, checked for quality assurance, and are available for assessment purposes.

The ACCSP and ASMFC have established species specific biological sample size goals for each partner state based on the total annual landings for each specific species. All data entry is standardized in the ACCSP format and queried when needed by NJDFW staff members for inclusion in technical reports, stock assessments, etc.

### **3.C. ACCSP Data Feeds**

The NJDFW/NJ ACCSP staff provides the ACCSP with support tables to facilitate timely and accurate landings for all species in which trip level data are collected. Quality assurance is performed monthly by NJ ACCSP staff to ensure a smooth transfer of data for the “End of the Year” Fisheries of the U.S. report submission.

### **3.D. Electronic Vessel Trip Reporting (eTRIPS) & Electronic Dealer Reporting (eDR)**

The ACCSP and the State of NJ have gained a significant amount of commercial landings data while improving accuracy and efficiency through the use of eTRIPs and eDR. The eTRIPS program encourages fishermen to enter their own catch and effort data providing each fisherman the ability to review data without staff involvement. Additionally, commercial trip level data are available to authorized NJDFW staff for query purposes used in harvest compliance, and stock management. NJ has gained a significantly higher amount of commercial landings data through eDR for tautog, eel, menhaden, and blue crab. Duplicate reporting between state and federally permitted fishermen is removed from end of the year data reports by NJ ACCSP staff, ensuring accurate final landings data. Continuation and maintenance of eDR is imperative for the improvement of NJ’s commercial fishery landings data collection. SAFIS eDR is the exclusive method of quota monitoring in NJ and has proven itself as a central management tool for monitoring fisheries status in NJ.

## **4. Approach**

### **4.A. Fisheries Dependent Sampling Program 30% Allocated Funds**

**Lobster At-Sea Observer Coverage.** The primary location of commercial lobster landings during the past 5 years off NJ takes place in LCMA 4 (69%) with some landings occurring in LCMA 3 and 5 (26% and 3%). Therefore, at sea observer sampling will consist of 16 trips per year in LCMA 4. During each sampling effort, every lobster brought aboard the vessel is measured for carapace length in addition to biological observations including sex, egg development on females, cull status (number of claws), shell condition (diseased or not), and shell hardness.

**Tautog At-Sea Observer Coverage.** NJDFW will continue to collect racks from the recreational hook and line fishery. Data collected include sex, length, weight, area

fished, intended market, and effort data. Sampling targets can be found in Table 2 of the Appendix. Data from the commercial fishery will be entered through the ACCSP SAFIS eTRIPS application along with at sea and port sampling of commercial fisheries.

#### **4.B. Biological Characterization 15% Allocated Funds**

Sampling of weakfish, Atlantic croaker, American shad, Atlantic menhaden, American eel, summer flounder, black sea bass, and river herring (alewife and blueback) will continue in 2015 based on 2014 annual landings of each species. Seven of the species sampled by NJ are ranked in the top quartile of the biological sampling priority matrix. Effort, either at-sea or dockside, is assigned in accordance with guidelines defined in the ASMFC's FMPs for each species. NJ ACCSP staff and NJDFW seasonal technicians will collect biological samples. Seasonal employees will process (cut and/or mount) all hard structures to be aged. The full time staff of Principal Biologist, Assistant Biologist, and Fisheries Specialists' will age all otoliths. All age samples collected except menhaden, summer flounder, and black sea bass are aged at the NJDFW Nacote Creek facility in Port Republic NJ. Menhaden are sent to the NMFS aging lab in Beaufort, NC; summer flounder and black sea bass are sent to the NMFS aging lab in Woods Hole, MA. For all other species, NJDFW and ACCSP staff have received the necessary training to process and read all the targeted otolith samples (Table 2 of the Appendix). NJ will coordinate with NOAA Fisheries-Greater Atlantic Regional Fisheries Office (GARFO) to avoid duplicate aging.

Data collected from each sample is initially recorded on paper data sheets and then transferred to electronic format by NJ ACCSP staff (ACCSP Fisheries Specialists). After data are successfully entered and quality control measures have been performed, NJ ACCSP staff will send data feeds to the ACCSP for integration into the ACCSP Data Warehouse. This method will allow stock assessment committees, technical committees, and operations committees to view the status of the NJ biological sampling program. Species specific sampling and data collection methodology will follow previous sampling protocol (see section 4.B. of "Continued Dealer Reporting, Trip Level Reporting, and Biological Sampling for Commercial Fisheries in NJ-2013"). Species specific target samples sizes for 2015 can be found in Table 3 of the Appendix.

#### **4.C. ACCSP Data Feeds 15% Allocated Funds**

The NJ ACCSP Program supplies the ACCSP with data from multiple sources including paper/electronic landings data and biological characterization programs. Some NJ landings data are not collected via eTRIPS or eDR and must be converted from paper to electronic records. Included in paper reports are commercial trip level landings of blue crab, American eel, and tautog. Biological characterization data are collected for American lobster, tautog, weakfish, American shad, American eel, Atlantic croaker,

summer flounder, black sea bass, and river herring. Following collection, the data are then input into an electronic database for future use and analyses.

#### **4.D. Electronic Vessel Trip Reporting (eTRIPS) & Electronic Dealer Reporting (eDR) 40% Allocated Funds**

The continuation of SAFIS implementation includes components for web-based dealer reporting (eDR), web-based fishermen reporting, paper-based data entry by NJDFW staff, report compliance monitoring, and site administration (user access, look-up tables, data correction, etc.). The NJ ACCSP Fisheries Specialists supervise the implementation of the NJ eTRIPS application. NJ ACCSP staff provide state permitted fishermen with user accounts, establish favorites lists and facilitate the usage of the eTRIPS application, a web based trip level reporting form. NJ ACCSP staff (Fisheries Specialists') and NJDFW staff (Principal Investigator) develop and present training seminars for groups and conduct individual meetings when necessary to support fishermen in the use and customization of the eTRIPS application. These training tools include Power Point presentations at local libraries, firehouses, and other public meeting venues. The NJ ACCSP project attempts to train multiple individuals at each meeting, however, there are frequently cases when individual attention and support is required outside of these announced seminars. In addition, NJ staff conduct compliance monitoring of reporting (when mandatory reporting exists: blue crab, eel, tautog, menhaden) and perform QA/QC analyses of data entered into the application. NJ ACCSP Fisheries Specialists identify and complete data gaps/user support for state-permitted dealers, fishermen, and managers. Cross validation for all species entered into eTRIPS with SAFIS eDR is completed during each reporting period to assure that duplicate reporting is not taking place by comparing electronic reports to those received in paper logbook format by the NJDFW for species such as tautog and Atlantic menhaden. Compliance of fishermen monthly reports is facilitated using the eTRIPS program.

NJ ACCSP staff lends support to the majority of state permitted dealers, typically providing logistical information regarding quota status, vessel recognition, gear selection, and general state regulations. The NJ ACCSP staff will travel to commercial fishing facilities providing assistance to permitted dealers pertaining to data entry for the eDR application as needed. All NJ ACCSP staff travel for dealer and fishermen support pertaining to SAFIS and eTRIPS data entry, meetings for the further development of NJ commercial fisheries landing statistics program, and training expenses incurred will be covered by the NJ ACCSP.

#### **5. Geographic Location**

The NJDFW Fisheries Biologist will serve as the Principle Investigator for this with NJ ACCSP Fisheries Specialists (2) serving as staff. The project will be administered from the New Jersey Department of Environmental Protection (NJDEP), Division of Fish & Wildlife Nacote Creek Research Station in Port Republic, New Jersey.

**6. Milestone Schedule:** Month 1 following receipt of grant approval.

Description of Activity	Month														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Electronic Vessel Trip Reporting (monitor existing fishermen reports, train new fishers, rollout system for additional species, data entry of data collected via paper based reports)	X	X	X	X	X	X	X	X	X	X	X	X			
Biological Characterization of Commercial Fisheries (Collect lengths, weights and age structures from NJ's commercial fisheries. Process and age scales, opercula or otoliths collected)	X	X	X	X	X	X	X	X	X	X	X	X			
Lobster Landing Statistics (Lobster harvest data collection with components of eVTR, dealer data, at-sea sampling, port sampling)	X			X	X	X	X	X	X	X	X	X			
Tautog Landing Statistics (collection of commercial at-sea coverage data)	X	X	X	X	X	X	X	X	X	X	X	X			
ACCSP Data Feeds (data entry of all biological samples collected by the NJDFW, transmission of all data to the ACCSP through monthly data feeds, SAFIS support tables)			X			X			X			X			
Electronic Dealer Reporting (continue to perform quota monitoring and the online reporting of commercial fisheries landings data for summer flounder, black sea bass and scup)	X	X	X	X	X	X	X	X	X	X	X	X			
Semi-annual report 1							X								
Semi-annual report 2													X		
Final report															X

## 7. Project Accomplishment Measurements update

<b>Project Component</b>	<b>Goal</b>	<b>Measurement</b>
SAFIS Electronic Trip Reporting (eTRIPS) Phase I	Successfully collect data from fishermen reports, check for compliance, and perform quality assurance.	All data checked and compliance performed prior to the 10 <sup>th</sup> of the following month.
SAFIS Electronic Trip Reporting (eTRIPS) Phase II	Enter all received data submitted by fishermen, perform quality assurance measures.	All data entered and checked prior to the 10 <sup>th</sup> of the following month.
Biological Characterization of Commercial Fisheries	Meet all target sample sizes for length, sex, age for each species.	Number of samples collected.
Dependent Fisheries At-Sea Observer Program	Conduct the prescribed number of trips and collect target number of samples by species and management area.	Number of trips made and number of samples collected.
ACCSP Data Feeds	Supply the ACCSP with data feeds as described including participant, and landings data on the schedule described	Were the data feeds performed by the deadlines identified?
SAFIS Electronic Dealer Reporting (eDR)	Supply support to participating eDR dealers with NJ state dealer permits when requested. Perform report compliance on a monthly basis. Manage summer flounder, black sea bass, and bluefish quota as allocated to the State of NJ.	Was support provided and quotas managed?

**8. FY 2015 Budget** (Letters in parenthesis pertain to Federal Grant Object Codes)

<i>Item</i>	<i>Total NJ DFW in-kind support</i>
<b>Salaries (NJDFW)</b>	
Supervising Biologist 5% in-kind	\$4,738
Principal Biologist-Age and Growth Lab Supervisor- 35% in-kind (current FTE)	\$28,218
Senior Biologist- 25% in-kind (current FTE)	\$13,694
Technician I-Data Processing and Entry 50% ACCSP, 50% in-kind, (current FTE)	\$28,190
Clerical 10%	\$4,922
Fringe benefits (46.35% on FTEs)	\$36,970
<b>Supplies &amp; Materials</b>	
Scientific Equipment (Measuring boards, scales, calipers)	\$250
Materials for collection and preparation of scales, otoliths, operculi, etc.	\$350
purchase of samples (American eels)	\$600
<b>Other</b>	
NJDFW Trawl Survey (\$5,900 per day x 10 days)	\$59,000
Department Network account (OIRM)	\$4,000
NJ DFW indirect costs (20.29% of salaries)	\$24,794
Subtotal NJ funds	<b>\$205,725</b>
<b>Append to ACCSP Administrative Grant</b>	
<b>Salaries (NJ ACCSP Staff)</b>	
2 ACCSP Fisheries Specialists (ASMFC employees)	\$83,200
Benefits 25%	\$20,800
<b>Other</b>	
Travel (mileage and tolls)	\$4,000
NMFS Contract; process and age summer flounder/black sea bass otoliths, (\$12.94/sample, 1,000 samples)	\$12,940
* ACCSP Overhead (35%)	\$37,800
<b>ACCSP Admin Grant Project Costs</b>	<b>\$158,740</b>
<b>Total Project Costs (includes in-kind)</b>	<b>\$364,465</b>
* For a full description of the ASMFC overhead fee, please see the attached three PDF files.	

## **Budget Narrative**

**(a). Salaries; ACCSP Fisheries Specialists:**

(2) NJ ACCSP fisheries specialists' annual salary.

**(b). benefits of above employees**

25% of the annual salary for the two NJ ACCSP staff.

**(c). Travel (mileage and tolls):**

The average amount of miles traveled over the last three years to commercial docks, vessels, and instate meetings with industry representatives for the entire project = 7,142 miles / year.

$7,142 \times \$0.56 = \$4,000$  dollars.

**(d). NMFS Contract:**

For aging otoliths from summer flounder and black sea bass collected by NJ ACCSP Staff:

500 black sea bass otoliths x \$12.94 per otolith = \$ 6,470.

500 summer flounder otoliths x \$12.94 per otoliths = \$ 6,470.

1,000 total otoliths to be aged x \$ 12.94 per otoliths = \$12,940.

purchase of 350 American eels from fishermen.

**(e). ASMFC Overhead:**

35 % of the sum of budget items a, b, and c.

**(f). ACCSP Administrative Grant Project Costs:**

Total of (a) through (e) does not include in-kind support. No funds are being directly received by the State of NJ.

The FY2015 budget is in two parts, the first part details the amount that is being provided as in-kind match by the NJDFW, while the second part is the amount to be amended to the ACCSP Administrative Grant. The \$158,740 covers the salaries for two Fisheries Specialist positions that were hired by the ACCSP and work out of the NJDFW's field office in Port Republic, NJ. This covers their fringe and indirect, the ASMFC's overhead, their travel for mileage, and tolls during port sampling and at-sea observer trips in addition to attendance at ACCSP Committee meetings. The ACCSP also is able to administer funds to have the summer flounder and black sea bass otoliths prepared and ages determined by the NMFS Northeast Fisheries Science Center staff.

The in-kind funding provided by the NJDFW includes; salaries for NJDFW full time employees under the titles of Supervising Biologist, Principal Biologist, Assistant Biologist, Technician I, and Clerical; supplies for port sampling, aging laboratory materials, and purchasing eel samples; staff time for independent samples taken aboard the NJ Ocean Trawl Survey and processed at the NJDFW's Port Republic field station, as well Department network support for online reporting systems, and computer support for staff working under the ACCSP Project. Sources of in-kind funding come from the annual state appropriation for the NJ Bureau of Marine Fisheries and from the Atlantic Coastal Grant.



**8.1 FY 2014 Budget** (Letters in parenthesis pertain to Federal Grant Object Codes)

	<i>Item</i>		<i>Total NJ DFW in-kind support</i>
	<b>Salaries (NJDFW)</b>	<b>Calculation</b>	<b>Cost</b>
	Supervising Biologist 5% in-kind		\$6,027
	Principal Biologist-Age and Growth Lab Supervisor- 50% in-kind (current FTE)		\$47,286
	Assistant Biologist- 25% in-kind (current FTE)		\$19,029
	Technician I-Data Processing and Entry 50% ACCSP, 50% in-kind, (current FTE)		\$39,372
	Clerical 10%		\$6,223
	<b>Supplies &amp; Materials</b>		
	Scientific Equipment (Measuring boards, scales)		\$250
	Materials for collection and preparation of scales, otoliths, operculi, etc.		\$350
	purchase of samples (eel otoliths)		\$700
	<b>Other</b>		
	NJDFW Trawl Survey (502 samples collected in 2012 x \$20 per sample)		\$10,040
	Department Network account (OIRM)		\$4,900
	NJ DFW indirect costs (20.29% of salaries)		\$25,050
	Subtotal NJ funds		<b>\$159,227</b>
	<b>Append to ACCSP Administrative Grant</b>		
(a)	<b>Salaries (NJ ACCSP Staff)</b>		
	2 ACCSP Fisheries Specialists (ASMFC employees)	2 x (2080 hrs x 19.07/hr)	\$79,343
(b)	Benefits 25%	25% of total salaries	\$19,836
	<b>Other</b>		
(c)	Travel (mileage and tolls)	8,390 miles x \$0.55/mile	\$4,615
(f)	NMFS Contract; process and age summer flounder/black sea bass otoliths	\$12.48/sample x 1,000 samples	\$12,480
(j)	* ACCSP Overhead (35%)	35% of items a, b, and c	\$36,328
(k)	<b>ACCSP Admin Grant Project Costs</b>		<b>\$152,602</b>
	<b>Total Project Costs-Includes ACCSP Admin Grant and NJDEP In-Kind Match</b>		<b>\$311,829</b>

## 9. Maintenance Projects

Table 1. Amount of funds received directly by the NJDFW, the amount appended to the ACCSP Admin. Grant for NJ ACCSP Staff salaries, and the amount and percentage of in-kind funds supplied by the NJDFW for the ACCSP projects.

<b>History Details for NJDFW ACCSP Funded Projects</b>						
<b>Fiscal Year</b>	<b>Period</b>	<b>Project</b>	<b>NJ ACCSP Funds Requested</b>	<b>Appended to ACCSP Admin Grant</b>	<b>NJDFW In-Kind</b>	<b>In-Kind Percentage of Total Project Cost</b>
2001	9/01/2001 through 8/31/2002	Integration of Commercial Blue Crab Harvest Data into the ACCSP	\$133,988	\$0	\$0	0%
2005	5/01/2005 through 4/30/2006	Implementation of Phase 2 of the ACCSP for the State of New Jersey	\$89,180	\$84,375	\$41,831	19%
2006	9/01/2006 through 8/31/2007	Biological Characterization of Four New Jersey Commercial Fisheries	\$79,722	\$0	\$59,986	43%
2006	9/01/2006 through 8/31/2007	Continuance of Phase 2 of the ACCSP for the State of New Jersey	\$81,264	\$78,975	\$63,556	28%
2007	9/01/2007 through 8/31/2008	Implementation of eVTR, Biological Characterization and Continuance of SAFIS Coordination for the State of New Jersey	\$167,544	\$87,413	\$111,617	30%
2008	9/1/2008 through 8/31/2009	NJ Implementation of ACCSP Commercial Fisheries Data Collection; Electronic Vessel Trip Reporting, Electronic Dealer Reporting, and Biological Characterization.	\$128,536	\$150,525	\$86,609	24%
2009	9/1/2009 through 8/31/2010	Introduction & Continuance of SAFIS and Biological Characterization of Commercial Fisheries in NJ	\$52,814	\$174,096	\$132,008	37%
2010	9/1/2010 through 8/31/2011	Further Development of SAFIS and Biological Characterization of Commercial Fisheries in NJ	\$24,301	\$174,096	\$191,008	49%
2011	9/1/2011 through 8/31/2012	Continued Expansion of SAFIS and Biological Sampling for the Commercial Fisheries of NJ	\$0	\$188,779	\$191,008	50%
2012	9/1/2012 through 8/31/2013	Continued Dealer Reporting, Trip Level Reporting, and Biological Sampling for Commercial Fisheries in NJ	\$0	\$192,100	\$240,897	56%
2013	9/1/2013 through 8/31/2014	Continued Dealer Reporting, Trip Level Reporting, and Biological Sampling for Commercial Fisheries in NJ	\$75,989	\$192,100	\$240,897	47%
2014	9/1/2014 through 8/31/2015	Continued Dealer Reporting, Trip Level Reporting, and Biological Sampling for Commercial Fisheries in NJ	\$0	\$152,602	\$159,227	51%
<b>Total Amount for all ACCSP Projects</b>			<b>\$833,338</b>	<b>\$1,475,061</b>	<b>\$1,518,644</b>	<b>36%</b>

## **Proposal Summary for Ranking Criteria**

**PROPOSAL TYPE:** *Maintenance*

### **PRIMARY PROGRAM PRIORITY:**

**Catch and Effort:** **100 %** of permitted dealers in NJ will be submitting dealer reports through SAFIS eDR, for **100%** of the species they purchase. **67%** of the 21 commercial harvester license types will be submitting trip level catch and effort data, the remaining 33% of harvester licenses are collected through the federal NMFS VTR program.

### **PROJECT QUALITY FACTORS (Partners, Funding, and Data):**

#### **Partners-**

##### **Multi-Partner/Regional impact including broad application:**

Although this project focuses on the activities of NJ permitted fishermen and dealers, it includes the data collection of species harvested regionally such as lobster, bluefish, summer flounder, black sea bass, scup, tautog, weakfish. Thus the ASMFC will benefit from the dealer and harvester data collected from this project.

#### **Funding-**

##### **Transition Plan:**

The NJ ACCSP Project in FY2013 included funds that went directly to the NJDFW for salaries and supplies. The NJDFW has proposed a landing license for all state fisheries several times over the years. The efforts have been thwarted by industry lobbyists who are opposed to any license. The NJDFW has been able to create an Atlantic menhaden landing license, the funds of which will be directed towards commercial fisheries research and management for that specific fishery. This specific license is limited entry with very specific qualifying factors to remain in the fishery. Because of this recent development, there are several commercial bases realizing the importance of mandatory reporting. These license funds will provide NJ with a source of revenue further relieving funding away from the ACCSP. These costs were removed in FY2014, and will continue to be covered as NJDFW in-kind match for FY2015.

##### **In-kind Contribution:**

The NJDFW is providing 56% of the project cost (see table 3).

#### **Data:**

##### **Improvement in data quality/quantity:**

The NJDFW has been able to provide commercial harvest landings data to the ACCSP for American lobster, Atlantic menhaden, blue crab, and American eel through annual data feeds. The NJ eDR program continues to be monitored by the NJ ACCSP staff. This type of project and data management has ensured improvements in data quality, quantity and timeliness.

### **SECONDARY PROGRAM MODULE:**

#### **Biological Sampling:**

NJDFW is collecting biological characterization data through port sampling and at-sea observer coverage for 10 species, 7 of which are listed in the upper 25% on the ACCSP Biological Priority Matrix.

## **PROJECT QUALITY FACTORS (Partners, Funding, and Data):**

### **Partners:**

NJDFW is collecting biological characterization data for 10 species of which 7 have regional management through the ASMFC's FMPs including weakfish, Atlantic croaker, American shad, tautog, American lobster, black sea bass, and summer flounder.

- American lobster at-sea observer data coverage includes trips in LCMA's 4 and 5.
- American eel sampling covers water bodies bordered by NY, NJ, PA, and DE.
- Atlantic menhaden samples are used by Seton Hall University to conduct chemical contamination studies through bioassay analysis.

### **Data:**

All biological data collected by the NJDFW/NJ ACCSP staff are available for coast wide stock assessment. NJDFW blue crab harvest trip level catch and effort data are used by the state of Delaware to conduct their stock assessment within the Delaware Bay. NJDFW tautog biological sampling and aging data are used by coast-wide and regional stock assessment committee. NJDFW at-sea lobster observer data are utilized regionally for stock assessment and recruit abundance. NJDFW weakfish and American eel biological characterization data are used for stock assessment.

Appendix:

Table 1. History of ALL biological samples collected by the NJ ACCSP program. ACCSP FY2013 rankings for each species appear in parentheses after each species name; anything ranked 1-20 is in the upper 25% of the matrix.

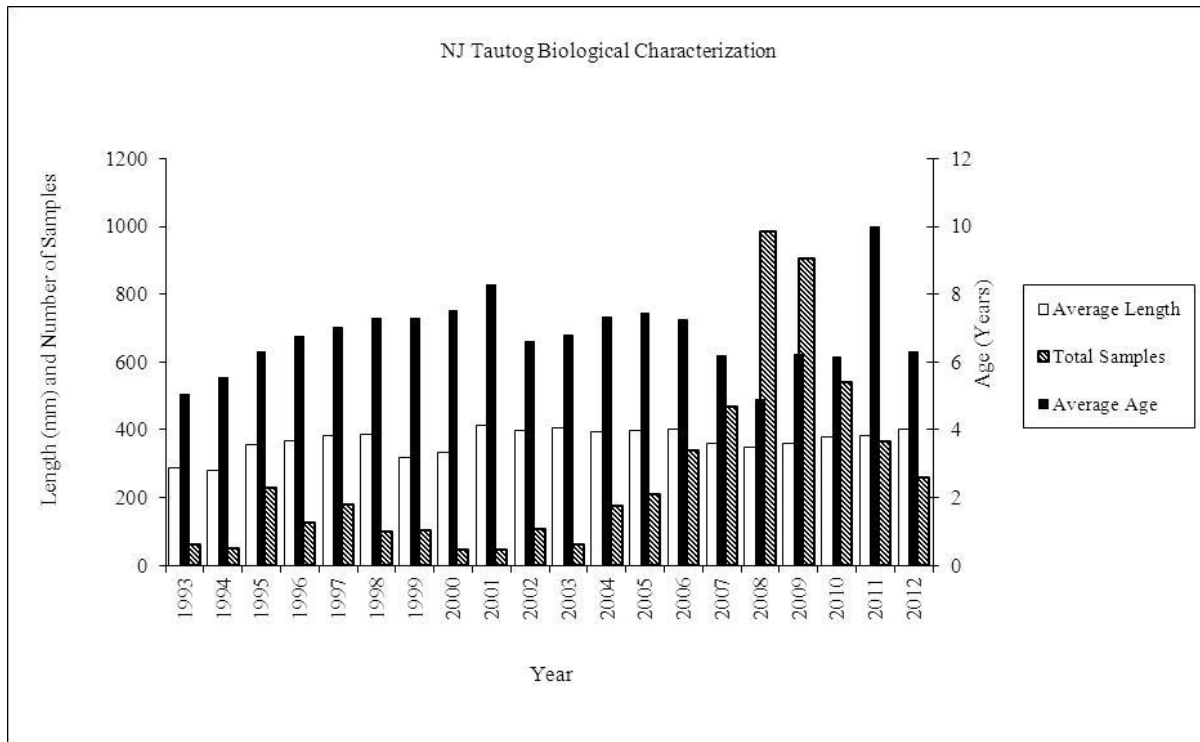
	Weakfish (13)			American Eel (24)			Atlantic Croaker (71)			American Shad (4)			Atlantic Menhaden (adequately sampled)		
Year	Lengths	Otoliths	Otoliths Aged	Lengths	Otoliths	Otoliths Aged	Lengths	Otoliths	Otoliths Aged	Lengths	Otoliths	Otoliths Aged	Lengths	Scales	Scales Aged
2004	71	57	57	0	0	0	0	0	0	0	0	0	0	0	0
2005	150	150	148	0	0	0	0	0	0	0	0	0	0	0	0
2006	379	377	377	457	141	48	364	364	364	0	0	0	310	310	230
2007	566	549	549	237	0	0	340	340	338	7	0	0	630	630	486
2008	457	451	451	547	508	0	608	500	498	36	34	0	760	760	667
2009	254	254	254	478	418	0	960	560	558	28	28	0	430	430	386
2010	650	571	571	399	384	346	750	750	749	42	42	0	560	560	421
2011	313	313	310	289	265	265	274	274	240	0	0	0	530	530	448
2012	202	202	156	140	60	60	660	635	635	220	0	0	890	890	826
2013	216	216	212	175	173	170	0	0	0	166	162	0	570	570	474
*2014	0	0	0	196	196	0	0	0	0	71	60	0	790	790	0
<b>TOTAL</b>	<b>3242</b>	<b>3124</b>	<b>2873</b>	<b>2882</b>	<b>2145</b>	<b>889</b>	<b>3956</b>	<b>3423</b>	<b>3382</b>	<b>499</b>	<b>266</b>	<b>0</b>	<b>4801</b>	<b>4801</b>	<b>3464</b>
	Tautog (21)			American Lobster (20)		Black Sea Bass (1)			River Herring (12)			Summer Flounder (10)			
Year	Lengths	Opercles	Opercles Aged	Lengths	Trips Made	Lengths	Otoliths	Otoliths Aged	Lengths	Otoliths	Otoliths Aged	Lengths	Otoliths	Otoliths Aged	
2004	176	176	176	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
2005	208	208	208	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
2006	339	339	339	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
2007	467	313	313	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
2008	982	505	200	6330	11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
2009	901	569	200	6785	14	N/A	N/A	N/A	2009	1850	N/A	N/A	N/A	N/A	
2010	563	487	200	5569	10	1282	91	90	378	306	N/A	247	247	231	
2011	363	346	346	8661	14	106	106	106	655	509	N/A	340	340	335	
2012	265	259	259	23690	20	109	109	108	891	889	N/A	393	393	377	
2013	460	431	0	9954	9	141	141	141	226	226	N/A	362	360	350	
*2014	164	164	0	7446	7	51	51	0	0	0	0	173	172	0	
<b>TOTAL</b>	<b>4888</b>	<b>3797</b>	<b>2241</b>	<b>68435</b>	<b>85</b>	<b>1689</b>	<b>498</b>	<b>445</b>	<b>4159</b>	<b>3780</b>	<b>N/A</b>	<b>1515</b>	<b>1512</b>	<b>1293</b>	

\*2014 samples collected are to date of proposal preparation, sampling for 2014 is ongoing.

Table 2. 2014 sampling targets for each of the nine species currently funded through the ACCSP.

2014 NJ ACCSP SAMPLING TARGETS		
Species	Target Lengths	Target Ages
American eel	1750	350
Atlantic croaker	1076	540
Atlantic menhaden	610	610
Weakfish	42	21
Shad	250	250
Summer flounder	500	500
Black sea bass	500	500
River herring	500	500
Tautog	480	480

Figure 1. Historical summary of the NJDFW tautog aging program (1993-2012).



**OBJECTIVE**

Conservation and management of marine/estuarine fishes through scientific sampling, data collection, and research.

**EDUCATION**

2006 M.S., University of Massachusetts, Fisheries and Wildlife Conservation, Thesis Title: Winter Recruitment of Age-0 Bluefish, *Pomatomus saltatrix*, into a Northeast Florida Estuary.

1998 B.S., Massachusetts Maritime Academy, Marine Safety and Environmental Protection.

**PROFESSIONAL EXPERIENCE**

2011-Present Fisheries Biologist, NJ Division of Fish and Wildlife, Bureau of Marine Fisheries, Nacote Creek, NJ.

2005-2011 Fisheries Specialist, Atlantic States Marine Fisheries Commission; NJ Bureau of Marine Fisheries, Nacote Creek, NJ.

2005 Research Technician, New Jersey Department of Environmental Protection, Bureau of Marine Fisheries, Nacote Creek, NJ.

2002-2006 Masters Candidate / Research Assistant, University of Massachusetts, Department of Natural Resources Conservation, Fisheries and Wildlife Conservation, Amherst, Massachusetts.

2000-2002 Research Technician, Rutgers University Marine Field Station, Tuckerton, NJ.

1999-2000 Research Volunteer, National Marine Fisheries Service, James J. Howard Marine Laboratory, Highlands, New Jersey.

Clarke, P.J. and F. Juanes. Winter Recruitment of Age-0 Bluefish, *Pomatomus saltatrix*, in a Northeast Florida Estuary. Marine Ecology Progress Series. Vol. 492: 235–252, 2013.

Able, K.A., P. J. Clarke, and R.C. Chambers. Transitions in the morphological features, habitat use, and diet of young-of-the-year goosfish (*Lophius americanus*). Fishery Bulletin. Volume 105, Number 4, October 2007.

Clarke, P.J. 2001. Materials and Methods for Preparing and Analyzing Otoliths from *Lophius americanus* (Northwestern Atlantic Goosfish). Technical Report. Rutgers University Marine Field Station.

Juanes, F., J. Murt and P. Clarke. 2007. Winter recruitment of YOY bluefish: habitat use, feeding ecology, and energetics. NAFO/ICES/PICES/Symposium, Reproductive and Recruitment Processes of exploited marine fish stocks. Lisbon, Portugal, 1-3 October 2007.

Winter Ecology of Young-of-the-Year Bluefish in a Northeast Florida Estuary. Mid-Atlantic American Fisheries Society. 2006.

Winter Recruitment of Age-0 Bluefish, *Pomatomus saltatrix*, in a Northeast Florida Estuary. 28th Annual Larval Fish Conference. Clemson, South Carolina, USA, 23-26 May 2004.

Winter Recruitment of Young-of-the-Year Bluefish, *Pomatomus saltatrix*, into Northeast Florida Estuaries; aspects of distribution, critical habitat, diet, and condition. 133rd Annual American Fisheries Society Conference. Quebec City, Quebec, Canada, 10-14 August 2003.

Examination of the Early Life History of *Lophius americanus* (Northwest Atlantic Goosfish). New Jersey Academy of Science, Kean University, New Jersey. 2002.

**PUBLICATIONS AND PRESENTATION**

**FY 2015 Atlantic Coastal Cooperative Statistics Program (ACCSP)  
Funding Request Proposal – June 30, 2014  
Revised – September 1, 2014**

**Applicant:** South Carolina Department of Natural Resources (SCDNR)  
Marine Resources Division, Charleston, SC

**Project Title:** ACCSP Data Reporting from South Carolina's Commercial Fisheries  
1) 100 % Trip-Level Catch and Effort Data Collection (70%)  
2) Biological Sampling for Hard Part/Aging of Offshore Species (30%)

**Project Type:** Maintenance Project: One-year  
(No change in scope of work, continued emphasis on Electronic Data Reporting)

**Principal Investigator:** Amy Dukes, SCDNR Statistics Section Leader

**Requested Award Amount:** \$165,824.63 (Excludes 5% NOAA Administrative Fee)

**Requested Award Period:** One-year, July 1, 2015 thru June 30, 2016, or after receipt of funds

**Objectives:** The objective of this study is to successfully execute two ACCSP Primary Program Priorities with South Carolina Commercial Fisheries: Catch/Effort Data Collection (70%) and Biological Sampling (30%)

**Currently, SCDNR is actively engaged in collecting consistent ACCSP standardized trip-level data for 100% of all marine and diadromous commercial fisheries in South Carolina.** The proposed funding would allow SCDNR to maintain compliance with ACCSP data requirements and standards through the continuation of commercial catch and effort data collection, data entry, database management, and administrative support. It will also enable collections of biological samples, including otoliths and length frequency, from species in the snapper/grouper, pelagic, and coastal migratory complexes landed in South Carolina. These data serve as an integral component of the development, implementation, and maintenance of fisheries management plans for Atlantic Coastal fish stocks.

**Needs:** It is crucial to assess comprehensive catch/effort data and to collect biological samples in order to effectively and efficiently manage fisheries. Fishery dependent data, provided by commercial fisherman, has a direct impact on fishing management and the sustainability for the industry. The information gathered is used to evaluate the need for potential changes to fisheries regulations and to monitor commercial fishing quotas across the southeast. These data are used to support stock assessment analyses for state and federally managed species, and are responsible for the assessment of finfish stocks to identify fisheries trends, assess management priorities while meeting regulatory requirements under the Magnuson-Stevens Act. Atlantic States Marine Fisheries Commission also needs reliable and detailed data to evaluate the effectiveness of Fisheries Management Plans. SCDNR continues to have discussions with state representatives about requests for available state appropriated funds to accomplish the ACCSP Catch/Effort and Biological Sampling priorities, however at this time there is no direct long-term state funding available. **It is the goal of the agency to secure state funds in the near future and a draft proposal has been submitted for consideration in fiscal year 2016 to the SC Legislature.**



**Catch and Effort** - Since 1976, South Carolina has required mandatory reporting (regulatory authority, Title 50, Section 50-5-380, SC Code of Laws) of monthly totals of commercial landings from licensed wholesale seafood dealers. Since 2003, these data have been provided on a trip-level basis. **Currently, 100% of all commercial fisheries products landed in South Carolina are required to be reported through ACCSP compliant trip-level logbooks.** These data are collected through a one-ticket system, meaning that all fishing effort (provided by the harvester at time of sell/purchase), pounds of catch and product values (provided by the purchaser) are obtained and reported by the licensed wholesale seafood dealer on logbook forms provided by the agency. **These logbooks were designed to be fishery/species-specific to allow detailed and complete catch per unit effort data to be recorded for each fishery type. The logbooks collect the following data fields: product volume (i.e. pounds, bushels), product price, disposition (i.e. gutted, whole) and market category (i.e. small, large), gear type (i.e. trawl, hook and line), area and sub-area fished (i.e. river system, and port), commercial fisherman information (name and license) vessel name and registration numbers, number of crew, time fished (gear soak time), and specific information on amount of gear effort (i.e. number of nets/lines/traps, number of hooks per line, number of sets/hauls, line length).** The logbooks are bound and are carbon copied, as they serve as business receipts for the harvesters and dealers can use them as a bill of lading. **Examples of two commercial trip-logbooks, Daily Crab and Trawl, are provided below in Appendix 1 and 2. Currently there are 1,373 licensed commercial saltwater fishermen and 265 wholesale dealers in South Carolina, of which 239 are reporting via paper logbook and 26 federal dealers are using electronic entry.** Commercial fishermen and wholesale seafood dealers who fail to make accurate, timely and complete reports are subject to Law Enforcement actions, including fines and possible suspension of licenses.

Electronic data collection has continued to be a major focus in South Carolina, as National Marine Fisheries Service (NMFS) has required electronic data reporting for all federal seafood dealers since 2010 (Southeast Regional Office, SERO) and 2013 (Highly Migratory Species, HMS) in order to track species for quota monitoring. The initial outreach efforts by SCDNR have been restricted solely to federal dealers. Although the concept of electronic data reporting was not well received by the majority of dealers, **the 26 federal dealers** that are currently using the provided data platforms have adjusted well. A dedicated staff member will be hired to focus on electronic data reporting which will be funded through ACCSP allocations in FY2014. The goal of this new staff member will be to provide outreach, education, and support to federal dealers while initiating efforts to have state-only dealers utilize the electronic infrastructure. Having a dedicated staff member to directly assist these customers will allow SCDNR to develop functional outreach tools and provide technical support to dealers as they transition to electronic data reporting while ensuring compliance.

Additionally, a change in commercial licensing has allowed a more target-based approach to collect landings data from bait dealers. In South Carolina, to harvest, purchase, and/or sell bait regardless of where the bait was landed, an individual or company must possess a Bait Dealer license. Many of these bait dealers are simply selling bait that was shipped in and not harvested from South Carolina waters. The information they were providing was not adequate for ACCSP standards. A new required data field has been added which clearly identifies if an individual or company purchasing a Bait Dealer license is in fact harvesting bait from South Carolina waters. A new logbook is now in design and production that will be completed by those individuals or companies that indicate they are harvesting bait. This new logbook will be distributed in early 2015, and will have mandatory compliance on trip-level data collections identical to the existing collections from wholesale seafood dealers.

The requested funding for this project would allow SCDNR to continue to employ Fisheries Statistics Section (FSS) staff, including an electronic data coordinator, data manager, compliance coordinator, and data entry positions, as well as support for printing and postage costs associated with these data collections.

**Biological Sampling** - SCDNR currently conducts dock-side sampling efforts on commercially landed finfish, collecting biological samples including but not limited to otoliths and length frequencies. **ACCSP-compliant biological sampling data from the snapper/grouper complex, and coastal migratory and pelagic species are collected through the Southeast Fisheries Science Center (SEFSC) Trip Interview Program (TIP).**

Through TIP, port agents often collect additional biological data including tissue (DNA), stomach and gonad samples from species over and above the sampling targets, as these species are of interest to SCDNR and are related to project goals under the agency's overall mission to manage and protect South Carolina fisheries. These additional samples will be analyzed in-house under the direction of SCDNR **Marine Resources Monitoring, Assessment, and Prediction (MARMAP) program** staff, and will increase the amount of available data for future stock assessments. These additional samples will not utilize ACCSP requested funds except to cover the port agents' salary and travel expenses since these additional samples are taken cohesively. Through ACCSP funding, SCDNR will be able to maintain these consistent biological sampling efforts with two port agents.

### **Results and Benefits:**

FSS staff and port agents facilitate the partnership between the commercial fishing sector and state/federal management entities to maintain positive working relationships between all parties. SCDNR will work to maintain open and effective lines of communication with all commercial fishermen and wholesale dealers **to ensure** that everyone understands the importance of **timely, accurate and complete data submissions** associated with the management of marine fisheries.

**Catch and Effort - The trip-level data collected will provide comprehensive and comparable landings data which will be used to evaluate the current effectiveness of fisheries management, set priorities and develop new Fisheries Management Plans in conjunction with state and federal partners and councils.**

**Biological Sampling - This level of biological sampling is essential for the evaluation of finfish stocks, and the resulting comprehensive and comparable dataset will be essential to set priorities for and evaluate the effectiveness of current and future fisheries regulations, quotas, and management plans.**

### **Approach:**

#### Catch and Effort Tasks

1. Collection and entry of all commercial fisheries trip-level catch and effort data through a mandatory trip ticket reporting system in accordance with ACCSP protocols and standards.
  - SCDNR will continue to employ two Data Specialists, one Data Administrative Assistant, one Data Manager and one Section Manager Leader responsible for all commercial catch and effort compliance, data entry, editing, and submission to ACCSP.
  - Individual trip tickets will be required from dealers and tracked for compliance for all commercial fisheries products landed in South Carolina.
  - Non-compliance offenders will be reported to SCDNR Law Enforcement and are subject to action. Statistics staff will assist with prosecution efforts by providing evidence in court.
  - Trip tickets will be reviewed for completeness, edited as necessary, entered and verified.
  - Trip ticket logbooks will periodically undergo a review process in order to identify areas for data collection improvements, and to ensure that dealers understand all data fields.
  - Efforts to QA/QC licensing data will continue as necessary to ensure the cohesion and integrity of FSS databases.
  - Data will be converted to ACCSP codes and transmitted to ACCSP in a timely manner, at minimum quarterly.
2. Editing and verifying commercial fisheries trip level catch and effort data through electronic data reporting.
  - Staff will continue to focus efforts on compliance, outreach and education to federal dealers and continue to urge state dealers to utilize the ACCSP's Standard Atlantic Fisheries Information System (SAFIS) or Bluefin platforms to report catch and effort data electronically.
  - FSS staff will verify consistencies and edit as necessary catch and effort data reported between mandatory trip tickets and electronic data submissions.



Task 4 Report writing period.												X	X	X	X
<b>Biological Sampling</b>	J	A	S	O	N	D	J	F	M	A	M	J	J	A	
Task 1 Collection and preparation of data on length frequencies and hard-part samples for commercially landed Snapper/Grouper, Pelagic, and Coastal Migratory species.	X	X	X	X	X	X	X	X	X	X	X	X	X		
Task 2 Preparation and shipment of hard-part samples to Beaufort Marine Lab in North Carolina for processing and aging.	X	X	X	X	X	X	X	X	X	X	X	X	X		
Task 3 Data editing (coding), verification and entry into the TIP online database.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Task 4 Report writing period.												X	X	X	X

**Project Accomplishments Measurement:**

Catch and Effort - SCDNR will continue to meet a data dissemination goal, which will deliver South Carolina landings data to ACCSP no more than 90 days after the end of a quarter (every three months).

Biological Sampling - SCDNR will continue to achieve set TIP sampling targets yearly, with data entry into the TIP online database and delivery of collected samples monthly.

<b>Program Priorities/ Project Component</b>	<b>Goal</b>	<b>Measurement</b>
Catch and Effort	Collection of 100% of all SC commercial fishery products landed at trip-level in accordance with ACCSP standards.	Data entered, verified and delivered to the ACCSP no more than 90 days after the landing date.
Catch and Effort	Continuation of Electronic Data Reporting by Federally Permitted Dealers and advocate the initiation for state-only dealers.	Dealers reporting on a weekly basis, completely and accurately. NMFS SERO/HMS to enforce and regulate.
Biological Sampling	Collection of all species targeted and identified by the ACCSP Biological Committee and TIP as data deficient.	Number of samples collected by representing number of species.
Biological Sampling	Validate, enter, and edit all biological data into TIP on-line and provide samples to Beaufort Lab.	Timeliness and accuracy of data/samples provided.

**Cost Summary:****BUDGET TEMPLATE FOR PROPOSAL PLANNING – FY15**

	ACCSP Operational Costs Request		SCDNR In-Kind Contributions	
	Monthly Time	Salary Funds	Monthly Time	Salary Funds
<b>Personnel Expenses: All current staff, no new hires.</b>				
Statistics Leader (Catch & Effort, & Biological - AWD)	0	\$0	9	\$32,710
Database Manager (Catch & Effort - EH)	3	\$9,912	3	\$9,912
Biologists II (Electronic Outreach - NP)	6	\$18,154	2	\$6,051
Data Administrator (Catch & Effort - VG)	4	\$11,579	4	\$11,579
Data Coordinator I (Catch & Effort - SM)	4	\$8,252	4	\$8,252
Data Coordinator II (Catch & Effort - CB)	6	\$13,723	5	\$11,436
Biologist I (Biological - DP)	7	\$19,007	4	\$10,861
Biologist I (Biological - EM)	6	\$16,292	5	\$13,576
<b>Total Salary Costs</b>		<b>\$96,919.00</b>		<b>\$104,377.00</b>
<b>Fringe Costs (38%)</b>		<b>\$36,829.22</b>		<b>\$39,663.26</b>
<b>Indirect Costs (23.81%)</b>		<b>\$23,076.41</b>		<b>\$24,852.16</b>
<b>Total Personnel Expenses</b>		<b>\$156,824.63</b>		<b>\$168,892.42</b>
<b>Miscellaneous Expenses</b>				
<b>Printing &amp; binding (forms, surveys, tickets)</b> SCDNR currently has 8, soon to be 9 logbook forms necessary to collect 100% mandatory trip level data. Printing of the logbooks based on size and quantity ordered. Average price per book: \$8.17. Typical usage of these logbooks varies from year to year. During the last fiscal year, # 369 logbooks were distributed to dealers, with a replacement coast estimated at \$3,014.73		\$3,000		\$1,000
<b>Postage (incoming, business reply mail)</b> The yearly fee to hold a USPS Business Reply is \$905.00. SCDNR paid an additional \$2,425.54 in returned mail during the 2014 fiscal year, which primarily includes dealer reports. Providing free return mail is an incentive for accurate and timely reporting from dealers. It has proven to be very successful.		\$3,000		\$1,000
<b>Postage (outgoing, forms, notices)</b> This amount reflects the average amount typically spent to send mail to dealers. Monthly reminder letters are sent to delinquent dealers, and upon request, user manuals, logbook, and additional forms are sent out to dealers.		\$1,500		\$1,500
<b>Office and Sampling Supplies</b> General supplies including envelopes (letter and large mailers), pens, printing paper, three-ring binders (for user manuals), and file organizational materials, clip boards, fin-clip vials, filet knives.		\$1,000		\$1,000
<b>Uniforms / clothing (hats, shirts, etc.)</b> Staff often interact with the public and must represent SCDNR. Polo shirts (\$24.00) and Oxford shirts (29.55) are available for purchase with the DNR embroidered logo.		\$500		\$500
<b>Travel</b> Port Agents will travel to dealers to intercept commercial fishing vessels to collect Biological samples. Current rates for SCDNR vehicles are 50.5 cents per mile. Round trip daily trips can average as high 200 miles.		\$2,000		\$8,000
<b>Total Miscellaneous Expenses</b>		<b>\$9,000.00</b>		<b>13,000.00</b>
<b>Total Costs</b>		<b>\$165,824.63</b>		<b>\$181,892.42</b>
<b>Total Project Cost</b>				<b>\$347,717.05</b>
<b>Percentage Contribution</b>		<b>48%</b>		<b>52%</b>

**BUDGET NARRATIVE**  
**(Previous Funding Period, FY14)**

**Project:** ACCSP Data Reporting from South Carolina's Commercial Fisheries  
1) 100 % Trip-Level Catch and Effort Data Collection  
2) Biological Sampling for Hard Part/Aging of Offshore Species  
**FFO#:** NOAA-NMFS-SE-2013-2003488  
**Project Period:** 1 July 2013 - 30 June 2014  
**1 Year Funding:** \$163,627  
**Prepare by:** Amy Dukes (PI)

**Personnel (Salaries) \$103,178:** Seven SCDNR employees' salary time will be utilized with these funds. The seven current employees are 1 Wildlife Biologist III, Amy Dukes, Project PI, for 3 months (\$10,689); 1 Wildlife Biologist II George Steele, Database Manager, for 6 months (\$24,987); 2 Wildlife Biologist I's, David Player, Port Agent, for 7 months (\$18,634 each) and Ernest Muhammad, Port Agent, for 6 months (\$15,972); a Data Administrator, Vanessa Geddis for 4 months (\$11,352); and 2 Data Coordinators, Carol Barber of 6 months (\$13,454) and Shonda Miller for 4 months (\$8,090).

**Fringe Benefits \$39,208:** The current SCDNR fringe benefit cost is set at 38% for salary employees. These rates are within the maximum range set forth by NOAA.

**Contractual: \$5,000.00:** The contractual budgeted funds will be used to cover expenses to the grant associated with monthly cell phone charges, printing, copying and freight charges. A primary function of this project will entail the printing of carbon copied logbooks that will be distributed to licensed individuals to collect data. During an average fiscal year, 550 logbooks are distributed to dealers, with an average price of \$15.00 each.

**Supplies and Materials \$2,000.00:** General office supplies including envelopes (letter and large mailers), pens, printing paper, three-ring binders (for user manuals), and file organizational materials will be purchased with these funds. In addition, postage paid envelopes are distributed through a business reply account with the US Postal Service. These funds will cover the yearly accounting fees and postage, both to and from licensed individuals.

**Travel \$1,000.00:** Vehicle mileage is to be covered under this category. Staff will travel to seafood docks to collect catch and biological data. The current SCDNR travel rate is 50.5 cents per mile.

**Fixed \$808.00:** Due to a new state accounting system, some expenses associated with vehicle charges fall under fixed charges. The current SCDNR travel rate is 50.5 cents per mile.

**Indirect Charges \$12,433.00:** The current SCDNR indirect cost is set at 12.057% which is only applied toward salaries and wages.

**Totals: \$163,627.00**

**Maintenance Projects History for Primary Program Priorities:** Catch and Effort (White), Biological Sampling (Grey) – Beginning in 2011, the funded proposal included both Primary Program Priorities.

Funding Year	Amount	Time Period	Results/Comments
2001	\$132,228	1 June 2001 – 31 May 2002 (extended thru 31 May 2003)	Implementation of ACCSP Commercial Module
2003	\$94,760	1 June 2003 – 31 May 2004 (extended thru 30 April 2006)	Continuation of ACCSP Commercial Module
2004	\$39,532	1 June 2004 – 31 May 2005	Biological Sampling. Grant money was awarded in August 2004. State hiring freeze in effect. One year no-cost extension awarded in May 2005.
2005 and 2006		1 June 2005 – 31 May 2006 (extended thru 30 November 2006)	Biological Sampling. State hiring freeze still in effect, lifted in Sept. 2005. Port sampler hired Oct. 2005. Award period extended to Nov. 2006.
2006	\$60,990	1 May 2006 – 30 April 2007 (extended thru 30 April 2008)	Continuation of ACCSP Commercial Module
2007	\$34,958	1 May 2007 – 30 April 2008	Biological Sampling. Grant money was awarded in August 2007.
2008	\$42,261	1 May 2008 – 30 April 2009	Biological Sampling.
2009	\$0	1 May 2009 – 30 April 2010	Biological Sampling. No proposal submitted, approved for a 6-month no cost extension
2009	\$0	1 May 2009 – 30 April 2010	Continuation of ACCSP Commercial Module. No proposal submitted, approved for a 6-month no cost extension to spend remainder of funds
2010	\$92,098	1 July 2010 – 30 June 30 2011	Catch and Effort data collection from the Commercial Module
2010	\$54,091	1 July 2010 – 30 June 2011	Biological Sampling.
2011	\$191,807	1 July 2011 – 30 June 2012	Catch and Effort data collection from the Commercial Module and Biological Sampling efforts.
2012	\$186,558	1 July 2012 – 30 June 2013	Catch and Effort data collection from the Commercial Module and Biological Sampling efforts.
2013	\$163,627 * Post budget cut	1 July 2013 – 30 June 2014	Catch and Effort data collection from the Commercial Module and Biological Sampling efforts.
2014	\$175,716	1 July 2014 – 30 June 2015	Catch and Effort data collection from the Commercial Module and Biological Sampling efforts.



## ACCSP - Ranking Criteria Summary

**Proposal Type** – Maintenance, no change in scope of work

**Primary Program Priority** – This proposal contains two Primary Program Priorities that fit the current ACCSP Program Design.

- Catch and Effort (70%) – SCDNR collects data from 100% of all commercial fisheries products landed in this state on a trip-level basis, following standardized data elements and code formats required by ACCSP. The state adopted one-ticket system requires each licensed Wholesale Seafood Dealer to collect and provide all effort information from the licensed commercial fisherman, the volume of product landed, and the product value. **Increased efforts to improve and further promote electric data reporting.** Metadata is not collected.
- Biological Sampling (30%) **(to be considered during the Project Quality Factors)** – SCDNR collects biological samples, including length measurements and otolith collections, from many species within the snapper/grouper complex, coastal migratory and pelagic species. Seven of the species sampled fall within the upper quartile of the ACCSP Biological Sampling Priority Matrix.

**Project Quality Factors** –

- Partners – Although this proposal does not have a multi-state partnership, it does have a regional impact. The South Atlantic Fisheries Management Council makes recommendations to NMFS based regionally collected fisheries data collection, both independent and dependent data. The Catch and Effort data and Biological Sampling data provided to ACCSP impacts these regional recommendations.
- Funding Transition – SCDNR continues to have discussions with state representatives about requests for available state appropriated funds to accomplish the ACCSP priorities; however at this time, there is no direct long-term state funding available. **It is the goal of the agency to secure state funds in the near future a draft proposal has been submitted for consideration in fiscal year 2016 to the SC Legislature.** Without funding, there is the potential for loss of staff and positive data collections. Funding has slightly decreased over the past three fiscal years.
- In-kind Contribution - The agency does utilize other funding sources to offset the non-existent state funds, which represents the 52% in-kind contributions.
- Data Improvement – Through the initiation of electronic data collection, primarily from dealers that handle offshore fisheries products, SCDNR will be improving the timeliness of data. QA/QC checks of the data prior to quarterly submission will continue in order to insure accurate and complete data.
- Secondary Program Priority – Biological Sampling (see above).
- Impact on Stock Assessments – The Catch and Effort data collected and provided to the ACCSP Data Warehouse is suitable to be provided for future stock assessments. In addition, the fin fish lengths measured and otoliths collected through Biological Sampling efforts are also provided for stock assessments.

**Other Factors** –

- Properly Prepared – This proposal follows the guidelines under the ACCSP Funding Decision Process Document.



Appendix 1. Example of the logbooks used by SCDNR, Daily Crab Trip Ticket.

**SOUTH CAROLINA TRIP TICKET (DAILY CRAB POT)**

2-

DEALER NAME:					
DEALER NUMBER:					
FISHERMAN NAME:					
FISHERMAN ID # or CUSTOMER ID #:					
NO. OF CREW: (INCLUDE CAPT)		VESSEL NUMBER:			
TRIP START DATE:	MO. / DAY / YR.	UNLOADING DATE:	MO. / DAY / YR.		
NUMBER OF TRAPS PULLED:			SOAK TIME (HOURS):		

**CIRCLE WATERBODY WHERE *MOST* OF CATCH WAS MADE**

020	Ashley River	300	ICWW: Prices Inlet-Sullivans	420	South Edisto
030	Broad River	310	Little River	430	St. Helena Sound
050	Bulls Bay	330	May River	490	Stono River
070	Calibogue Sound	370	Murrells Inlet	510	Waccamaw River
110	Charleston Harbor	130	North Edisto	530	Wando River
090	Combahee River	410	Port Royal Sound	550	Winyah Bay
100	Cooper River	450	Santee River	241	Atlantic Ocean
290	Folly River	470	Savannah River		

SPECIES	CODE	VOLUME	UNITS (circle one)	UNIT PRICE	TOTAL
#1 (Lg. Males)	7001		BU LBS DZ		
#2 (Lg. Females / Sm. Males)	7002		BU LBS DZ		
#3 (Sm. Females)	7003		BU LBS DZ		
MIXED #2 & #3	7004		BU LBS DZ		
JUMBO	7005		BU LBS DZ		
UNGRADED	7000		BU LBS DZ		
PEELERS	7028		EA DZ		
STONE CRAB CLAWS	7180		LBS		
WHELKS	7750		BU LBS		
FLOUNDER	1209		LBS		
CATFISH	0660		LBS		
(List Species)					

Dealer/Fisherman Use

Revised 1/2012  
12-7910



## Curriculum Vitae

**Name:** Amy Whitaker Dukes

**Professional Address:**

**Position:** Fisheries Biologist III  
Office of Fisheries Management  
Fisheries Statistics Section

217 Fort Johnson Road  
Charleston, SC 29412-9641

**Phone:** (843) 953-9365 Voice  
(843) 953-9386 Fax

**E-mail:** [DukesA@dnr.sc.gov](mailto:DukesA@dnr.sc.gov)

### EDUCATION:

Spartanburg Methodist College (SMC), Spartanburg SC  
Associate in Science, August 1994 to May 1996  
Major: Biology

Coastal Carolina University (CCU), Conway, SC  
Bachelor of Science, August 1996 to May 1999  
Major: Marine Science

### CAREER-RELATED EXPERIENCE:

Jan. 2008 - To present, Department of Natural Resources, Charleston, SC

Marine Resources Division in the Office of Fishery Management: Supervises and coordinates the collection of commercial and recreational fisheries dependent catch and effort data and biological sampling, including field activities, data compilation and transmission to ACCSP, report writing, and grants administration. Serve as SCDNR's representative to the ACCSP Operations, Information Systems, and Commercial Technical Committees.

Sept. 2000 - Jan 2008, Department of Natural Resources, Charleston, SC

ACE Basin National Estuarine Research Reserve (NERR): Participation in comprehensive research activities within the ACE Basin NERR. Manage data collection, sampling instrumentation, and compiling of databases in support of the Reserve's participation in the System-Wide Monitoring Program (SWMP). Responsible for entry, verification, editing, and statistical analysis of all data; assist with compilation of technical reports; preparing and delivering of presentations at conferences and workshops; and managing the ACE Basin NERR research budget.

Feb. 2000 - Sept. 2000, Department of Natural Resources, Charleston, SC

Marine Resources Division in the Office of Fishery Management: Assisting in the execution of an East Coast fin fish management plan. Anadromous species of American Shad and both Atlantic and Shortnose Sturgeon were collected, evaluated, tagged and released. Knowledgeable in the principles and practices of fish, statistical analysis, equipment maintenance and boat handling. Implemented the American Eel (elver) Young of the Year Survey; responsible for project set-up, daily sample collection, database design, management and analysis.

Sept. 1999 - Feb. 2000 Department of Natural Resources, Charleston, SC

Marine Resources Research Institute: Sorted plankton samples to collect and identify three species of post-larval Peneaid shrimp. Responsible for continuation of project organization and data management.

## Proposal for FY2015 ACCSP Funding

- APPLICANT NAME:** ACCSP Recreational Technical Committee (RTC).
- PROJECT TITLE:** Increase at sea sampling levels for the recreational headboat fishery on the Atlantic Coast (New Hampshire through Florida).
- PROJECT TYPE:** Maintenance Project. The scope of work for this project has remained the same since last year's accepted proposal.
- REQUESTED AWARD:** \$168,738

**REQUESTED AWARD PERIOD:** January 1, 2015 through December 31, 2015.

### **OBJECTIVE:**

Continue funding for at-sea sample coverage in the recreational for-hire headboat fishery for 12 ACCSP partner states from New Hampshire through Florida to measure catch-per-unit-effort for harvested and released fish and estimate total harvest and total catch for this fishery, as well as collect biological samples from harvested fish and regulatory discards for managed fisheries, and monitor and assess by-catch. Specifically, this proposed work would fund 327 at-sea sampling trips aboard headboats in New Hampshire, Massachusetts, Rhode Island, New York, New Jersey, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, and Florida.

### **RANKING CRITERIA SUMMARY**

- Primary Program Priority:
  - Catch and effort (50%)
    - Additional samples requested will improve precision of landings (both in numbers and weight) and total catch statistics from NH to VA.
- Secondary Program Priorities:
  - Biological Sampling (25%)
    - Additional biological samples from this request will improve precision for landings estimated in weight from NH to VA.
    - Additional biological samples from this request will provide critical information on the length frequency of released catch (which is unobserved in dockside sampling programs) from NH to FL.
    - It should be noted that without the samples requested in this proposal no biological samples from released catch would be collected from GA or FL.
  - Bycatch (25%)
    - Samples requested in this proposal provide vital information on the numbers and size for all finfish species discarded in this fishery.
    - Samples funded by past ACCSP requests have been used to construct indices of abundance for sublegal sized pre-fishery recruits for important managed species, including red snapper, for use in regional stock assessments in the South Atlantic where fisheries independent samples do not exist. This time series in the South Atlantic would not be possible without continuous funding through ACCSP.
- Multi-Partner/Regional: 17 partners (12 states, NMFS, ASMFC, & 3 regional Councils)
- In kind Contribution: \$3,250
- Improvement in data quality/quantity
  - Quality: improve precision of catch estimates of key state finfish species caught in headboat fishing mode

- Quality: improve accuracy of headboat catch estimates based on observer identification, count and measurement
- Quantity: Increase headboat sample size by 196 in 10 states from New Hampshire to South Carolina
- Quantity: Fund 100% of HB at-sea sample in East Florida and Georgia (131 trips)
- Impact Stock Assessment: Improved accuracy and/or precision as well as live discards will directly affect regularly planned regional stock assessments
  - For South Atlantic species such as red snapper (SEDAR 24) where fishery independent indices are non-existent or have a short time-series, fishery dependent CPUEs are important inputs to the assessments. At-sea observers on headboats provide better species identification and more accurate numbers to develop these fishery dependent indices.
  - At-sea observers provide the only independent, non-volunteer-based dataset to characterize the size and age composition of recreationally released fish. Recreational releases make up a large component of the catch for many species—in some cases exceeding recreational harvest—and, due to regulations and angler behavior, may impact a different subset of the population than the recreational and commercial landings.
  - Continuing the headboat observer dataset will facilitate the following upcoming assessments that use this time-series:
    - South Atlantic – In 2016, red grouper and red pogy are tentatively scheduled for assessment.
    - Mid-Atlantic – In 2015, black drum, bluefish, red drum, scup, sturgeon, weakfish and Atlantic Herring are scheduled for assessments by either SAW/SARC or ASMFC. In 2016, croaker, black sea bass, spot, winter flounder and skates are scheduled for an assessment by ASMFC.
  - North Atlantic – Atlantic cod, haddock, yellowtail flounder and groundfish.

## **NEED**

The headboat sampling allocations and funding requested in this proposal are needed to maintain improvements accomplished at the state level for catch estimates in headboat mode. The supplemented sampling level requested in prior proposals has provided more precise estimates at the state-level to support data needs for state, regional, and federal level stock assessments and fisheries management, as demonstrated in Appendix A. Renewed funding for FY2015 will preserve the only existing coast wide time-series on discarded catch from headboats. This project obtains information pertinent to the top three priority modules: catch and effort, biological sampling and bycatch. The primary work is focused on addressing the "Catch and Effort" module (50%) but also gathers significant biological information through fish lengths and weights to cover the biological module (25%), and bycatch information through observed and measured live discards to cover the Bycatch module (25%). Since biological and observed bycatch data are collected at the same time catch data are collected at-sea, no additional funds are being requested for the biological or bycatch portion. NOAA Fisheries funds sampling at the base level needed to accurately estimate catch and effort on a regional scale; however, the states are requesting additional at-sea sampling for headboats to improve landings at the state level to better support state and regional stock assessment and fisheries management needs. This funding is critical since the data are necessary for proper inter-state fisheries management decisions, allocations, and stock assessments on currently managed marine recreational finfish species (**Improvement in data quality/quantity/timeliness**).

As part of the Marine Recreational Information Programs (MRIP) work to improve recreational fishing statistics, NOAA Fisheries implemented a new statistical method for calculating recreational catch estimates. Catch estimates were recalculated for the Atlantic and Gulf Coasts going back to 2004.

The new estimation method corrects for improper weightings of low pressure fishing sites and computations for variance. While the new method improves accuracy by eliminating bias, the precision was reduced (i.e. proportional standard error or PSE's are higher). Additional sample is needed to bring PSE's back to historical levels.

We are requesting continued funding from the ACCSP because the Marine Recreational Information Program (MRIP) requests proposals that concentrate on testing statistical assumptions, potential sources of bias, and investigating new pilot methodologies. MRIP is unlikely at this time to fund a proposal to increase the number of samples for current methodologies, but may be a potential funding source in the future as new methods are implemented.

### **Overview of Current Data Collection Methods for Headboat Fisheries:**

For-hire fisheries include licensed headboat vessels where a professional captain and crew provide recreational fishing trips to the public for a fee. Headboats in the Atlantic differ from charter vessels in the numbers of passengers carried, species targeted, areas fished, and fishing methods employed; therefore, catch and effort statistics for the two different types of for-hire fishing trips are currently collected separately. A headboat is roughly defined as a for-hire vessel on which individual anglers are charged a per-person fee for recreational fishing. Headboats typically require a minimum number of paying passengers to make a trip and spaces are sold until the maximum capacity that the vessel is licensed for is reached. Most headboats in the Atlantic are licensed to carry more than 10 passengers and the maximum vessel capacity exceeds 100 passengers for larger vessels.

Two methods are used to collect catch and effort statistics from recreational headboat fisheries along the Atlantic coast. From Maine through Virginia, the For-Hire Survey (FHS) is the primary method for estimating total recreational fishing effort and catch from headboats. Effort is estimated by randomly sampling 10% of headboat vessels in each state each week and conducting a telephone survey with the vessel operators to collect information on the number of anglers and the area fished for each trip conducted during the sampled week. Effort from sampled vessels is expanded to the entire headboat fleet to estimate total effort. Catch is estimated by randomly sampling headboat anglers at the dock or at-sea to measure catch per unit effort (CPUE). During dockside interviews with headboat anglers, surveyors directly observe the harvested catch and, for fish that the surveyor cannot observe, anglers are asked to recall the numbers of fish harvested or released for each species. During at-sea sampling, one or two fishery observers board the vessel to conduct interviews with anglers while the trip is underway and directly observe the numbers and sizes of both harvested and released fish by species for each angler they sample during the fishing trip. Total catch for harvested and released fish is estimated by multiplying average CPUE by total effort estimated by the FHS.

From North Carolina through the east coast of Florida, headboat vessel operators are required to submit logbook trip reports to the National Marine Fisheries Service Southeast Regional Headboat Survey (SRHS) for each for-hire recreational fishing trip they conduct. Logbook trip reports are used to calculate total fishing effort, total harvest, and total catch for the headboat fishery in the South Atlantic region. Discards were added to the SRHS in 2004. Dockside sampling is employed to verify logbook reporting and collect biological information from harvested catch, and at-sea samples provide information which is used to verify logbook reporting and collect biological information from released catch for use in regional stock assessments. As fisheries management shifts towards bag limits and quotas, the need to verify self-reported harvest and discard information becomes a priority. The current system encourages under reporting for lengthened fishing seasons, consequently increasing the importance of these validation methods.

## **RESULTS AND BENEFITS**

Conducting at-sea sampling aboard headboats improves the accuracy of catch estimates in the FHS by having trained observers identify and count the fish caught and released during recreational fishing. Appendix A illustrates examples of the increase in both observed harvest (Type 3) and observed discard (Type 9) data for regionally important species. Without continued ACCSP funding, affected partners face an estimated reduction of 33% in the quantity of headboat harvest and discard data. At-sea sampling has also increased the number of length and weight measurements obtained on harvested fish, as well as obtaining length measurements and relative condition of discarded (released) fish which are not collected in dockside samples (Appendices A and B). The discard lengths obtained from headboat trips in recent years have been used to estimate the effects of reducing size limits of summer flounder in the recreational fishery. More than half (11 out of 20) of the top quartile of species recommended by the ACCSP Biological Review Panel for priority funding in FY15 are intercepted in the recreational headboat fishery (Table 1). Projects that benefit multiple upper quartile species are highly recommended for funding. High and low priority is based on the average priority given by ASMFC, NMFS, regional Fishery Management Councils and Atlantic coast states. It should be noted that species with low overall priority are regionally important to the South Atlantic and many are scheduled for stock assessments in FY13 (Table 1). For species in the top quartile with inadequate biological sampling, headboat at-sea surveys contribute significantly to the limited data that are available, and for many of the species with adequate biological sampling, samples collected from headboat surveys contribute significantly. Numbers of biological samples collected from at-sea surveys are provided in Appendices A and B.

**Table 1.** Top quartile species in the FY15 ACCSP Biological Sampling Priority Matrix that are intercepted during headboat at-sea surveys on the Atlantic Coast. Species with single asterisks are scheduled for regional stock assessments or updates in 2015, and double asterisks are tentatively scheduled for 2016.

	<b>Adequate Biological Sampling</b>	<b>Inadequate Biological Sampling</b>
<b>High Priority</b>	Black Seabass** Winter Flounder Summer Flounder Spiny Dogfish Scup**	
<b>Low Priority</b>	Weakfish*	Snowy Grouper Gag Grouper Red Grouper Gray Triggerfish* Winter Skate

Headboat landings data are used by regional Fisheries Management Councils along with landings from other segments of recreational fisheries to determine if Annual Catch Limits (ACL's) are exceeded and accountability measures must be implemented. The Magnuson-Stevens Fishery Conservation and Management Act (MSA) required Fisheries Management Councils to establish ACL's for all managed species. When an ACL is exceeded, accountability measures, such as paybacks and/or reductions in future allowable catches are required. Table 2 highlights key species managed with ACL's that are harvested by the recreational headboat fishery in each state.

**Table 2.** Key species managed with annual catch limits (ACL's) harvested in Atlantic coast headboat fisheries.

State	Species of Concern
Massachusetts	Winter flounder, scup*
New Hampshire	Atlantic cod*, Atlantic mackerel, haddock*
Rhode Island	Black sea bass**, Tautog
New York	Atlantic cod*, black sea bass**, scup*, Tautog
New Jersey	Striped bass
Delaware	Atlantic croaker**
Maryland	Tautog
Virginia	Black sea bass**, Striped Bass, Tautog, and Summer flounder
North Carolina	Black sea bass**, gray triggerfish*, red porgy*, vermilion snapper
South Carolina	Black sea bass, vermilion snapper
Georgia	Black sea bass, red snapper*, vermilion snapper
Florida	Black sea bass, gray triggerfish*, gag, red grouper, red snapper, vermilion snapper, red porgy

\*Indicates species scheduled for regional stock assessments, updates, or reviews in 2015.

\*\*Indicates species tentatively scheduled for regional stock assessments, updates, or reviews in 2016.

At-sea sampling for headboats will be increasingly important in the South Atlantic as new ACCSP standards for data collection are adopted and MRIP pilot studies are implemented. ACCSP Standards for for-hire data collections specify that logbook reporting programs should have methods in place to independently validate self reported data and that levels of under/over reporting be documented and disclosed to all data users (<http://www.accsp.org/forhire.htm>). In recent years, the NMFS Southeast Headboat Program has received funding for several pilot studies to implement recommended improvements through the Marine Recreational Information Program (MRIP). An independent review of for-hire fisheries data collection methods was completed by MRIP in March, 2009 (<http://www.st.nmfs.noaa.gov/mrip/projects/downloads/ForHireReportFinal.pdf>) and pilot tests funded through MRIP to improve the Southeast Region Headboat Survey were designed to implement recommended best practice methods in this regional logbook data collection program. The recommended best practice method for for-hire fisheries data collections is the universal use of logbook reporting methods where practicable, and components that should be included in a logbook reporting system for it to be practical and valid include weekly (at minimum) reporting frequency; an electronic mode of reporting; statistically sound validation methods to account for unit non-response, missing or incomplete reporting, misreporting, and reporting error; 100% vessel tracking and frame maintenance; and statistically sound methodologies for intercept sampling.

Recent South Atlantic stock assessments for vermilion snapper (SEDAR 17), red snapper (SEDAR 24) and black sea bass (SEDAR 25) have utilized harvest data from at-sea observers to positively validate self-reported harvest rates with logbook reports from the Southeast Headboat Survey. When discard data for vermilion snapper and black sea bass were compared with logbook reports, at-sea observer data was selected in favor of self-reported data from logbook reports due to significant underreporting.

In addition, at-sea observer surveys provide more detailed data on the size and condition of released fish, which is not recorded in logbook reports. Size information on released Atlantic croaker obtained by headboat at-sea observers was used to develop catch-at-age matrices of recreational discards for the 2010 Atlantic States Marine Fisheries Commission (ASMFC) Atlantic croaker stock assessment.

The Southeast Data Assessment Review (SEDAR) 15, Stock Assessment Report 1 (SAR 1) for red snapper expressed the importance of increased sample sizes for headboat at-sea surveys by stating that, "The at-sea observer survey of headboat trips collects quality data on the species identification and size of discarded fish.... The workgroup recommends that this new survey continue to add to the



current time series for use in future assessment models.” To date, headboat at-sea data have been used in stock assessments for the following species by the South Atlantic Fishery Management Council: greater amberjack, Spanish mackerel, red snapper, vermilion snapper, gray triggerfish, and black sea bass. Data from the increased sample requested in this proposal would directly improve SEDAR assessments for red snapper, king mackerel, red porgy, small coastal sharks, and gag grouper; ASMFC assessments for weakfish and tautog; and SAW/SARC assessments for Cod, Haddock, yellowtail flounder and groundfish are scheduled for 2015-2016. (**Impact on Stock Assessment**).

**Partners influenced by this proposal:**

11 States, NMFS, ASMFC, and 3 federal Fishery Management Councils (17).

**APPROACH**

Previously, sample sizes for additional at-sea trips were selected to keep each state’s annual headboat mode PSE’s below 20% or bring below 20% for important species, which was in accordance with the standards of the ACCSP. The new ACCSP standard for precision of for-hire catch estimates states, “Due to improvements in estimation methodology for historical PSE calculations, and the need for more rigorous discussions of risk associated with PSE values, the updated standard for precision will be developed in a technical source document to be created in 2012.” This document is not yet available, and until there is more clear direction on accepted PSE levels, we are requesting no changes in sample size from FY2014 to FY2015. The scope of work for this project has not changed since last year’s accepted proposal.

**Field Procedures**

Headboat vessels are randomly selected each month from each state. Operators from selected vessels are contacted in advance to arrange for observers to be on board during a scheduled fishing trip. Dependent upon the number of customers on board, one or two biologists accompany passengers during the scheduled trip. The captain and mates cooperate by making sure fish caught by their anglers are observed by one of the biologists before they are stored in the fish hold or released overboard. For each fish, biologists record the species, disposition, size (fork length in mm), and the condition of fish that were released (Florida only).

Disposition is coded as:

- 1: thrown back alive, legal;
- 2: thrown back alive, not legal;
- 3: plan to eat;
- 4: used for bait or plan to use for bait;
- 5: sold or plan to sell;
- 6: thrown back dead or plan to throw away.

Release condition is coded (Florida only) as:

- Good = 1: fish swam toward bottom immediately upon entry into the water;
- Fair = 2: fish was disoriented upon release and slowly swam towards the bottom;
- Poor = 3: fish was very disoriented upon release and remained at the surface;
- Dead = 4: fish was either dead or unresponsive upon entering the water;
- Eaten = 5: fish was eaten by a bird, another fish, or a marine mammal;
- Unobserved = 9: unable to observe fish, not applicable.

In 2012, Florida also began collecting the following information from each discarded fish:

Hook location

Hook type (circle hooks only required north of Cape Canaveral)

Venting method (if vented)

De-hooking method (removed by hand, pliers, de-hooking tool, or hook not removed)  
 Barotrauma symptoms (swollen bladder, extruded stomach or intestines, exophthalmia)

Trip level information for each trip includes the area fished, duration of fishing (to the nearest half hour), number of anglers, and depths (feet, Florida only) of each fishing site within a trip.

Area fished is coded as:

1: 3 miles or less from shore; or

2: more than 3 miles from shore

A brief interview with each angler observed during a trip is also conducted to collect information on primary and secondary target species, angler avidity, and state and county of residence. The interviews conducted during the trips follow the standard procedures used for all FHS interviews. To maintain consistency between base sampling and the additional samples funded through this proposal, no additional questions or dispositions will be included.

### **GEOGRAPHIC LOCATION**

The Atlantic coast of the United States from New Hampshire through Miami/Dade County, Florida.

### **MILESTONE SCHEDULE**

As in previous years, the NOAA Fisheries staff will issue delivery orders to the current contractor for at-sea surveys to increase sample sizes as decided and funded by the ACCSP. Procedures, as documented in the Statement of Work for the 2015 contract, will be followed by the contractor and any states subcontracting to perform the intercept sampling. Additionally, all work associated with this proposal will occur within the dates as specified to the contractor for other deliverables associated with the intercept contract. Semi-Annual (30 days following month 6 and 12) and Final Progress Reports (90 days following month 12) will be completed as specified in the ACCSP Funding Decision Process Document.

**Table 3. Milestones.**

	1	2	3	4	5	6	7	8	9	10	11	12
NOAA Fisheries, deliver orders to contractor to increase sample sizes	x											
Contractor and states conduct at-sea sampling	x	x	x	x	x	x	x	x	x	x	x	x
Semi-annual and final progress reports						x						x

**PROJECT ACCOMPLISHMENTS MEASUREMENT**

Table 4 provides sample goals for each two month period (wave). Progress towards goals for this project will be measured in numbers of vessel trips sampled each wave.

**Table 4. Requested headboat at-sea sample allocation and cost estimates for 2015.**

State	Allocation = Number of Vessel Trips						Total Trips
	Jan/Feb Wave 1	Mar/Apr Wave 2	May/Jun Wave 3	Jul/Aug Wave 4	Sep/Oct Wave 5	Nov/Dec Wave 6	
New Hampshire		0	3	4	3	0	10
Massachusetts		0	6	10	6	0	22
Rhode Island			4	6	4		14
New York		3	6	7	6	3	25
New Jersey		3	7	8	7	3	28
Maryland		2	5	7	5	2	21
Delaware		2	4	5	4	2	17
North Carolina		4	7	8	5	4	28
Virginia		2	4	5	4	2	17
South Carolina		2	3	4	3	2	14
Georgia		0	3	3	3	2	11
Florida (east coast)	16	22	22	22	22	16	120
Total	16	40	74	89	72	36	327

**COST SUMMARY (BUDGET)**

**In-kind contributions** include NOAA Fisheries MRFSS/MRIP staff time to process contract documents and perform quality control on the data as well as the estimates. Personnel costs related to the HB portion of a staff person's time are estimated to be equivalent to \$10,000). The F/ST1 Division Chief is Dr. Dave Van Voorhees.

Object Classes (Table 5):

- Contractual: Funds for the states of New Hampshire through Georgia will be delivered to NOAA Fisheries then a private contractor who conducts the sampling, or in some cases awards the individual state agency a sub-contract to perform the sampling
- Personnel: In Florida, there is no contractor and funds for at-sea headboat trips will be dispersed to NOAA's Southeast Fisheries Science Center (and charged a 5% administrative fee), before being dispersed to the state of Florida to conduct the work. A pool of six biologists employed by the state of Florida will contribute a portion of their time to this project.
- Fringe: Medicaid and FICA on Florida personnel
- Travel: travel costs are requested to pay for mileage to and from headboat sample sites. So that state employees are covered by liability insurance for the vessel, Florida pays the regular headboat fare for each sampler to board and sample vessels at-sea.
- Supplies: items include measuring boards, clipboards, mechanical pencils, Write In the Rain (WITR) Paper
- Other: Cell phone service for contact with vessel operators, copying and mailing costs.
- Indirect charges: The state of Florida assesses an overhead charge to grants to cover the costs of administrating the grant. For ACCSP, the overhead is capped at 25% of total direct charges.

**Table 5. Budget.**

Description	Calculation	Cost
Contractual (a)		
NOAA contractor for New Hampshire through Georgia	207 trips x \$386.00/trip	\$79,902
Personnel (b)		
Florida Biologists	(10 hours/trip x \$15.00/hour x 110trips x two samplers) + (10 hr/trip x \$15.00/hour x 10 trips x one sampler)	\$34,500
Fringe (c)		
Florida personnel	Fringe = 0.12*personnel (b)	\$8,625
Travel (d)		
Vehicle mileage to and from Florida sample sites	\$0.445/mile: 9,600 miles (120 assignments @ 80 mi RT)	\$8,544
Headboat fare (required in Florida)	(2 samplers x \$75/trip x 110 trips) + (1 sampler x \$75/trip X 10 trips)	\$17,250
Other travel expenses in Florida	Parking and highway tolls	\$240
Supplies (e)		
Florida supplies	Measuring boards, clipboards, WITR paper	\$750
Other (f)		
Florida other	Mailing, copying, Cell phone service	\$1,160
Totals (d+e+f)		\$27,944
Total Direct Charges		
Indirect Charges (g)	State of Florida Indirect (25% of TDC)	\$17,767
Sum of Direct and Indirect		\$168,738

**FY2014 Budget narrative:** A total of \$168,738 based on the cost per headboat observer trip is requested for this proposal. Cost per trip includes headboat fees, data collection, supervision, sample frame maintenance, travel, postage, data entry, quality assurance and quality control, data editing and review, and all other survey related tasks. A summary of costs associated with this proposal for participating states is given in Table 2.

Funds for the states of New Hampshire through Georgia will be delivered to NOAA Fisheries then a private contractor who conducts the sampling, or in some cases awards the individual state agency a sub-contract to perform the sampling. In Florida, there is no contractor in place and funds for at-sea headboat trips will be dispersed to NOAA's Southeast Fisheries Science Center (and charged a 5% administrative fee), before being dispersed to the state of

Florida to conduct the work. The state of Florida has a negotiated indirect rate with ACCSP of 25% of total direct costs to grants. The cost per trip is further increased in Florida by their large geographic size, which requires traveling greater distances and increasing man-hours charged for each sampling trip. In addition, state regulations, require State of Florida personnel to pay the regular headboat fare for each sampler to board and sample vessels at-sea. All of these associated costs contribute to the elevated unit cost of headboat sampling trips for Florida, when compared to New Hampshire through Georgia. The total requested amount for this proposal is \$168,738. These funds would be dispersed to the NOAA Fisheries Headquarters Office.

**FY2015 In-kind contributions** include NOAA Fisheries MRFSS/MRIP staff time to process contract documents and perform quality control on the data as well as the estimates. Personnel costs related to the HB portion of a staff person's time are estimated to be equivalent to 5% (\$3,250) of one full time employee salary (\$65,000). The F/ST1 Division Chief is Dr. Dave Van Voorhees.

**Table 6. ACCSP Funding Related to the For-Hire Headboat Fishery: 1999-2015.**

<b>Year</b>	<b>Project Description</b>	<b>Funds Received</b>	<b># At-Sea Trips</b>
FY99	Outreach with SC for-hire constituents prior to For-Hire Pilot Study (SCDNR)	\$5,000	
FY00	For-Hire Pilot Study comparing three data methodologies in SC	\$94,082	
FY01	Independent evaluation of SC For-Hire Pilot Study	\$7,695	
FY02	Outreach with for-hire constituents & development of vessel directory prior to implementation of For-Hire Survey	\$66,000	
FY03	Increase charter and party/headboat sampling levels from ME through GA (100% increase)	\$418,972	456
FY04	Increase charter and party/headboat sampling levels from ME through GA (100% increase)	\$533,410	456
FY05	Increase charter and party/headboat sampling levels from ME through FL (100% increase in general, FL HB sampling added)	\$666,740	565
FY06	Increase charter (100% increase) and party/headboat (50% increase ME-GA, FL level funded) sampling levels from ME through FL	\$389,700	560
FY07	Increase charter (100% increase) ME through GA and party/headboat (50% increase) sampling levels from ME through FL	\$391,940	357
FY08	Increase charter (100% increase) ME through GA and party/headboat (50% increase) sampling levels from ME through FL (excluding GA)	\$359,753	310
FY09	Increase charter (100% increase in most waves) NH through GA and party/headboat (50% increase) sampling levels from NH through FL (excluding ME, CT, RI, GA)	\$309,279	327
FY10	Increase charter (between 50-100%) NH through GA (excluding ME, CT, RI, MD, RI) and party/headboat (50% increase) sampling levels from NH through FL (excluding ME, CT, RI, SC, GA)	\$376,092	293
FY11	Increase charter (between 50-100%) NH through GA (excluding ME, CT, RI, MD, RI) and party/headboat (50% increase) sampling levels from NH through FL (excluding ME, CT, RI, SC, GA)	\$299,591	276
FY12	Increase party/headboat (50% increase) sampling levels from NH through FL (excluding ME, CT, RI, VA)	\$159,573	285
FY13	Increase party/headboat (50% increase) sampling levels from NH through FL	\$147,707	302
FY14	Increase party/headboat sampling levels from NH through FL	\$155,490	314
FY15*	Increase party/headboat sampling levels from NH through FL	\$168,738	327

\*proposed (years prior to FY2012 included charter funding in addition to headboat funding whereas more recent years only include requests for increasing sampling in headboat mode).

**Appendix A. State-specific examples of elevated biological measurements obtained through implementation of headboat methodology, 2005-2010.**

Species	State	Released Fish Measured	Harvested Fish Measured	Total Measured
Atlantic cod	Delaware	0	2	2
	Maryland	5	1	6
	New Jersey	27	33	60
	New York	23	10	33
	Virginia	0	6	6
	Connecticut	1	5	6
	Maine	2,097	1,888	3,985
	Massachusetts	5,434	1,533	6,967
	New Hampshire	2,482	1,555	4,037
	Rhode Island	277	341	618
	Species Total	10,346	5,374	15,720
Atlantic croaker	Delaware	1431	6070	7501
	Maryland	522	2110	2632
	New Jersey	209	1420	1629
	Virginia	4879	9687	14566
	Georgia	42	0	42
	North Carolina	1874	65	1939
	South Carolina	44	119	163
		Species Total	9001	19471
Atlantic mackerel	Delaware	0	29	29
	New Jersey	36	240	276
	New York	0	2	2
	Connecticut	1	1	2
	Maine	31	42	73
	Massachusetts	56	114	170
	New Hampshire	38	2,898	2,936
	Rhode Island	0	15	15
	Species Total	162	3,341	3,503
Black sea bass	Delaware	1,077	1,125	2,202
	Maryland	7,577	3,470	11,047
	New Jersey	5,769	2,835	8,604
	New York	2,777	1,246	4,023
	Virginia	2,084	635	2,719
	Connecticut	26	3	29
	Massachusetts	1,353	1,677	3,030
	Rhode Island	525	887	1,412
	North Carolina	15,100	3,081	18,181
	South Carolina	5,712	744	6,456
	Georgia	610	431	1,041
	Florida	17,279	4,427	21,716
		Species Total	59,889	20,561
Gag	North Carolina	108	67	175
	South Carolina	13	3	16
	Georgia	54	12	66
	Florida	274	100	374
		Species Total	449	182
Gray triggerfish	Delaware	0	10	10
	Maryland	3	90	93
	New Jersey	2	54	56
	New York	0	20	20
	Virginia	0	35	35
	Massachusetts	1	1	2
	Rhode Island	0	3	3
	North Carolina	33	594	627
	South Carolina	2	69	71
	Georgia	5	112	117
	Florida	631	1,485	2,116
		Species Total	677	2,473

## 8\_Maintenance\_RTC

Species	State	Released Fish Measured	Harvested Fish Measured	Total Measured
Haddock	Maine	91	702	793
	Massachusetts	225	2,433	2,658
	New Hampshire	337	3,823	4,160
	Species Total	653	6,958	7,611
Pollock	Maryland	0	2	2
	New Jersey	0	2	2
	Maine	231	1,304	1,535
	Massachusetts	283	1,122	1,405
	New Hampshire	451	1,729	2,180
	Rhode Island	8	9	17
	Species Total	973	4,168	5,141
Red grouper	North Carolina	62	53	115
	South Carolina	1	2	3
	Florida	649	50	699
	Species Total	712	105	817
Red porgy	Georgia	33	12	45
	North Carolina	316	315	631
	South Carolina	141	101	242
	Species Total	490	428	918
Red snapper	North Carolina	46	9	55
	South Carolina	3	8	11
	Georgia	104	73	177
	Florida	5,460	580	6,040
	Species Total	5,613	670	6,283
Scamp	North Carolina	67	52	119
	South Carolina	32	51	83
	Georgia	3	15	18
	Florida	64	20	84
	Species Total	166	138	304
Scup	Delaware	111	16	127
	Maryland	61	24	85
	New Jersey	310	586	896
	New York	1,372	1,776	3,148
	Virginia	22	7	29
	Connecticut	239	355	594
	Massachusetts	4,854	5,349	10,203
	Rhode Island	1,009	2,352	3,361
	Georgia	1	0	1
	North Carolina	183	379	562
	South Carolina	1	10	11
	Species Total	8,163	10,854	19,017
Striped bass	Delaware	80	133	213
	Maryland	736	487	1,223
	New Jersey	238	289	527
	New York	701	332	1,033
	Virginia	521	893	1,414
	Connecticut	106	149	255
	Massachusetts	13	1	14
	New Hampshire	33	1	34
	Rhode Island	6	10	16
	Species Total	2,434	2,295	4,729



## 8\_Maintenance\_RTC

Species	State	Released Fish Measured	Harvested Fish Measured	Total Measured
Summer flounder	Delaware	1,275	393	1,668
	Maryland	2,862	363	3,225
	New Jersey	3,715	911	4,626
	New York	7,070	857	7,927
	Virginia	1,028	144	1,172
	Connecticut	78	35	113
	Massachusetts	206	238	444
	Rhode Island	2,712	1,626	4,338
	Georgia	0	2	2
	North Carolina	1,030	85	1,115
	South Carolina	1	0	1
		Species Total	19,977	4,654
Tautog	Delaware	603	1,340	1,943
	Maryland	856	843	1,699
	New Jersey	618	466	1,084
	New York	896	539	1,435
	Virginia	48	104	152
	Connecticut	73	34	107
	Massachusetts	99	64	163
	Rhode Island	133	224	357
	North Carolina	0	5	5
		Species Total	3,326	3,619
Vermilion snapper	North Carolina	1,146	2,574	3,720
	South Carolina	371	1,839	2,210
	Georgia	213	258	471
	Florida	4,881	2,929	7,810
		Species Total	6,611	7,600
Winter flounder	Maryland	1	0	1
	New Jersey	28	34	62
	New York	27	100	127
	Massachusetts	68	105	173
	New Hampshire	12	51	63
	Rhode Island	3	8	11
		Species Total	139	298

**Appendix B. Discarded fish observed during headboat at-sea surveys, 2005-2010.**

Common Name	North Atlantic Region	Mid-Atlantic Region	South Atlantic Region	Total	Common Name	North Atlantic Region	Mid-Atlantic Region	South Atlantic Region	Total
Acadian redfish	109			109	Bullnose ray		1		1
African pompano			26	26	Butter hamlet			1	1
Alewife		1		1	Butterfish		1		1
Almaco jack			26	26	Carolina hake		1		1
Amberjack genus			3	3	Caesar grunt			1	1
American eel		12	10	22	Chain dogfish		1		1
American sand lance	3			3	Channel catfish			1	1
American shad		4		4	Chub mackerel			23	23
Atlantic bumper			17	17	Clearnose skate		1,250	44	1,294
Atlantic cod	10,892	59		10,951	Cobia			90	90
Atlantic croaker		7,908	2,086	9,994	Cod family		1		1
Atlantic cutlassfish		8	16	24	Coney			22	22
Atlantic guitarfish			1	1	Conger eel		47	7	54
Atlantic herring	28	44		72	Cottonwick			16	16
Atlantic mackerel	164	47		211	Cownose ray		42	1	43
Atlantic menhaden		3		3	Creole-fish				
Atlantic moonfish			2	2	Crevalle jack			2	2
Atl. sharpnose shark		3	1,298	1,301	Cubbyu			22	22
Atlantic spadefish			103	103	Cunner	555	513		1,068
Atlantic stingray			41	41	Cusk	62			62
Atlantic thread herring		2	27	29	Doctorfish			64	64
Atlantic tomcod		3		3	Dolphin			49	49
Atlantic torpedo	1			1	Dusky flounder			8	8
Atlantic wolffish	21			21	Dusky shark		25	1	26
Balloonfish			1	1	Dwarf sand perch			4	4
Banded rudderfish		1	132	133	Florida pompano			1	1
Bank sea bass			962	962	Fourspot flounder	14	3		17
Bar jack		1	4	5	French grunt			65	65
Barbfish			2	2	Gafftopsail catfish			6	6
Barndoor skate		2		2	Gag			447	447
Barracuda genus			1	1	Goldentail moray			1	1
Barred grunt			7	7	Gray triggerfish	1	5	640	646
Bearded brotula			1	1	Gray snapper			68	68
Bermuda chub			18	18	Graysby			70	70
Bigeye			34	34	Great barracuda			31	31
Bigeye scad			20	20	Great hammerhead			4	4
Bigeye soldierfish			1	1	Greater amberjack			129	129
Bighead searobin		1	1	2	Greater soapfish			6	6
Black drum		4	68	72	Green moray			49	49
Black grouper			14	14	Grunt family			1	1
Black sea bass	2,028	21,252	35,883	59,163	Grunt genus		1		1
Blackedge moray			2	2	Guaguanche			2	2
Blackfin snapper			19	19	Gulf flounder			4	4
Blacktip shark		4	75	79	Gulf kingfish			6	6
Blue runner			300	300	Haddock	690			690
Blueback herring	5	1		6	Hake genus		3		3
Bluefish	233	799	524	1,556	Hickory shad		3		3
Bluespotted cornetfish			4	4	Hogfish			13	13
Bluestriped grunt			77	77	Houndfish			4	4
Bluntnose stingray			1	1	Inshore lizardfish		12	585	597
Bonefish			1	1	Jolthead porgy			9	9
Bonnethead			75	75	King mackerel			176	176
Bull shark			2	2	Kingfish genus		1		1
Bullet mackerel		1		1	Knobbed porgy			4	4

**Appendix B, continued. Discarded fish observed during headboat at-sea surveys, 2005-2010.**

Common Name	North Atlantic Region	Mid-Atlantic Region	South Atlantic Region	Total	Common Name	North Atlantic Region	Mid-Atlantic Region	South Atlantic Region	Total
Ladyfish	.	.	9	9	Sand tiger	1	.	.	1
Lane snapper	.	.	126	126	Sand tilefish	.	.	147	147
Lefteye flounder	.	.	31	31	Sandbar shark	.	55	5	60
Lefteye flounder family	.	5	.	5	Scalloped hammerhead	.	.	8	8
Little skate	271	297	.	568	Scamp	.	.	165	165
Little tunny	.	2	443	445	Scorpionfish family	.	.	3	3
Littlehead porgy	.	.	7	7	Sculpin family	8	1	.	9
Longhorn sculpin	265	.	.	265	Scup	6,588	1,982	188	8,758
Longspine porgy	.	15	59	74	Sea bass family	.	.	1	1
Longspine squirrelfish	.	.	50	50	Sea bream	.	.	12	12
Mahogany snapper	.	.	1	1	Sea raven	79	4	.	83
Margate	.	.	1	1	Searobin family	1	10	7	18
Moray family	.	.	5	5	Searobin genus	19	110	12	141
Mummichog	7	.	.	7	Sharksucker	.	.	491	491
Mutton snapper	.	.	472	472	Sheepshead	.	.	3	3
Northern kingfish	.	16	11	27	Sheepshead porgy	.	.	10	10
Northern puffer	.	106	139	245	Shorthorn sculpin	7	.	.	7
Northern searobin	115	590	137	842	Silk snapper	.	.	1	1
Northern stargazer	.	22	1	23	Silky shark	.	.	15	15
Nurse shark	.	.	84	84	Silver hake	8	.	.	8
Ocean pout	37	34	.	71	Silver perch	.	77	136	213
Ocean triggerfish	.	.	2	2	Silver porgy	.	.	3	3
Oceanic whitetip shark	.	.	1	1	Silver seatrout	.	.	3	3
Ocellated frogfish	.	.	1	1	Skate genus	108	174	.	282
Offshore lizardfish	.	.	14	14	Slippery dick	.	.	1	1
Oyster toadfish	3	1,651	369	2,023	Smallmouth grunt	.	.	13	13
Peacock flounder	.	.	4	4	Smooth butterfly ray	.	2	.	2
Pigfish	.	156	1,201	1,357	Smooth dogfish	77	2,112	35	2,224
Pinfish	.	10	1,505	1,515	Smooth puffer	.	.	6	6
Planehead filefish	.	.	1	1	Snakefish	.	.	14	14
Pollock	1,113	1	.	1,114	Snowy grouper	.	.	2	2
Porgy family	.	.	4	4	Soapfish genus	.	.	1	1
Porcupinefish	.	.	2	2	Southern flounder	.	2	20	22
Porkfish	.	.	8	8	Southern hake	.	2	23	25
Princess parrotfish	.	.	3	3	Southern kingfish	.	40	338	378
Puddingwife	.	.	4	4	Southern puffer	.	.	3	3
Queen triggerfish	.	.	15	15	Southern stingray	.	1	18	19
Rainbow runner	.	.	8	8	Spanish hogfish	.	.	2	2
Red drum	.	8	23	31	Spanish mackerel	.	1	9	10
Red grouper	.	.	704	704	Speckled hind	.	.	1	1
Red hake	34	44	.	78	Spinner shark	.	1	160	161
Red hind	.	.	3	3	Spiny butterfly ray	.	1	.	1
Red porgy	.	.	515	515	Spiny dogfish	6,532	1,160	28	7,720
Red snapper	.	.	5330	5,330	Spot	.	1,605	118	1,723
Remora	.	.	48	48	Spottail pinfish	.	.	228	228
Requiem shark family	.	3	5	8	Spotted hake	1	34	1	36
Reticulate moray	.	.	6	6	Spotted moray	.	.	50	50
Rock hind	.	.	2	2	Spotted scorpionfish	.	.	91	91
Rock sea bass	.	.	71	71	Spotted seatrout	.	16	1	17
Round scad	.	.	40	40	Squirrelfish	.	.	254	254
Saddle bass	.	.	1	1	Star drum	.	.	5	5
Sailfish	.	.	10	10	Stargazer family	.	2	.	2
Sailors choice	.	.	21	21	Stingray family	.	.	4	4
Sand diver	.	.	11	11	Striped bass	167	2,436	.	2,603
Sand lance genus	1	.	.	1	Striped burrfish	.	1	3	4
Sand perch	.	.	139	139	Striped grunt	.	.	21	21

**Appendix B, continued. Discarded fish observed during headboat at-sea surveys, 2005-2010.**

<b>Common Name</b>	<b>North Atlantic Region</b>	<b>Mid- Atlantic Region</b>	<b>South Atlantic Region</b>	<b>Total</b>
Striped searobin	56	2,370	167	2,593
Summer flounder	3,117	16,887	1,032	21,036
Swordfish			2	2
Tautog	335	3,394		3,729
Thorny skate	4			4
Threadfin shad			1	1
Thresher shark		2		2
Tiger shark			1	1
Tomtate			10,394	10,394
Unident. flounder		1		1
Unidentified (sharks)		18	1	19
Unidentified eel		4	3	7
Unidentified fish	1	2		3
Unidentified skate		3	3	6
Vermilion snapper			6,485	6,485
Warsaw grouper			1	1
Weakfish		1,358	195	1,553
White grunt		1	519	520
White hake	6			6
White perch		106		106
Whitebone porgy			25	25
Whitfin sharksucker			35	35
Whitespotted soapfish			80	80
Windowpane	12	42		54
Winter flounder	83	63		146
Winter skate	30	150		180
Yellowhead wrasse			1	1
Yellowmouth grouper			1	1
Yellowtail snapper			513	513
<b>Total</b>	<b>33,892</b>	<b>69,260</b>	<b>78,328</b>	<b>181,479</b>

**Appendix C. Summary of 2012 MRIP Headboat samples (count of Boat trips)****MRIP HEAD BOAT - 2012 Number of BOAT-Trips Sampled**

	<b>NMFS - base Proposed</b>	<b>ACCSP - Proposed</b>	<b>ACCSP Obtained (Total-NMFS)</b>	<b>TOTAL SAMPLED BOAT TRIPS</b>
State	2012	2012	2012	2012
CT	20	0	0	14
ME	16	0	0	14
MA	44	21	20	64
NH	20	11	13	33
RI	28	0	0	27
DE	34	16	43*	77
MD	42	20	17	56
NJ	56	19	13	67
NY	50	16	10	59
VA	34	0	1	33
Region total	344	103	127	444
GA	0	11	11	11
NC	56	26	28	78
SC	28	2	10	36
FL	0	120	115	115
Region total	84	159	164	240
<b>TOTAL</b>	<b>428</b>	<b>262</b>	<b>391</b>	<b>684</b>

\*Higher sample numbers in Delaware are expected to be from state add-on to contract not listed in this table.

## Principal Investigator

**Scott Newlin**  
Environmental Scientist IV  
DNREC, Division of Fish and Wildlife  
P.O. Box 330  
Little Creek, DE 19961  
(302) 739-4782  
Scott.Newlin@state.de.us

## EDUCATION

Frostburg State University, B.S. in Fisheries Management, 1993.

## WORK EXPERIENCE

### **January 2006—Present: Environmental Scientist, Delaware Division of Fish and Wildlife.**

Data manager for the fisheries data office overseeing commercial, recreational and independent data for all finfish and shellfish. Serves on Spiny Dogfish, Coastal Shark, Tautog, Atlantic Menhaden, Atlantic Croaker, Red Drum and Black Drum technical committees and Spot plan review team for Atlantic States Marine Fisheries Commission; and serves on Recreational, Commercial, Biological, Information, Bycatch, and Operations technical committees for ACCSP.

### **December 2003—June 2006: Environmental Scientist, Delaware Division of Fish and Wildlife.**

Primary researcher for the Estuary Enhancement Project to document the success of re-introduced tidal flow to impounded wetlands for the primary purpose of allowing alosids species access to potential spawning habitat and allow other species to utilize the wetland habitats for spawning and juvenile habitat. Perform other wetland restoration work as needed.

## LICENSES AND CERTIFICATIONS

SCUBA—P.A.D.I. certified, May 2001.

Certified Fisheries Biologist, American Fisheries Society, March, 2012.

## PROFESSIONAL SOCIETIES

American Fisheries Society, AFS General Membership

## PUBLICATIONS

Hense, Zina, Whitmore, William, Newlin, Scott & Tinsman, Jeffrey. Aerial Flight Survey Estimating Fishing Effort on Delaware Artificial Reef Sites Over a Ten Year Period. Division of Fish and Wildlife. 37 pages.

Newlin, Scott & Glanden, Garry. 2010. Marine Recreational Fishing in Delaware 2010. A summary report of the Marine Recreational Fisheries Statistics Survey (MRFSS). Delaware Division of Fish and Wildlife, Dover, DE. July 2011. 98 pages.

**Applicant:** NOAA Fisheries Service, Southeast Fisheries Science Center, Beaufort, NC

Principal Investigator:  
Jennifer C. Potts

**Project Title:** Continued processing and aging of biological samples collected from U.S. South Atlantic commercial and recreational fisheries in response to ACCSP bio-sample targets

**Project Type:** Maintenance

**Requested Award Amount:** \$250,831

**Requested Award Period:** One year

**Objectives:**

The primary objective of the proposed work is to continue processing and aging ACCSP-prioritized reef fish species in support of stock assessments for those species. This project aims to cover **100% of the biological module and item 2, biological data, of the Program Goals as stated in the FY2015 RFP.** The goal of this project is to process prioritized samples as they are received annually. Another goal is to process prioritized samples that have been stored for many years. Focal species have been and/or will be assessed through the Southeast Data, Assessment, and Review (SEDAR) process and periodically updated in accordance with the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA). The NMFS Beaufort Laboratory receives the majority of the fishery-dependent age samples collected within the **U.S. South Atlantic. Our laboratory works closely with other regional ageing laboratories to provide age data inputs for the stock assessment models.** Thus, another objective of this study is **to create reference collections to exchange with other laboratories and participate in ageing workshops.** These collaborations will allow us to collectively address issues of **consistency in methodology and interpretation of age structures** between laboratories, allowing data sets to be combined for stock assessments. Also, because the NMFS Beaufort Laboratory receives biological samples from various state agencies and federally managed fishery-dependent surveys, the data associated with each sample will be verified, standardized to ACCSP protocols, and logged into the Beaufort bio-sample inventory (BFT) or the Bio-sample Database (BSD) linked directly to the NMFS Trip Interview Program database, which can be shared with ACCSP. **All of these objectives directly fulfill the mission statement of the ACCSP 2014 – 2018 Strategic Plan.**

**Need:**

NOAA Fisheries Service (NMFS) in the southeast region has instituted the Southeast Data,

Assessment and Review (SEDAR) process for conducting stock assessments, through which model outputs are used to inform management in accordance with the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA). After thirty-nine SEDARs, the most cited research recommendation has been the need for more comprehensive, validated, and consistent age composition data. The Atlantic Coast Cooperative Statistics Program (ACCSP) Biological Review Panel has also had extensive discussions about this issue (Technical Source Document V). In concurrence with the SEDAR and ACCSP recommendations is research conducted by Yin and Sampson (2004). Their study looked at the many factors influencing stock assessment models (e.g., length of data series, natural mortality, fishery selectivity curve, fishing mortality, recruitment, survey biomass index, fishery and survey age composition, fishing effort, and sampling error in catch data). Of the factors affecting estimates of ending biomass and projected catch, their study suggests improvement to the models can be made with increased age composition sampling, for the least cost.

Extensive collections of otoliths and spines dating to the 1970s for many of the most important reef fish species of the U.S. South Atlantic are stored at the NMFS Beaufort Laboratory. These collections have been greatly enhanced by ACCSP sampling targets for biological samples. ACCSP has set biological sampling targets for twenty species included in the South Atlantic Fishery Management Council (SAFMC) Snapper Grouper Fishery Management Plan (FMP). ACCSP has also funded or is reviewing proposals for funding state agencies to collect biological samples from the commercial fishery. The Beaufort Laboratory receives approximately 20,000 age samples per year from commercial and recreational fishery landings contributed by many agencies including the North Carolina Division of Marine Fisheries (NCDMF), South Carolina Department of Natural Resources (SCDNR), Florida Fish and Wildlife Commission (FWC), NMFS Headboat Survey, and NMFS Trip Intercept Program (TIP). These new samples will provide the age composition data for stock assessments, but funding is required for processing and ageing the samples.

Another strong research recommendation from several SEDARs pertained to age and growth studies of the same species performed by more than one laboratory. Researchers have been asked to standardize processing techniques, be consistent in age determination analysis, and resolve ageing discrepancies between laboratories. The NMFS Beaufort Laboratory works closely with SCDNR, NCDMF, FWC and NMFS Panama City Laboratory to exchange processed samples for age comparison studies. Recently, Virginia Marine Resources Commission (VMRC) and Old Dominion University (ODU) have collaborated with NMFS- Beaufort in ageing of blueline tilefish and snowy grouper. Funding is required to support workshops to discuss processing methodology and interpretation of the aging structures. As a result of these workshops, consistency in ageing will be met and paired age readings will be used to create age error matrices that will be used as input data to stock assessment models.

#### **Results/Benefits:**

The NMFS Beaufort Laboratory has been collecting samples and aging reef fish species for 40 years, and is able to provide those data for assessment models for species of the snapper grouper



complex of the U. S. South Atlantic. Funding for this project would be directed at the processing and aging of fish from the 2015 - 2016 proposed SEDAR species list, as well as continued processing of the highest priority species to ACCSP and in the SAFMC Snapper Grouper FMP. That work will begin during the summer of 2015, following the completion of the data input requirements for red grouper. Work will already be underway processing gray snapper and scamp for which the lab holds more than 10,000 samples of each species dating back to the late 1970s. Also, ongoing efforts to stay up to date on vermilion snapper and tilefish (golden) will be continued. All four species have data due dates in late fall of 2015. The proposed work will continue the processing and ageing newly collected samples of high priority species such as black sea bass, red porgy, gag, and blueline tilefish. The data provided will reduce uncertainty about the stock assessment models of important commercial and recreational species. Also, the data would be used to characterize fishery landings and provide information on year class strength, effects of fishing on age structure, and growth of fish in the population.

**Seven species currently managed in the SAFMC Snapper Grouper FMP are listed in the upper 25% of the ACCSP Bio-Sampling Priority Matrix.** Three of these species, red grouper, blueline tilefish and tilefish, are scheduled to be assessed in 2015 along with scamp and gray snapper. The other species have been assessed recently (e.g., gag grouper, snowy grouper, and gray triggerfish) or are due for update assessments within the next few years. Thus, it is important to continue processing and reading the age samples collected. Past funding from ACCSP has allowed the Beaufort Laboratory to meet the SEDAR schedule.

Along with the seven snapper grouper species in the Priority Matrix, the Beaufort Laboratory includes eight additional species as our top priority for age processing (Table 1). Those fifteen species make up 87% of total samples received annually. **To process and read the annual samples received would take at least 400 person days to complete.** In Addition, of those species, lane snapper and white grunt have not undergone a SEDAR assessment, nor are they on the SEDAR schedule to date. The Beaufort Laboratory has inventoried over 20,000 white grunt samples. The lab has not completed the inventory of lane snapper samples dating back to the early 1980s, yet. Over 860 days will be needed to process and read the back-log of white grunt and lane snapper. The estimate of time required does not include the time spent verifying all the data and updating the inventories, exchange of calibration sets with other laboratories and age workshops, data analysis and report writing.

During the past several years, there have been changes to the SEDAR schedule by the SEDAR Steering Committee that have caused the NMFS Beaufort Laboratory staff to shift their species of focus. Due to the changes, the staff has had to sub-sample the collection for particular species, namely vermilion snapper and gray triggerfish, to meet shortened deadlines, thus possibly compromising the data for the stock assessment. By funding this proposal, NMFS Beaufort would be able to maintain the current number of staff, to continue to process primary reef fish species on an annual basis, and to process the back-log of samples held since the 1970s and the previously excluded age structures due to sub-sampling. SAFMC Snapper Grouper FMP species included in the ACCSP Bio-Sample Targets are listed in Table 1 along with the number of age samples received in 2011 - 2013. **The annual cost estimate per species for processing and aging of the**

samples has also been calculated and included in Table 1. The cost estimate does not include inter-laboratory calibration component of study. **Samples from yellowtail snapper, mutton snapper and black grouper are sent to Florida’s FWC in cooperation with that lab to age those species. FWC returns the age data to the Beaufort Laboratory for inclusion in the BFT and BSD.** The annual processing would allow the staff to respond to changes in the SEDAR schedule with less loss of data integrity.

Table 1. 2011-2013 Fishery-dependent age samples of the top priority species received at the NMFS Beaufort Laboratory as a result of ACCSP Bio-Sample Targets. **Estimated annual cost to process and age each species based on average salary cost and time per sample. Estimate does not include inter-laboratory calibration, age workshops, or data analyses.**

<b>Species</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>Annual Cost to Age</b>
<b>BLACK SEA BASS</b>	1441	2333	2289	<b>\$28,588</b>
<b>SNOWY GROUPER</b>	254	949	644	<b>\$17,418</b>
<b>BLUELINE TILEFISH</b>	639	1200	811	<b>\$24,991</b>
<b>GRAY TRIGGERFISH</b>	1286	1161	1008	<b>\$32,582</b>
<b>GAG</b>	1138	1261	734	<b>\$22,159</b>
<b>RED GROUPER</b>	895	812	448	<b>\$15,242</b>
<b>TILEFISH</b>	604	1713	1035	<b>\$31,611</b>
<b>RED PORGY</b>	1197	937	868	<b>\$28,310</b>
<b>RED SNAPPER</b>	2	338	700	<b>\$7,356</b>
<b>VERMILION SNAPPER</b>	5110	4902	4219	<b>\$100,653</b>
<b>SCAMP</b>	1159	1021	647	<b>\$26,660</b>
<b>GRAY SNAPPER</b>	324	322	607	<b>\$8,862</b>
<b>WHITE GRUNT</b>	1753	995	1635	<b>\$31,000</b>
<b>LANE SNAPPER</b>	269	333	544	<b>\$8,105</b>
<b>Total</b>	<b>15542</b>	<b>18277</b>	<b>16189</b>	<b>\$383,536</b>

The total number of otoliths or spines that can be processed and read in a single year is dependent on several factors, including the number of trained personnel in the lab, the type of processing required, and the difficulty in interpretation of the structure. Processing techniques include low-speed saws that may result in higher quality sections and allow for more than one section per sample, or a high-speed saw that results in one section and is adequate for easier to age fish. The three staff hired through ACCSP funds along with two FTEs and one contractor will be able to process and read over 20,000 age samples in one year. Funding of this proposal will allow for the continuation of the processing of age structures collected on an annual basis to meet the prioritized needs of SEDAR. The funds will also allow us to process through back-logged samples. Without these additional staff, stock assessment uncertainty will increase because of less-than-adequate age data inputs, and assessment biologists will be less likely to determine the

effects of fishing on size composition or age structure of the populations.

The people hired into these contract positions would be required to participate in SEDAR Life History Groups. They would become intimately knowledgeable of the data associated with the age samples and with the methodology to age the fish. They would contribute to discussion of each species as an expert. The contract biologist would be required to contribute to analysis of the life history data inputs for the SEDAR assessment and contribute to the report writing.

Various state and federal laboratories each house their own collections of age samples, such as fishery-independent survey samples or special project samples. They will be working independently to process and read samples of many marine fish species. They will then work collaboratively by combining data with the other laboratories to give more complete life history information to assessment biologists. The funding of this proposal will ensure greater coordination between laboratories for exchanging processed samples and ensuring reader precision between laboratories.

### **Approach/Procedures:**

Biological samples collected by port agents at various locations from North Carolina through the east coast of Florida will be shipped to the Beaufort Laboratory. Once received, staff will review the electronic and hard copy data for each sample, ensure the samples are properly labeled, sort the samples by species and store them for future processing. All sample data collected by port samplers will be entered into a searchable database that will be updated and maintained. **This information can be shared with ACCSP and NMFS SEFSC bio-sample databases. Staff will also respond to requests for samples from other regional ageing facilities, thus creating greater cooperation with those facilities.**

Staff of the NMFS Beaufort Laboratory will be responsible for processing the fishery-dependent age structures of species needed for SEDAR stock assessments. The samples will be sectioned and aged following the methods of Potts and Manooch (1999) and Cowan et al. (1995) in concurrence with other fish ageing laboratories. The age data will be recorded for each sample and provided to assessment biologists. After the data have been vetted through the SEDAR process or published, they will be made available to ACCSP and the NMFS Bio-sample databases.

All staff involved with these studies will be trained by the principal investigator, who has 24 years of experience ageing marine fish. Also, they will be required to assist in creating reference collections and training sets. Image analysis software will be used to take pictures of the age samples, apply measurements to them and annotate the images for training purposes. The staff will cross train with researchers at other laboratories. Age workshops will be held to standardize sample processing methodology and interpretation of the age structures, followed by exchanges of each lab's calibration sets. Many of the ageing laboratories in the Southeast region have worked together and exchanged information in the past, making cooperation between these facilities easier.

**Geographic locations:**

Biological samples for ageing will be collected from **commercial and recreational fishery landings from North Carolina through the east coast of Florida and the Florida Keys through routine, on-going sampling activities.** Recently, samples of deep-water reef fish species (e.g., blueline tilefish and snowy grouper) caught off of Virginia and Maryland have been included in the stocks from the U.S. South Atlantic. Funding for this proposal will result in contract research support personnel to be located at NMFS/SEFSC, Beaufort, NC.

**LITERATURE CITED:**

Cowan, J. H., Jr., R. L. Shipp, H. K. Bailey, IV, and D. W. Haywick. 1995. Procedure for rapid processing of large otoliths. *Transactions of the American Fisheries Society* 124:280-282.

Potts, J. C., and C. S. Manooch, III. 1999. Observations on the age and growth of graysby and coney from the southeastern United States. *Transactions of the American Fisheries Society* 128:751-757.

SEDAR. 2007. Consolidated SEDAR workshop recommendations for research, monitoring, and SEDAR procedures. Report from SEDAR, One Southpark Circle #306, Charleston, SC 29407. April 2007. 80p.

Yin, Y., and D. B. Sampson. 2004. Bias and precision of estimates from an age-structured stock assessment program in relation to stock and data characteristics. *North American Journal of Fisheries Management* 24(3):865-879.

**Milestone Schedule:**

TASKS	J	J	A	S	O	N	D	J	F	M	A	M
Receiving and storing hard parts	X	X	X	X	X	X	X	X	X	X	X	X
Processing hard parts	X	X	X	X	X	X	X	X	X	X	X	X
Ageing hard parts			X	X	X	X	X	X	X	X	X	X
Provide hard parts to cooperative institutions		X	X	X	X	X	X	X	X	X	X	X
Provide samples for reference collections	X	X	X	X	X	X	X					
Quarterly progress reports			X			X			X			
Final Report												X

**Project Accomplishments Measurement:**

The ultimate accomplishment measurement of this project will be the successful completion of all age data for SEDAR scheduled species in FY2016. Four species are currently on the schedule for October 2015 which include Blueline Tilefish (or Vermilion Snapper), Tilefish, Scamp, and Gray Snapper. The total age samples needing to be processed for those species are ~24,000. The work will have been begun prior to the funding of this project. Also, the lab intends to continue the aging of samples collected in 2015 for Black Sea Bass, Vermilion Snapper, Blueline Tilefish, Tilefish, Gag, and Red Porgy. Other species will be processed as demanded.

**Cost Summary:**

	<u>ACCSP</u>	<u>NMFS In-Kind</u>	<u>Total</u>
<b>Personnel Services/Salaries</b>			
P.I. Salary (8 months)		\$60,970	\$60,970
FTE salary (8 months)		\$28,125	\$28,125
Contract Biologist (12 mo.)		\$87,777	\$87,777
Contract Biologist (12 mo.)	\$87,777		\$87,777
Contract Technicians (12 mo.) x 2	\$156,754		\$156,754
<b>Subtotal</b>	<b>\$244,531</b>	<b>\$176,872</b>	<b>\$421,403</b>
<b>Fringe Benefits</b>			
\$78,970 *30%		\$26,729	\$26,729
<b>Travel</b>			
For age workshops (3 people * 1 trip)	\$1,300		\$1,300
<b>Supplies</b>			
Consumables (slides, saw blades, chemicals)	\$5,000		\$5,000
<b>Facilities Cost Recovery Fee</b>		\$61,000	\$61,000
<b>TOTAL</b>	<b>\$250,831</b>	<b>\$264,601</b>	<b>\$515,432</b>

**BUDGET NARRATIVE for REQUESTED FUNDING**  
 July 1, 2015 – June 30, 2016

Category	Cost	Justification
Personnel	\$244,531	Contract Biologist position to take lead on project (2080 hrs x \$42.25); Two contract technician positions to process age samples and assist in ageing (2 x 2080 hrs x \$37.68). These labor costs are negotiated pricing through the federal government.
Travel	\$1,300	Travel for 3 contract personnel to age workshop for 3 days (\$1,300).
Supplies	\$5,000	Estimated cost of supplies to process 20,000 age samples in one year. Supplies include embedding materials, slides, slide storage, saw blades, etc.
<b>Total Request</b>	<b>\$250,831</b>	

**BUDGET NARRATIVE for NMFS IN-KIND FUNDING**  
 July 1, 2015 – June 30, 2016

Category	Cost	Justification
Personnel	\$176,872	Includes two-thirds of PIs time and FTE technician and a full time contract Biologist position funded through another program. All three personnel are directly involved with the day to day processing and aging of samples, laboratory management and data analyses.
Fringe Benefits	\$26,729	Fringe benefits are calculated on the partial salaries of the two FTE positions listed.
Cost Recovery Fee	\$61,000	The Beaufort Laboratory is in a somewhat unique position of cross-line office ownership of the facility. National Ocean Service owns the facility and National Marine Fisheries Service is required to pay a “Cost Recovery Fee” on a per person basis for the use of the facility. No other NMFS Laboratory in the Southeast Region is required to pay such a fee. The Southeast Fisheries Science Center has agreed to pay the fee for the requested personnel in this proposal, due to the importance of the proposed work.
<b>Total</b>	<b>\$264,601</b>	

**Maintenance Project:**

Table 2. History of related projects funded by ACCSP.

Funding Year	Project Title	ACCSP Funds	In-Kind Funds
2013	Processing and aging biological samples collected from U.S. South Atlantic commercial and recreational fisheries in response to ACCSP bio-sample targets	\$205,636 (partially funded; requested amount \$249,946)	\$98,800
2012	Processing and aging biological samples collected from U.S. South Atlantic commercial and recreational fisheries in response to ACCSP bio-sample targets	\$236,440	\$74,915

Table 3. Budget Narrative from FY 2013 (A) and 2012 (B) funding.

A.

Category	Cost	Actual	Justification
Personnel	\$218,828	\$205,636 Note: All money went to contract labor cost. Supplies and travel were paid by other projects.	Contract Biologist position to take lead on project (1928 hrs x \$41.50); Two contract technician positions to process age samples and assist in ageing (2 x 1928 hrs x \$36.00). These labor costs are negotiated pricing through the federal government.
Travel	\$6,600.00		Travel for 3 contract personnel to age workshop for 5 days (\$3,600). Travel for two contract personnel to SEDAR Data Workshops for 7 days (\$3,000). These personnel will be required to participate in SEDAR Life History groups in order to represent data they have recorded.
Vehicle	\$616.00		Cost to use government vehicle for travel to Charleston, SC for age workshops and SEDAR meetings (\$0.55/mi).
Supplies	\$12,000		Estimated cost of supplies to process 20,000 age samples in one year. Supplies include embedding materials, slides, slide boxes, saw blades, etc. Required upgrade of image analysis software used in training and creating digital reference. Due to Federal Government required changes to Windows 7 platform, image analysis software (Image Pro) and camera interface software (Olympus) need to be upgraded. These software packages are critical for creating reference collections and training sets of age sample slides.
Total Request	\$249,946		

B.

Category	Cost	Justification
Personnel	\$213,565	Contract Biologist position to take lead on project (1928 hrs x \$40.77); Two contract technician positions to process age samples and assist in ageing (2 x 1928 hrs x \$35.00). These labor costs are negotiated pricing through the federal government.
Travel	\$6,000.00	Travel for 3 contract personnel to age workshop for 5 days (\$3,000) – Age workshop for Blueline tilefish, gray triggerfish and snowy grouper; Travel for two contract personnel to SEDAR Data Workshops for 7 days (\$3,000) – Participant in Life History group for SEDAR32 (blueline tilefish and gray triggerfish).
Vehicle	\$616.00	Cost to use government vehicle for travel to Charleston, SC for age workshops and SEDAR meetings (\$0.55/mi).
Supplies	\$5,000	Estimated cost of supplies to process 20,000 age samples in one year. Supplies include embedding materials, slides, slide boxes, saw blades, etc.
Overhead	\$11,259	Allowable NOAA overhead charge of 5% of total request (\$225,181). Used for administrative costs and IT equipment for new contract personnel.
Total Request	\$236,440	



Table 4. Accomplishments from the 2012 (A) and 2013 (B) funding year cycles. Number of samples being processed but not aged at that time, and number of samples processed and aged by species.

**A. 2012**

<b>Species</b>	<b># of Samples Being Processed</b>	<b># of Samples Aged</b>	<b>Sampling Years</b>
Black Sea Bass	1,000	3,300	2011 - 2012
Blueline Tilefish	800	3,117	2003 - 2012
Gray Triggerfish	700	6,240	1990 - 2012
Snowy Grouper	2,400		2010 - 2012
Red Porgy	1,300		2012
Red Snapper	300		2012
Gag	6,000		2005 - 2012
Vermilion Snapper	3,120		2012

**B. 2013**

<b>Species</b>	<b># of Samples Being Processed</b>	<b># of Samples Aged</b>	<b>Sampling Years</b>
Gag Grouper		6,551	2007 - 2012
Red Snapper		1,210	2010 - 2013
Gray Triggerfish		2,457	2012 - 2013
Gray Triggerfish from SCDNR collection		8,471	1991 - 2013
Blueline Tilefish		1,851	2012 - 2013
Black Sea Bass		1,935	2012 - 2013
Red Porgy	3,600		2012 - 2013
Tilefish	2,340		2011 - 2013
Vermilion Snapper	3,000		2012 - 2013
Scamp	1,200	300	1983 - 2013

## Summary of Proposal for Ranking Purposes

**Proposal Type:** *Maintenance*

### **Primary Program Priority:**

**Biological Sampling:** 100% of age samples collected from the seven SAFMC Snapper Grouper FMP species within the top 25% priority matrix will be processed and aged. The age data will be loaded into Bio-Sample Database housed at the NMFS SEFSC and made available for the SEDAR process. After the age data are vetted through the SEDAR process, those data will be made available to the ACCSP database.

### **Project Quality Factors:**

#### **Multi-Partner/Regional Impact Including Broad Impact:**

Age samples from species managed through the SAFMC Snapper Grouper FMP will be collected and shipped to the NMFS Beaufort Laboratory for processing and ageing for stock assessment purposes. These age samples will be representative of the commercial and recreational fisheries operating from Virginia and North Carolina through the east coast of Florida. The samples will be collected by various state agencies and NMFS sampling programs. In cooperation with these programs, the Beaufort Lab will standardize data, inventory, and process the samples.

The Beaufort Laboratory will work collaboratively with several state and federal laboratories and universities through age workshops and exchanges of reference collections to ensure consistency in age data for input to SEDAR assessments. The partners include NCDMF, SCDNR, FFWC, USC-Aiken, VMRC, ODU, NMFS-Panama City.

#### **Contains funding transition plan/Defined end point:**

Once the lab has cleared the back-log of samples dating back to the 1970s, less staff would be needed to process the annual age samples at the current rate of accrual. Samples from most of the priority species have had the back-log cleared. All new samples received from those species are processed annually. The back-log from four other primary species remains to be processed – Scamp, Gray Snapper, White Grunt, and Lane Snapper. The Beaufort Lab will be requesting funding assistance to accomplish that work and then start to reduce the amount of contract labor required to keep abreast of the annual samples. Also, funding through federal congressional budgets to enhance stock assessment data inputs would allow the Beaufort Laboratory to hire permanent federal employees and not have to rely on funding from ACCSP. As long as ACCSP sets sampling targets for managed species, the age samples will need to be processed for stock assessments.

#### **In-kind Contributions:**

NMFS is providing 50% of the total project cost.

#### **Improvement in data quality/quantity/timeliness:**

Continued funding of this project would allow the Beaufort Laboratory to approach a level

of processing of all age samples received from the South Atlantic Snapper Grouper fishery on an annual basis. When this level of processing is reached, the lab will be able to provide up-to-date age composition data for stock assessment purposes. The age samples would not need to be sub-sampled to meet schedule changes to SEDAR.

**Potential secondary module as a by-product:**

Other South Atlantic snapper grouper species with ACCSP sampling targets, but not in the current priority matrix will also be aged and data made ready for SEDAR assessments in the future.

**Impact on stock assessments:**

Funding of this project will address one of the top research recommendations coming from SEDAR - more comprehensive, validated and consistent age composition data. Age workshops and reference collections will enhance consistency in methodology and age data between partner laboratories.

## **CURRICULUM VITAE**

Jennifer Chrestensen Potts  
Research Fishery Biologist  
NOAA/NMFS/SEFSC  
101 Pivers Island Road  
Beaufort, NC 28516-9722

### **EDUCATION**

North Carolina State University B. S. 12/1988 Fisheries & Wildlife Sciences

East Carolina University M. S. 5/1997 Biology (Ecology)

### **PROFESSIONAL EMPLOYMENT**

6/97 - present

Position: Research Fisheries Biologist.

NOAA/NMFS/SEFSC, Beaufort Laboratory, 101 Pivers Island Road, Beaufort, NC 28516-9722.

Responsibilities include collecting, cataloging, preparation and analysis of otoliths for ageing projects; preparing manuscripts for peer review publication; collecting field data and biological parts of reef fishes; Participation in SEDAR process – Life History Group Leader for South Atlantic assessments; Supervising and training staff in ageing laboratory; reviewing proposals for federal government funding (i.e., MARFIN and S-K); reviewing manuscripts for peer review journals.

2/90 - 6/97

Position: Biological Technician (Fisheries).

NOAA/NMFS, Beaufort Laboratory, 101 Pivers Island Road, Beaufort, NC 28516-9722.

### **PUBLICATIONS**

#### **Peer Reviewed Publications (Selected)**

Burton, M. L., J. C. Potts, and D. R. Carr. 2014. Age, growth, and mortality of Yellowmouth Grouper from the southeastern United States. *Marine and Coastal Fisheries: Dynamics, Management and Ecosystem Science* 6:33-42.

Burton, M. L., J. C. Potts, and D. R. Carr. 2012. Age, growth and natural mortality of rock hind, *Epinephelus adscensionis*, from the Gulf of Mexico. *Bull. Mar. Sci* 88(4).

Palazón-Fernandez, J. L., J. C. Potts, C. S. Manooch, III, and C. Sarasquete. 2010. Age, growth,

- and mortality of toadfish, *Halobatrachus didactylus* (Schneider, 1901) (Pisces: Batrachoididae), in the Bay of Cádiz (southwestern Spain). Scientia Marina 74(1):121-130.
- Garcia, E. R., J. C. Potts, R. A. Rulifson, and C. S. Manooch III. 2003. Age and growth of yellowtail snapper, *Ocyurus chrysurus*, from the southeastern United States. Bulletin of Marine Science.
- Potts, J. C., and C. S. Manooch, III. 2002. Estimated ages of red porgy (*Pagrus pagrus*) from fishery-dependent and fishery-independent samples and comparison of growth parameters. Fishery Bulletin 100:81-89.
- Potts, J. C., and C. S. Manooch, III. 2001. Differences in the age and growth of white grunt from North Carolina and South Carolina versus southern Florida. Bulletin of Marine Science 68:1-12.
- Potts, J. C., and C. S. Manooch, III. 1999. Observations on the age and growth of graysby and coney from the southeastern United States. Transactions of the American Fisheries Society, 128:751-757.
- Potts, J. C., C. S. Manooch, III, and D. S. Vaughan 1998. Age and growth of vermilion snapper, *Rhomboplites aurorubens*, from the southeastern United States. Transactions of the American Fisheries Society 127:787-795.
- Manooch, C. S., III, J. C. Potts, D. S. Vaughan, and M. L. Burton. 1998. Population assessment of the red snapper, *Lutjanus campechanus*, from the southeastern United States. Fisheries Research 735:1-14.
- Manooch, C. S., III, and J. C. Potts. 1997. Age and growth of red snapper, *Lutjanus campechanus*, collected from North Carolina through east coast of Florida. Journal of the Elisha Mitchell Society 113(3):111-122.
- Manooch, C.S., III, and J.C. Potts. 1997. Age, growth, and mortality of greater amberjack from the southeastern U.S. Fisheries Research 30:229-240.
- Manooch, C. S., III, and J. C. Potts. 1997. Age and growth of greater amberjack from the Gulf of Mexico. Bulletin of Marine Science 61(3):671-683.
- Manooch, C.S., III, and J.C. Potts. 1996. Growth characteristics of the spottail pinfish, *Diplodus holbrooki*, off North Carolina. Journal of the Elisha Mitchell Scientific Society 112:7-9.
- Potts, J. C., and C. S. Manooch, III. 1995. Age and growth of red hind and rock hind collected from North Carolina through the Dry Tortugas, Florida. Bulletin of Marine Science. 56:784-794.



STATE OF MAINE  
DEPARTMENT OF  
MARINE RESOURCES  
MARINE RESOURCES LABORATORY  
P.O. BOX 8, 194 MCKOWN POINT RD  
W. BOOTHBAY HARBOR, MAINE 04575-0008

PAUL R. LEPAGE  
GOVERNOR

PATRICK C. KELIHER  
COMMISSIONER

Atlantic Coastal Cooperative Statistics Program  
1050 N. Highland St. Ste. 200 A-N  
Arlington, VA 22201

August 20, 2014

We are pleased to submit the proposal titled “FY15: Creation and Expansion of State of Maine Swipe Card Program” for your consideration. This is a new proposal which will build upon the swipe card program created using Department of Marine Resources (DMR) funds in 2014. The DMR piloted a swipe card initiative for elver dealers during the 2014 season and DMR paid for the cost of that project, although other partners may benefit from its results. The results from the pilot project were deemed a success and now the DMR would like to expand swipe card reporting into other fisheries where traditional forms of reporting (paper and current electronic methods) have had their issues. The implementation of a swipe card reporting system for elvers in 2014 provided the DMR with real time data that allowed the DMR to effectively monitor individual fishery quotas (IFQs) for over 900 licensed harvesters and 117 licensed dealers (primary dealers and their supplementals). This proposal addresses the following 2015 ranking criteria: catch and effort, regional impact, funding transition plan, in kind contribution, improvement in data quality and timeliness, impact on stock assessment and properly prepared. For a summary of the proposal for ranking purposes, please see page 14. Contact Robert Watts at the Maine Department of Marine Resources with any questions. Thank you for your consideration of this proposal.

In our original proposal, committee members asked that we address the three questions below. We are addressing them in this cover letter, but also in the report as well.

1. It was discussed that it may be cost beneficial to link this project with the Massachusetts swipe card program to reduce costs.

It was our understanding that the Massachusetts swipe card program was designed as a one ticket system to only include shellfish. From our previous experience with creating a limited one species reporting program it does not provide the flexibility to expand to other fisheries that we anticipate doing in the near future. The MA swipe card system is also a one-ticket system and in Maine we do currently have the ability to migrate to a one ticket system.

2. Allow for open competition for the contract.

We are certainly open to the competitive bid process, however we contacted Bluefin Data, LLC to develop this proposal based on the great working relationship we have with them and their institutional knowledge (they developed the Trip Ticket reporting system that Maine and NMFS currently use as an electronic reporting software option).

3. Please clarify the statement: “When the DMR writes the contract with Bluefin Data, LLC we intend to request that the DMR has rights to the coding used to create and maintain the Swipe Card Program.” What does this mean? Does DMR or ACCSP have rights to the coding? Either way, it appears there will be maintenance fees, which DMR intends on paying (as stated later in the proposal), but doesn’t “having the rights to the coding” mean that DMR owns the software and wouldn’t have to pay those fees? Furthermore, if ACCSP is really paying for the development of this software (assuming this grant gets funded), shouldn’t ACCSP have rights to this software, especially if other partners want to use it?

The DMR would request that ACCSP and the DMR have the rights to the coding should Bluefin Data, LLC ever go out of business. The “maintenance fees” would be ongoing regardless of ownership of the program. Bluefin Data, LLC provide technical support to the end user as well as to the DMR. This program would be evolving from the original build to include other fisheries as the DMR requires. These “maintenance fees” will not pay for the expansion; however, will cover the support and ability for the DMR to provide this program to as many dealers as are required.

4. Are any of the scallop, sea urchin or elver dealers that would potentially use the swipe card application, federally permitted? Furthermore, do any of them buy other products, and if so, how will they report those products?

This past season one elver dealer also had federal permits. The DMR spoke with GARFO and came to a mutual solution that would allow the DMR to require the elver dealer to report using our swipe card program. The DMR will begin a discussion with NMFS regarding requiring all state licensed dealers (including those with federal permits) to report to the DMR using a swipe card program. Since all the data will be sent to SAFIS similar to the current Trip Ticket software, it is our hope that this will not pose a huge problem.

5. The first statement indicates sending all dealer data to SAFIS, but the second sentence uploading to the Warehouse. These are two separate databases, and it is important to distinguish where the data from this software will be going. Will it be SAFIS or the Warehouse? Later in the proposal (under Programmatic Cost for instance) it is indicated that SAFIS is the place where uploads will be sent. If it is SAFIS, how will this affect current uploads from the ME DMR MARVIN database that appear to be going to the Warehouse? Maybe ME DMR should consider having all uploads go to SAFIS, especially when considering adding more species to swipe card reporting, integrating federally permitted dealers, and transitioning paper-based dealers to electronic reporting?

The initial loading of data from the program will be sent to SAFIS (page 4). There would be less records uploaded from MARVIN to the Warehouse should we require more dealers and more species to be reported via a swipe card program. The DMR does not upload data from MARVIN to SAFIS because DMR staff continually audit data each week, so the data being uploaded to the warehouse are a mix of pre- and post-audited records. The reloading of data from MARVIN to the Warehouse is an automated process that the DMR loads into a temporary table provided by the Warehouse. If we were to perform the same upload method to SAFIS we would need to be able to delete records from SAFIS to reload a record or risk creating duplicate records. In addition, quahog and Bluefin tuna data are loaded into the warehouse and not into SAFIS, so the updates to the warehouse would need to continue.

6. It would be helpful if the proposal could clarify how license (for both dealers and harvesters) and vessel information will be maintained in the Central Database and SAFIS (or the Warehouse). The Bluefin trip-ticket software gets license and vessel info, and other look-up

values currently from SAFIS – and uploads the dealer data into SAFIS. Will the swipe card Central Database do the same, or will that information be managed instead from the DMR license management application? This is important because if other partners are interested in using this software in later years (a stated benefit in the proposal), they should know how this all fits together. It's also important if federally permitted dealers start using the swipe card solution.

As proposed, the Central Database will pull license and vessel information from the DMR license management application. SAFIS does not have the ability to store license types, only that a dealer or harvester has held a license in the past. The DMR license application will have the ability to track individual licenses that each harvester holds as well as which vessels are associated with that license. The license application is used to populate the available harvesters which will allow the DMR to print the swipe cards when needed.

7. Clarify how many species will be using this swipe card program.

Starting in the fall of 2015 the DMR would like to have elver, sea urchin and scallops report using this swipe card program.

8. ME DMR indicates paying for ongoing monthly maintenance fees associated with this program. In the other ME dealer reporting proposal, ACCSP is paying for the trip ticket maintenance fees. How will these two reporting programs come together in terms of this cost?

The DMR does not anticipate discontinuing use of the current Trip Ticket program until all fisheries are required to report using a swipe card. This transition will not happen for years. The DMR is always looking for ways to transition away from the need for ACCSP funding and this proposal is not seen as a proposal that would become a maintenance project. The DMR anticipates that we would only be asking for the cost to build the program and would be able to fund yearly maintenance fees from internal funding sources that are not currently available.

Sincerely,

Robert Watts  
Marine Resources Scientist  
[rob.watts@maine.gov](mailto:rob.watts@maine.gov)  
(207) 633-9412



Atlantic Coastal Cooperative Statistics Program  
1050 N. Highland St. Ste. 200 A-N  
Arlington, VA 22201

**FY15: Creation and Expansion of State Of Maine Swipe Card Program**  
**Revised**

**Total Cost: \$238,125 [not including the NOAA administration fee]**

Submitted by:

Robert B. Watts II  
Maine Department of Marine Resources  
PO Box 8  
West Boothbay Harbor, ME 04575  
[rob.watts@maine.gov](mailto:rob.watts@maine.gov)

Heidi R. Bray  
Maine Department of Marine Resources  
PO Box 8  
West Boothbay Harbor, ME 04575  
[heidi.bray@maine.gov](mailto:heidi.bray@maine.gov)

David A. Libby  
Maine Department of Marine Resources  
PO Box 8  
West Boothbay Harbor, ME 04575  
[david.a.libby@maine.gov](mailto:david.a.libby@maine.gov)

**Applicant Name:** Maine Department of Marine Resources (DMR)

**Principal Investigator:** Robert Watts, Marine Resource Scientist

**Project Title:** FY15: Creation and Expansion of State Of Maine Swipe Card Program

**Project Type:** New Project

**Requested Award Amount (without the NOAA administration fee):** \$238,125

**Requested Award Period:** For one year, beginning after the receipt of funds

**Objectives:**

The objective of this proposal is to create a comprehensive swipe card program that will collect trip level landings information from all licensed dealers who buy directly from harvesters. The Maine Department of Marine Resources (DMR) piloted a swipe card initiative for elver dealers during the 2014 season. The primary task will be to build a swipe card system that could easily integrate other fisheries with little additional programming. In 2014 DMR contracted with Bluefin Data LLC to create a single fishery swipe card program for elvers that proved successful. The DMR is now looking to expand swipe card reporting to other fisheries in the coming years. While the swipe card system will be developed to incorporate any fishery, the next two fisheries the DMR would like to require dealers report via swipe cards are sea urchin and scallops. The DMR will use past experiences from the elver swipe card project to build a comprehensive system that could be used by all partners.

**Need:**

Timely and accurate landings data are essential for fisheries management, and particularly for quota based fisheries. After reviewing the results of the limited elver swipe card program, the DMR determined that there is a great benefit to expanding the swipe card to all of Maine's fisheries and to allow for transfer of this technology to all ACCSP partners. In 2014 the DMR required that all licensed elver dealers report trip level elver purchases daily through a swipe card program. The use of this swipe card system proved successful in collecting timely and accurate data that was used to effectively manage quotas. The program and reporting timeframe allowed the DMR to implement individual fishery quotas (IFQs) for the first time. These dealer reports were used to track individual harvester quota and the overall quota. When an IFQ was reached, the harvester's card was deactivated. If the entire fishery met the quota, all card(s) would have been deactivated and the fishery closed. The DMR was able to analyze all data daily for landings that had been received by 5 P.M. the previous day. A total of 7,056 elver transactions were recorded during the 2014 season and none of these records had to be entered by DMR staff. If the DMR did not have this swipe card program IFQs would not have been possible and accurate monitoring of the overall quota would not have been possible.

Based on the success of the elver swipe card system, DMR would like to expand this reporting method to **include sea urchin and scallops.** The swipe card program that was created was basic and allowed for only **elvers** to be reported. In order for the DMR to include other fisheries, a new swipe card program will need to be developed that will allow other fisheries to be added without having to customize the program for individual fisheries. This proposal also includes mobile applications for android and an iOS platform that did not exist in the original swipe card program. All data that comes through the swipe card system would be uploaded to SAFIS and shared with all ACCSP partners. The expansion of a mandatory swipe card reporting system to other fisheries would enable DMR and partners to manage fisheries in different ways (e.g., allow harvesters to choose fishing days or

removing daily quotas and go to a seasonal quota). The use of swipe cards would help increase the timeliness and accuracy of the data the DMR collects from dealers.

### **Results and Benefits:**

Swipe cards allow for the submission of timely data to fisheries managers. If fisheries managers are able to receive real-time data there is the potential to manage fisheries in a different way. Some fisheries are managed with a daily quota, a seasonal quota or days in/days out of a fishery. With swipe card programs, harvesters could potentially choose which days they fish or fill their entire quota in a longer or shorter amount of time. Swipe cards also help prevent unlicensed harvesters from fishing. In the elver fishery, summonses for unlicensed fishing dropped from 271 in 2013 to less than 20 in the 2014 season. If a swipe card is required to complete a transaction, the unlicensed harvester would not be able to sell their catch. The only way a licensed harvester would receive a swipe card is through the licensing authority.

The data collected in the pilot elver swipe card project so far have shown how valuable this information is for Maine's fisheries. DMR scientists were able to manage IFQ's and overall fishery quotas in real time. The swipe card program could potentially revolutionize how fisheries are managed. Before 2014 the elver fishery had no quota monitoring and only required weekly dealer (electronic and paper) and monthly harvester (paper only) reporting. Using this new swipe card program, the DMR was able to implement IFQs and comply with the ASMFC's mandate to manage an overall elver quota. Without the swipe card system, this would have been a much more difficult or even impossible task. In addition to the timeliness of data, the amount of illegal fishing activity was dramatically reduced. Only licensed harvesters were issued swipe cards. It was mandated that all elver transactions were recorded through a swipe card program.

This project will help DMR meet the data collection standards of ACCSP. All partners will benefit, as all data will be uploaded to ACCSP and many of the species landed in Maine have a broad geographic range which includes many other agencies in their management. Partners may also benefit from the technologies built from a more comprehensive dealer swipe card/mobile app project.

### **Approach:**

#### **Creation of swipe card program**

The DMR will contract with Bluefin Data to create a more comprehensive swipe card program that could eventually be implemented in all of Maine's fisheries that require mandatory trip level reporting. A current proposal has been received from Bluefin Data to create this comprehensive swipe card program (Attachment 1, page 7). When the DMR writes the contract with Bluefin Data, LLC we intend to request that the DMR and ACCSP has rights to the coding used to create and maintain the Swipe Card Program **should Bluefin Data, LLC go out of business.**

- Work with Bluefin to build a swipe card program that will allow for multiple fisheries to transition from a traditional paper or electronic reporting system to a swipe card program.
- Review progress of swipe card program development.

#### **Outreach with industry to promote buy-in.**

DMR staff will continue to work with dealers to explain the purpose and benefits of this reporting system. Staff will attend the annual Maine Fishermen's Forum and present a Landings Program poster explaining the importance of accurate reporting as well as displaying preliminary data by fishery. Staff will work with established industry organizations, such as the DMR advisory councils and dealer and

harvester associations to reiterate the program goals and show results of the elver swipe card reporting. Staff will focus on explaining the swipe card program and how it will benefit the industry as a whole by allowing the DMR to gather more accurate data.

**Communication with National Marine Fisheries Service about federal dealers.**

Since there will be an overlap with Maine dealers that also possess federal dealer permits, the DMR will need to hold discussions with NMFS about how federal dealers could be impacted. The DMR does not want to have federal dealers report the same data twice. Since the system being proposed is very similar to the current Trip Ticket software currently used by some federal dealers it is the hope of the DMR that these federal dealers could use the proposed swipe card program to fulfill both Maine and NMFS reporting requirements.

**Transmission of dealer data to ACCSP.**

The swipe card program will send all dealer data to SAFIS. In each data feed, the following fields are uploaded to SAFIS according to ACCSP protocols: supplier dr id, supplier dealer id, supplier trip id, supplier cf id, supplier vessel id, unload year, unload month, unload day, state code, county code, port code, primary gear, data source, data supplier, reported quantity, live pounds, dollars, disposition code, grade code, unit measure, species ITIS, market code, supplier action flag, dr seq id, fishing mode.

**Geographic Location:** Operations will be based out of Boothbay Harbor, Maine and the project will take place throughout Maine.

**Milestone Schedule:**

	Month											
Task:	1	2	3	4	5	6	7	8	9	10	11	12
Contract with Bluefin Data	X											
Develop and test swipe card program		X	X	X	X							
Test software with dealers						X	X	X	X	X	X	X
Make modifications to software						X	X	X	X	X	X	X
Industry outreach to promote dealer buy-in	X	X	X	X	X	X	X	X	X	X	X	X
Semi-Annual Report						X						X
Annual Report												X

**Project Accomplishments Measurement:**

The final goal of the project would be to have a fully functional comprehensive swipe card program that would be used in the elver, sea urchin and scallop fishery by the end of the grant period. Long term, it would be our intent to use this program for all fisheries. This program would be contracted, tested and any bugs fixed before the end of the grant period. The swipe card program created during this grant period would be fully expandable to incorporate other mandatory reporting fisheries in the future.

**Cost Summary: FY15: Creation and Expansion of State Of Maine Swipe Card Program**

<b>Programmatic Cost</b>	<b>Description</b>	<b>Cost</b>
1 Central Database with an API	200 hrs * \$140/hr	\$28,000
1 PC Based Application	175 hrs * \$140/hr	\$24,500
1 License Management Application	50 hrs * \$140/hr	\$7,000
1 DMR Management Portal	250 hrs * \$140/hr	\$35,000
1 Android Application	200 hrs * \$140/hr	\$28,000
1 iOS Application	250 hrs * \$140/hr	\$35,000
		<b>Subtotal</b>
		<b>\$157,500</b>
<b>Additional Development Cost</b>		
Administrative Cost	125 hrs * \$140/hr	\$17,500
System Testing	50 hrs * \$140/hr	\$7,000
Graphic Design	25 hrs * \$140/hr	\$3,500
Travel	2 Developer trips to Maine	\$5,000
		<b>Subtotal</b>
		<b>\$33,000</b>
	<b>Total Program and Developer Fee</b>	<b>\$190,500</b>
<b>Total Direct Costs</b>		<b>\$190,500</b>
<b>Indirect Costs (25%)</b>		<b>\$47,625</b>
<b>Total Award to DMR</b>		<b>\$238,125</b>
<b>DMR In-kind Contribution</b>		
<b>Programmatic Cost</b>	<b>Description</b>	<b>Cost</b>
1 Annual Support	8% of initial project total per year	\$15,240
		<b>Subtotal</b>
		<b>\$15,240</b>
<b>Personnel Cost</b>		
1 Scientist IV	10%	\$10,827
1 Scientist III	15%	\$14,279
1 Scientist I	20%	\$17,026
1 Specialist II	5%	\$3,262
		<b>Subtotal</b>
		<b>\$45,394</b>
<b>Equipment Cost</b>		
Swipe Card Encoder/Printer, ribbons, cleaning kit plus service agreement	2 - one for backup	\$8,000
Swipe Card Reader (Apex II units)	200 @ \$375/unit	\$75,000
Swipe Cards	1500 cards @ \$0.25/card	\$375
		<b>Subtotal</b>
		<b>\$83,375</b>
	<b>Total In-Kind Contribution</b>	<b>\$144,009</b>

**Budget Narrative for Proposed FY15 Grant:**

**Programmatic Cost:** The central database with an API is the brain of the entire swipe card system. This database is where all of the data will be stored before being sent to SAFIS. The PC Based application, Android Application and iOS Application are the programs the dealers will be provided with to report with. The DMR Management Portal will allow the DMR monitor and manage the Swipe Card System. This will be a web application that will allow the DMR to audit tickets and add harvesters and dealers to the License Management Application. The License Management Application will be the portal that allows the DMR to print and deactivate harvester swipe cards. As proposed, the Central Database will pull license and vessel information from the DMR license management application. SAFIS does not have the ability to store license types, only that a dealer or harvester has held a license in the past. The DMR license application will have the ability to track individual licenses that each harvester holds as well as which vessels are associated with that license. The license application is used to populate the available harvesters which will allow the DMR to print the swipe cards when needed. These programmatic costs are one time fees.

**Additional Development Cost:** These costs are for the developer to test the system before release and any programmatic fixes.

**Indirect costs:** The Department of Marine Resources has an indirect cost rate of 25%. See Attachment 2 (Page 11) for the Negotiated Indirect Cost Agreement.

# Maine Swipe Card System

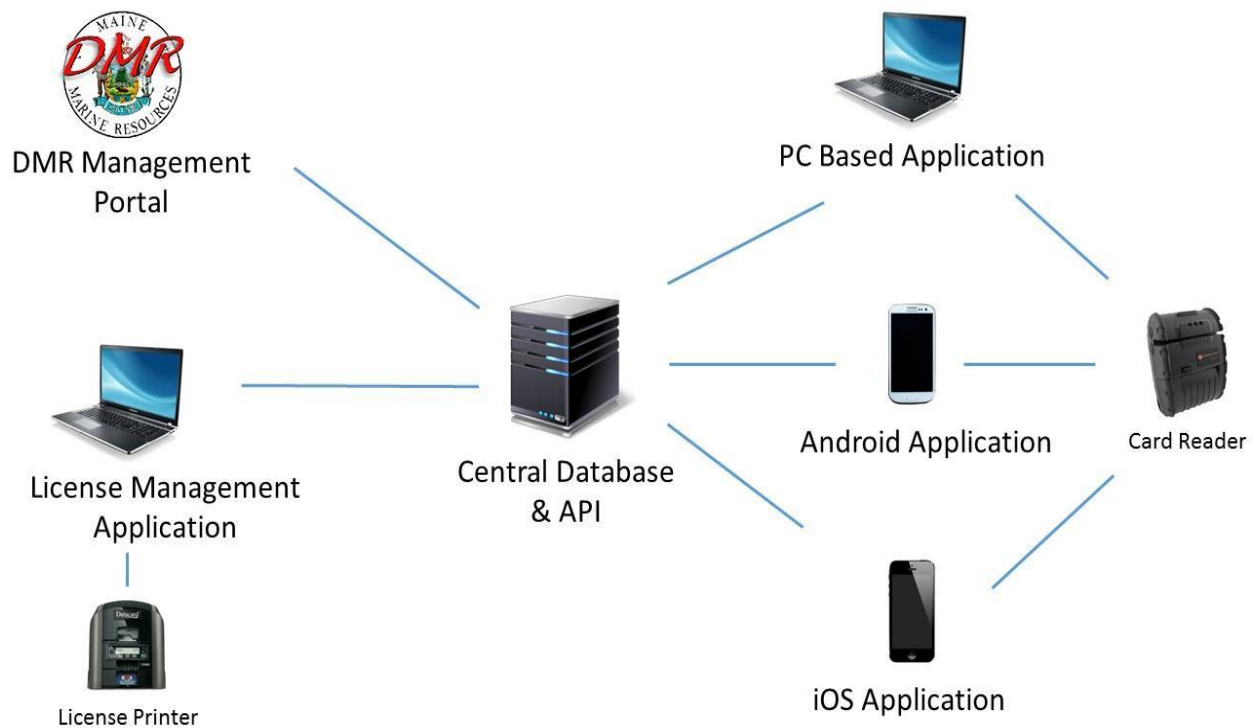
**PREPARED FOR:**

MAINE DEPARTMENT OF MARINE RESOURCES

BLUEFIN DATA, LLC | 16175 Feliciana Ave. Prairieville, LA 70769 | [www.bluefindata.com](http://www.bluefindata.com) | 225.317.9660



# The Maine Swipe Card System Overview



## Features Breakdown

The Maine Department of Marine Resources (DMR) requested a proposal for a swipe card system to monitor and manage elver eels, sea urchins, and scallops.

This system will allow DMR to monitor and control the data collection of elver eel, sea urchin and scallop dealers. This system will hold the same functionality as the Elver System with the addition of the following features:

1. Meet federal reporting requirements
2. Collection of vessels, markets, and grade
3. Collection of multiple species per ticket
4. Full syncing capability with local devices and central server
5. Administration features for system management

# Software Breakdown

## Central Database with an API – 200 hours - \$28,000

The central database will be the brain of the system. All data will be stored in this database, which will be fed to all of the client applications. The Application Programming Interface (API) allows a secure transfer of data from the central database to the client applications.

## PC Based Application – 175 hours - \$24,500

This dealer application will be a replacement of the PC based Elver System created for elver dealers. This application will be used by dealers to report for the three species requested.

## License Management Application – 50 hours - \$7,000

The license management application will be a replacement of the Elver Management project. It will hold a list of harvesters, and have the ability to print and manage swipe cards that are used by the dealer applications.

## DMR Management Portal – 250 hours - \$35,000

This application will be a management portal for DMR to monitor and manage the Maine Swipe Card System. This will be a website application that has the ability to modify and delete tickets, harvesters, dealers, and other data.

## Android Application – 200 hours - \$28,000

The second dealer application is an Android mobile application. This application will have the same functionality as the PC and iOS applications. Both Android phones and tablets will be supported.

## iOS Application – 250 hours - \$35,000

The last application for a dealer would be an iOS mobile application which will run on devices such as the iPhone, iPad, and iPod. This application will have the same functionality as both the Android and PC based applications.

# Additional Development Cost

Project management and support rates may vary depending on the project's final size. Support for the Maine Swipe Card system will be year-round and will include administration, hosting, security certificates, domain fees, bug fixes, and minor feature additions.

Administration	125 hours - \$17,500
System Testing	50 hours - \$7,000
Graphic Design	25 hours - \$3,500
Travel	\$5,000

# Roll Out Plan

The Maine Swipe Card System will be ready for beta testing in February of 2015, at which time Bluefin Data will make a trip to meet with dealers to demonstrate the application and receive feedback. Bluefin Data will make final modifications and prepare to launch by the start of the Elver season.

TOTAL DEVELOPMENT HOURS 1,325

ANNUAL SUPPORT 8% of project total per year

PROJECT TOTAL \$190,500

## Attachment 2: Negotiated Indirect Cost Agreement

**U.S. Department of Commerce**  
Office of Acquisition Management – Grants Management Division  
1401 Constitution Ave., NW, HCHB Rm 6412  
Washington, DC 20230, Attn: Indirect Cost Program

### CERTIFICATE OF INDIRECT COSTS

This is to certify that I have reviewed the indirect cost rate proposal prepared and maintained herewith and to the best of my knowledge and belief:

- (1) All costs included in this proposal dated February, 2014 to establish indirect cost billing rates for July 1, 2013 through June 30, 2014 are allowable in accordance with the requirements of the federal awards to which they apply and OMB Circular 87, "Cost Principles for State, Local, and Indian Tribal Governments". This proposal does not include any costs which are unallowable as identified in the applicable federal cost principles. For example, advertising contributions and donations, bad debts, entertainment costs or fines and penalties.
- (2) All costs included in this proposal are properly allocable to federal awards on the basis of a beneficial or causal relationship between the expenses incurred and the agreements to which they are allocated in accordance with applicable requirements. Further, the same costs that have been treated as indirect costs have not been claimed as direct costs. Similar types of costs have been accounted for consistently and the Federal Government will be notified of any accounting changes that could affect the rate.
- (3) The indirect cost rate calculated within the proposal is 28.29%, which was calculated using an indirect cost rate base type of Modified Total Direct Costs. The calculations were based on actual costs from fiscal year July 1, 2012 thru June 30, 2013 to obtain a federal indirect cost billing rate for fiscal year beginning July 1, 2013.

Subject to the provisions of the Program Fraud Civil Remedies Act of 1986, (31 USC 3801 et seq.), the False Claims Act (18 USC 287 and 31 USC 3729); and the False Statement Act (18 USC 1001), I declare to the best of my knowledge that the foregoing is true and correct.

Organization Name: State of Maine, Department of Marine Resources

CFO Signature:  Date: 3/6/14

Name/Title Authorized Official: Gilbert M. Bilodeau, Director, Natural Res Ser Ctr

Dept Head Signature:  Date: 3/5/14

Name/Title Authorized Official: Patrick Keliher, Commissioner



# Department of Marine Resources

## INTEROFFICE MEMORANDUM

---

**TO:** FILE  
**FROM:** PATRICK C. KELIHER, COMMISSIONER  
**SUBJECT:** RATE USED FOR COST ALLOCATION  
**DATE:** 3/19/2014

---

In accordance with OMB Circular A-87, the Department of Marine Resources has submitted to the U.S. Department of Commerce a departmental cost allocation plan for use during state fiscal year 2014 ending June 30, 2014. The indirect cost rate proposal is 28.29%. I am authorizing the use of the lesser rate of 25% to be used during this period.

A handwritten signature in black ink, appearing to read "P. C. Keliher". The signature is written in a cursive style and extends across the width of the page.

Patrick C. Keliher, Commissioner

## **Summary of Proposal for ACCSP Ranking**

**Proposal Type:** New Project

**Primary Program Priority and Percentage of Effort to ACCSP modules:**

*Catch and Effort (10 points):* 100% of licensed dealers must report trip level information on 100% species they purchase from harvesters.

**Project Quality Factors:**

*Regional Impact (5 Points):* all partners will benefit, as all the data collected will be uploaded to ACCSP. Regional management organizations, such as ASMFC, will benefit from the trip level information from Maine. Partners may also benefit from the technologies/procedures created with a swipe card/mobile app reporting project.

*Funding transition plan (4 Points):* After the initial programmatic costs associated with this program the DMR will pay for the ongoing monthly maintenance fee associated with this program. The DMR will be paying for all associated equipment for the swipe card program and DMR staff funded by the State of Maine will be responsible for implementing this reporting system.

*In-kind Contribution (2 Points):* the partner contribution is listed on page 5.

*Improvement in Data Quality/Timeliness (4 Points):* DMR is able to audit data at a more detailed level, including checking dealer reported data against harvester reported data. DMR encourages reporting timeliness through outreach with dealers and is working with Marine Patrol to ensure industry understands the importance of submitting accurate and timely information. DMR mandated electronic reporting through a swipe card system for the elver fishery in 2014, which improved timeliness and data quality and the DMR wants to expand to the sea urchin and scallop fishery.

*Potential Secondary Module as a By-Product(0 points):* None

*Impact on Stock Assessment (3 Points):* Regional management organizations which carry out stock assessments will benefit from the detailed, timely, and complete landings data reported from Maine. This information is used in stock assessments for many species that are managed by regional agencies.

*Properly Prepared (5 Points):* DMR followed ACCSP guidelines and pertinent documents when preparing this proposal.

**Robert B. Watts II**  
**Maine Department of Marine Resources**  
**(207) 633-9412**  
[rob.watts@maine.gov](mailto:rob.watts@maine.gov)

June, 2014

**PROFILE:**

- Knowledge of Maine and federal regulations pertaining to commercial fishing and associated reporting requirements through working with the Department of Marine Resources and the National Marine Fisheries Service.
- Knowledgeable of Maine's fishing industries and how they operate.

**EDUCATION:**

Access 2003: Programming in Microsoft Access, VTEC, Portland, ME 2011

Access 2003: Advanced Topics, VTEC, Portland, ME 2008

B.S. Marine Science, Maine Maritime Academy, Castine, ME 2002

**EMPLOYMENT EXPERIENCE:**

**Feb 2012 – Present**                      **Marine Resource Scientist I**  
**Maine Department of Marine Resources**  
**West Boothbay Harbor, ME**

- Manages daily operations of Maine's Commercial Landings Program, which collects, compiles and distributes commercial fishery statistics for Maine's commercial fisheries.
- Supervises five Landings Program personnel.
- Maintain Microsoft Access databases for licensing information, compliance, dealer and harvester data entry.
- Communicates with industry regarding reporting requirements, monitors reporting compliance and works with the licensing division in order to ensure all mandatory reporting requirements are met and licenses are issued accordingly.
- Oversees outreach to industry
- Maintains dealer and harvester auditing databases.
- Oversees Maine's Interactive Voice Response (IVR) reporting program.
- Serves as key contact for Maine commercial landings information in order to provide fishery managers, scientists, industry members and the public with commercial fishery information.

**Oct 2007 – Jan 2012**                      **Marine Resource Specialist II**  
**Maine Department of Marine Resources**  
**West Boothbay Harbor, ME**

- Oversee daily operations of the harvester landings program.
- Notify new harvesters about reporting requirements.
- Maintain databases used for data audits and data entry.
- Monitor reporting compliance database and notifies harvesters if they are delinquent.
- Supervise two Landings Program personnel.
- Oversees IVR reporting.
- Prepare data requests from various sources

**Jul 2005 – Oct 2007**

**Marine Resource Specialist I  
Maine Department of Marine Resources  
West Boothbay Harbor, ME**

- Interviewed marine recreational anglers all over the Maine coast to help determine fish stocks. Identified, weighed, measured and recorded fish caught by anglers.
- Entered data into a workable spreadsheet for analysis.
- Created publications, updated regulation handouts and updated the recreational fishing website as needed.

**May 2001 – Jun 2005**

**Conservation Aid  
Maine Department of Marine Resources  
West Boothbay Harbor, ME**

- Interviewed marine recreational anglers all over the Maine coast to help determine fish stocks. Identified, weighed, measured and recorded fish caught by anglers.
- Entered data into a workable spreadsheet for analysis.
- Acted as a liaison between the State of Maine and the recreational anglers, answered anglers questions about fishing regulations.



**Heidi Ryder Bray**  
**Maine Department of Marine Resources**  
**(207) 633-9504**  
[heidi.bray@maine.gov](mailto:heidi.bray@maine.gov)

June, 2014

**PROFILE:**

- Knowledgeable of the distribution, abundance and migration patterns of many commercial species as well as fishing practices in the Gulf of Maine.
- Knowledge of Maine statues and regulations as well as federal regulations pertaining to commercial fishing through working with Department of Marine Resources, National Marine Fisheries Service and Atlantic Coastal Cooperative Statistics Program.
- Expertise in Microsoft Access database programming, including experience with Visual Basic and SQL.
- Certified SCUBA diver and member of Maine Department of Marine Resources Dive Team.

**EDUCATION:**

Writing Queries Using Microsoft SQL Server Transact-SQL 2008, VTEC, Portland, ME 2009

Mastering Microsoft Access Programming, VTEC, Portland, ME 2004

Introductory VBA, State Training and Development Office, Augusta, ME 2003

B.S. Biology, Eckerd College, St. Petersburg, FL 1998

**EMPLOYMENT EXPERIENCE:**

**Dec 2011-Present**                      **Marine Resources Scientist III**  
**Maine Department of Marine Resources**  
**West Boothbay Harbor, ME**

- Directs Maine's Commercial Landings Program, which collects, compiles and distributes commercial fishery statistics for Maine's commercial fisheries.
- Runs the Boothbay Harbor environmental monitoring program, which is a program that collects weather and sea condition data.
  - MARVIN database development coordinator.
  - Oversees Maine's Recreational Fishing Program.
  - Oversees the Maine/NH Inshore Trawl Survey.
- Serves as key contact for Maine commercial landings information in order to provide fishery managers, scientists, industry members and the public with commercial fishery information.
- Promotes Maine's partnership with Atlantic Coastal Cooperative Statistical Program (ACCSP) through serving on the Commercial Technical Committee, Information Systems Technical Committee and Outreach Committee; working to bring the Landings Program into compliance with ACCSP standards.

**Aug 2004 – Dec 2011**                      **Marine Resources Scientist I**  
**Maine Department of Marine Resources**  
**West Boothbay Harbor, ME**

- Managed Maine's Commercial Landings Program.
- Supervised seven Landings Program employees.
- Designed and built databases used by Landings Program.
- Served as key contact for Maine commercial landings information in order to provide fishery managers, scientists, industry members and the public with commercial fishery information.

- Communicated with industry regarding reporting requirements, monitors reporting compliance and works with the licensing division in order to ensure all mandatory reporting requirements are met and licenses are issued accordingly.
- Promoted Maine's partnership with Atlantic Coastal Cooperative Statistical Program (ACCSP) through serving on the Commercial Technical Committee, Information Systems Technical Committee and Outreach Committee; worked to bring the Landings Program into compliance with ACCSP standards.

**Nov 2001 - Aug 2004**                    **Marine Resource Specialist**  
**Maine Department of Marine Resources**  
**West Boothbay Harbor, ME**

- Managed Maine's Commercial Landings Program.
- Served as State of Maine contact for Maine commercial landings statistics.
- Informed industry of reporting requirements, monitored reporting compliance and helped enforce these regulations.
- Promoted Maine's partnership with Atlantic Coastal Cooperative Statistical Program (ACCSP).

**May 1999 – Sep 2002**                **Naturalist**  
**Boothbay Whale Watch**  
**Boothbay Harbor, ME**

- Identified different whale species off coast of Maine and presented biological information to the public regarding different marine mammals and other marine species found in the Gulf of Maine region.

**Apr 2000 – Nov 2001**                **Conservation Aide**  
**Maine Department of Marine Resources**  
**Augusta, ME**

- Maintained fishway at Brunswick Hydro Facility; conducted alewife tagging program; aged alosids via scale and otolith reading; transported and stocked alosids; conducted river and pond sampling; entered and analyzed sample data; inspected fish passages at regional dams; evaluated capability to pass fish up and/or downstream; investigated fish kills; coordinated and supervised volunteer program.

**Mar 2000 – May 2000**                **Contract Employee**  
**Maine Department of Marine Resources**  
**West Boothbay Harbor, ME**

- Coordinated and entered Vessel Trip Report data; interviewed fishermen for sample data; identified different shrimp species and processed samples.

**May 1997 – Aug 1999**                **Intern & Scientific Technician**  
**Darling Marine Center, University of Maine**  
**Walpole, ME**

- Processed samples for research to study affects of trawling on the ocean bottom; research on Cumacean taxonomy; drew and described new species of Cumacean; processed benthic samples; participated in ROV research cruise in the Gulf of Maine; assisted in international trawling workshop; participated in mudflat inventory in the Damariscotta River.

**David Alton Libby**  
**Maine Department of Marine Resources**  
**(207) 633-9532**  
[david.a.libby@maine.gov](mailto:david.a.libby@maine.gov)

June, 2014

**EDUCATION:**

Waterville Senior High School, Waterville, Me. 1967.  
Ricker College, Houlton, Me. B.A., Biology, December 1971.  
Benthic Ecology, University of Maine Darling Center, Walpole, Me. 1988.  
Fisheries Population Dynamics, University of Maine, Orono, Me. 1984.

**Employment Experience:**

**Nov 2006 – present**                      **Marine Resources Scientist IV**  
**Maine Department of Marine Resources**  
**West Boothbay Harbor, ME**

- Directs and oversees the Biomonitoring and Assessment Division. Chief responsibilities are to oversee fishery monitoring programs for commercially important marine species; the commercial ; biological studies; population assessments; and gear research.
- Directs the collection and processing of Maine's Commercial Landings Program (CLP) statistics and processing.
- Program science manager for the Bureau's biological database Marine Resource and Environmental Information System (MARVIN).
- Directs and manages the laboratory's wet lab and sea water facility for holding and conducting experiments of marine organisms
- Promotes Maine's partnership with Atlantic Coastal Cooperative Statistical Program (ACCSP) through serving on the Biological Review Panel and developing and overseeing projects to bring the state into compliance with ACCSP.

**Jul 2000 – Nov 2006**                      **Marine Resources Scientist III**  
**Maine Department of Marine Resources**  
**West Boothbay Harbor, ME**

- Oversees the Atlantic herring resource monitoring, assessment and advisory group.
- Directs the collection and processing of Maine's Commercial Landings Program (CLP) statistics and processing.
- Program science manager for the Bureau's biological database Marine Resource and Environmental Information System (MARVIN).
- Directs and manages the laboratory's wet lab and sea water facility for holding and conducting experiments of marine organisms
- Promotes Maine's partnership with Atlantic Coastal Cooperative Statistical Program (ACCSP) through serving on the Biological Review Panel and developing and overseeing projects to bring the state into compliance with ACCSP.

Jan 1988 – Jul 2000

**Marine Resources Scientist II**  
**Maine Department of Marine Resources**  
**West Boothbay Harbor, ME**

- Provides direction for the Atlantic herring landings and sampling projects. Supervises personnel as to their duties and tasks in carrying out the needs of the projects.

**Scientific Publications:**

Kanwit, J. K., and D. A. Libby. 2009. Seasonal movements of Atlantic herring (*Clupea harengus*): results from a four year tagging study conducted in the Gulf of Maine and Southern New England. J. Northw. Atl. Fish. Sci., 40:29-39. doi:10.2960/J.v40.ms577

Townsend, D. W., Radtke, R. L., Corwin, S. and D. A. Libby. 1992 Strontium:calcium ratios in juvenile Atlantic herring *Clupea harengus* L. otoliths as a function of water temperature. J. EXP. MAR. BIOL. ECOL. vol. 160, no. 1, pp. 131-140

Chenoweth, S. B., D. A. Libby, R. L. Stephenson and M. J. Power. 1989. Origin and dispersion of larval herring (*Clupea harengus*) in coastal waters of eastern Maine and southwestern New Brunswick. CAN. J. FISH. AQUAT. SCI. 1989. vol. 46, no. 4, pp. 624-632

Creaser, E. P. and D. A. Libby, 1987. Seasonal movements of juvenile and adult herring, *Clupea harengus* L., tagged along the Maine and New Hampshire coast in 1976-1982. J. Northwest Atl. Fish. Sci. vol. 8(1).

Creaser, E. P. and D. A. Libby. 1986. Tagging of age 1 herring (*Clupea harengus* L.) and their movements along the Maine and New Brunswick coasts. J. Northwest. Atl. Fish. Sci., Vol. 7 No. 1: 43-46.

Batty, R. S., J. H. S. Blaxter and D. A. Libby. 1986. Herring (*Clupea harengus*) filter feeding in the dark. Mar. Bio. Vol. 91: 371-375.

Libby, D. A. 1984. A comparing of scale and otolith aging methods for the alewife, *Alosa pseudoharengus*. Fish. Bull., U.S. 84(4).

Creaser, E. P., D. A. Libby and G. D. Spiers. 1984. Seasonal movements of juvenile and adult herring, (*Clupea harengus*. L.), tagged along the Maine coast. J. Northwest. Atl. Fish. Sci. 5(1) pp. 71-78.

Libby, D. A. 1982. Decrease in predominant ages during a spawning migration of the alewife, *Alosa pseudoharengus*. Fish. Bull., U.S. 80(4):902-905.

Libby, D. A. 1981. Difference in sex ratios of the anadromous alewife, *Alosa pseudoharengus*, between the top and bottom of a fishway at Damariscotta Lake, Maine. Fish. Bull., U.S. 79:207-211.



**Improving American Lobster Biological & Catch/Effort Data for Georges Bank, and Characterizing Seasonal Egger Aggregation in Closed Area II (Statistical Areas 561 & 562)**

**Principal Investigator:**

Joshua Carloni, Marine Biologist  
New Hampshire Fish and Game  
225 Main Street Durham, NH 03824  
603-868-1095 | Joshua.carloni@wildlife.nh.gov

**Coordination with Atlantic Offshore Lobstermen's Association:**

David Borden, Executive Director  
Atlantic Offshore Lobstermen's Association  
23 Nelson Street Dover, NH 03820  
401-380-6802 | dborden@offshorelobster.org

**Northeast Fisheries Science Center Advisor:**

Burton Shank, Research Fishery Biologist  
Northeast Fisheries Science Center  
166 Water Street Woods Hole, MA 02543  
508-495-2363 | burton.shank@noaa.gov

**Project Type:** New Project

**Requested Award Amount:** \$74,423

**Requested Award Period:** March 1, 2015 – February 29, 2016 (or one year project from when funds become available). This is a one year project and we will not be requesting continued funding once project period has ended.

## **OBJECTIVE:**

Seasonally, a highly productive lobster fishery is persecuted on eastern Georges Bank in “Closed Area II” (CA II), an area which has been closed to bottom tending mobile gear for 20 years. While in the area, the lobster fishery has observed a consistent aggregation of ovigerous female lobster. Pending management action by the New England Fisheries Management Council (NEFMC) may open this area to mobile gear in Fishing Year 2016, which may negatively impact this viable resource (ASMFC, 2012). Therefore, it is critical to collect quality data to properly assess the biological characteristics and spatial distribution of this offshore lobster population segment. Furthermore, the proposed work will provide critical data to the Atlantic States Marine Fisheries Commission’s (ASMFC) American Lobster Stock Assessment. Sampling offshore has been deemed inadequate for stock assessment purposes by the American Lobster Stock Assessment Subcommittee (SAS), and both the ACCSP Biological Review Panel and Bycatch Prioritization Committee have ranked this fishery in the upper quartile for sampling need based on partner priority and current level of sampling.

In addition, little is known about stock connectivity and larval recruitment between inshore and offshore areas within the Gulf of Maine and Georges Bank; however, the limited research available suggests that regional connectivity is possible, and even probable. Understanding this connectivity is increasingly important as inshore areas that support high levels of fishing pressure experience persistent low larval settlement rates (Wahle et. al, 2013). Documenting aggregations of egg bearing females is a critical step in understanding the eventual location of settlement. Collectively, the lobster fishery of Georges Bank and Gulf of Maine support more than six thousand US lobster harvesters and generate in excess of four hundred million dollars in landing for associated coastal communities

This project proposes to deploy NOAA NMFS certified observers aboard federal lobster vessels to collect catch, effort, biological and bycatch data from Statistical Areas (SA) 562 and 561; areas that encompass CA II. Furthermore, lobster harvesters fishing within SA 562 and 561 will be asked to complete datasheets with regards to the location of each trawl hauled (latitude and longitude) and the count of egg bearing females per trawl. Collaboration with the Atlantic Offshore Lobstermen’s Association (AOLA), which represents a large majority of the offshore lobster fleet fishing in the area, will facilitate industry participation.

### **Specific Objectives:**

1. Deploy NOAA certified observers on randomly selected federal lobster vessels hailing from ports in New Hampshire and Massachusetts. Observers will collect biological, catch, effort and bycatch data in SA 561 and 562 on board one multi-day trip per month from June through October, 2015 (or the following year depending on availability of funds).
2. Characterize the catch per unit effort and spatial distribution of ovigerous females in SA 561 and 562 via logbooks given to lobster harvesters requesting information with regards to trawl location, number of traps fished and number of ovigerous lobster caught.

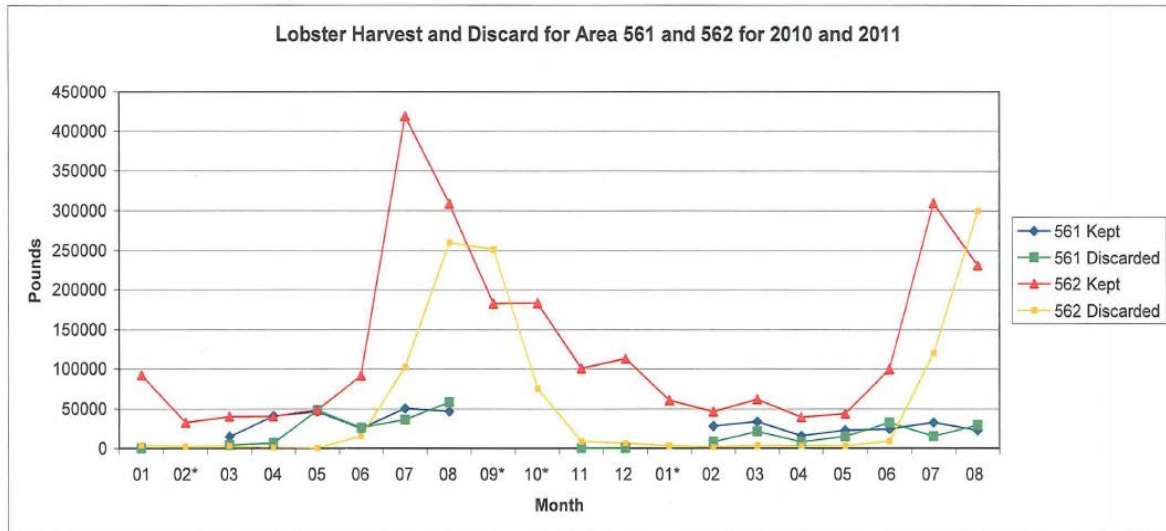
## **NEED:**

Closed Area II hosts a seasonal lobster fishing fleet of approximately 20-25 large fixed gear vessels (generally 70+ feet in length), fishing 20,000 to 30,000 traps annually and worth over \$4 million. The CA II fleet represents close to one third of the active Lobster Conservation Management Area 3 (LCMA 3) vessels, with approximately one half of the fleet home ported in New Hampshire, the balance split between Massachusetts and Rhode Island. This fleet has been active on Georges Bank for over 30 years. During the last 20 years, there has been very limited mobile gear fishing in large portions of CA II. Lobster harvesters have made substantial investments during this period in vessels, gear, and permits to access the area.

The lobster fleet has historically fished in the study area from June through October, which coincides with the period when the lobster migrate to the shoal waters of Georges Bank. As noted in the NEFMC's Draft Habitat Omnibus Amendment II environmental impact statement (HOA2 DEIS), ovigerous females are present in this area in high numbers, as high as 80% of the haul, July-December of each year (HOA2 DEIS, Volume 3, page 622). These data are supported by the Vessel Trip Reports, with high discard rates reported by offshore lobster vessels in CA II July through September (Figure 1). Most of these females are large (3-8 lbs.), have large egg masses, and would be expected to release their eggs in late fall. These are some of the most fecund individuals in the lobster population, possessing large eggs, which should generally improve larval survival (Attard and Hudon, 1987). Work done by Smith and Howell (1987) showed that monthly incidence of major damage or immediate mortality on lobster from the trawl fishery varied seasonally with values as high as 14% were observed.

In addition to the lack of knowledge regarding the spatial distribution of egg bearing females in offshore waters, there's also a lack of biological sampling in this area for American lobster. The current level of biological sampling in offshore waters is inadequate and the lobster SAS is forced to characterize landings from a very large area on a limited number of samples. This is specifically worrying in the Georges Bank stock area, given its high proportion of offshore waters/offshore fishing compared to the other stock areas. Furthermore, the ACCSP Biological Review Panel ranked lobster in the upper 25 percentile based on sampling priority and sampling adequacy. Increased biological sampling for lobster received the highest priority ranking (5 out of 5) from ASFMC, and a high ranking (3 out of 5) from NOAA NMFS, with current sampling levels marked as inadequate. These data will be used in future stock assessments and all the biological data will be uploaded into the ACCSP data warehouse.

If a resource of this geographical size and magnitude is to be managed as a sustainable fishery, then it is imperative that regional populations are closely monitored and that we gain a better understanding of the distribution of egg bearing females. Protection of egg bearing females is at the foundation of the lobster management pyramid (ASMFC, 2006; ASMFC, 2009), and it's critical to provide protection to areas with known aggregations of these animals. Data collected under this proposal will provide important biological and catch per unit effort (CPUE) data for an offshore fishery that's currently under sampled. Furthermore, the proposed work will provide a better picture of the spatial distribution of egg bearing females within SA 561 and 562. The proposed work will provide managers with baseline data to properly assess the impacts of opening CA II to mobile gear, as well as providing much needed data to the stock assessment in an area that is currently deficient.



\*Removed to protect confidentiality.

Figure 1. Kept and discarded lobster from federal vessel trip reports for Statistical Areas 561 and 562, January 2010 - August 2011. Figure from NH FG's letter to NEFMC dated January 26, 2012.

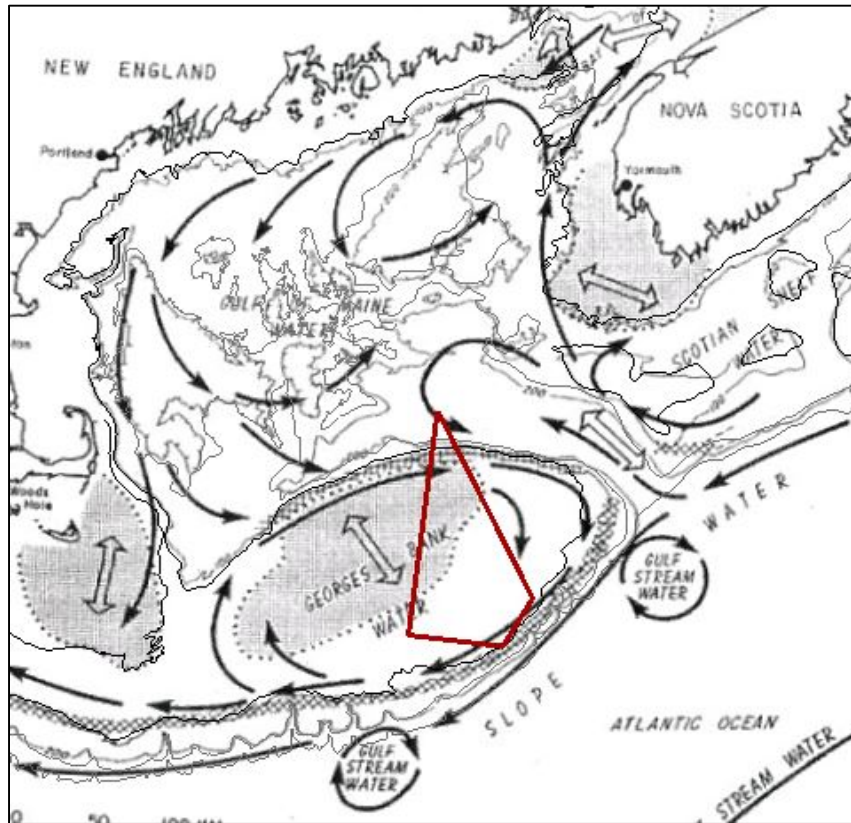
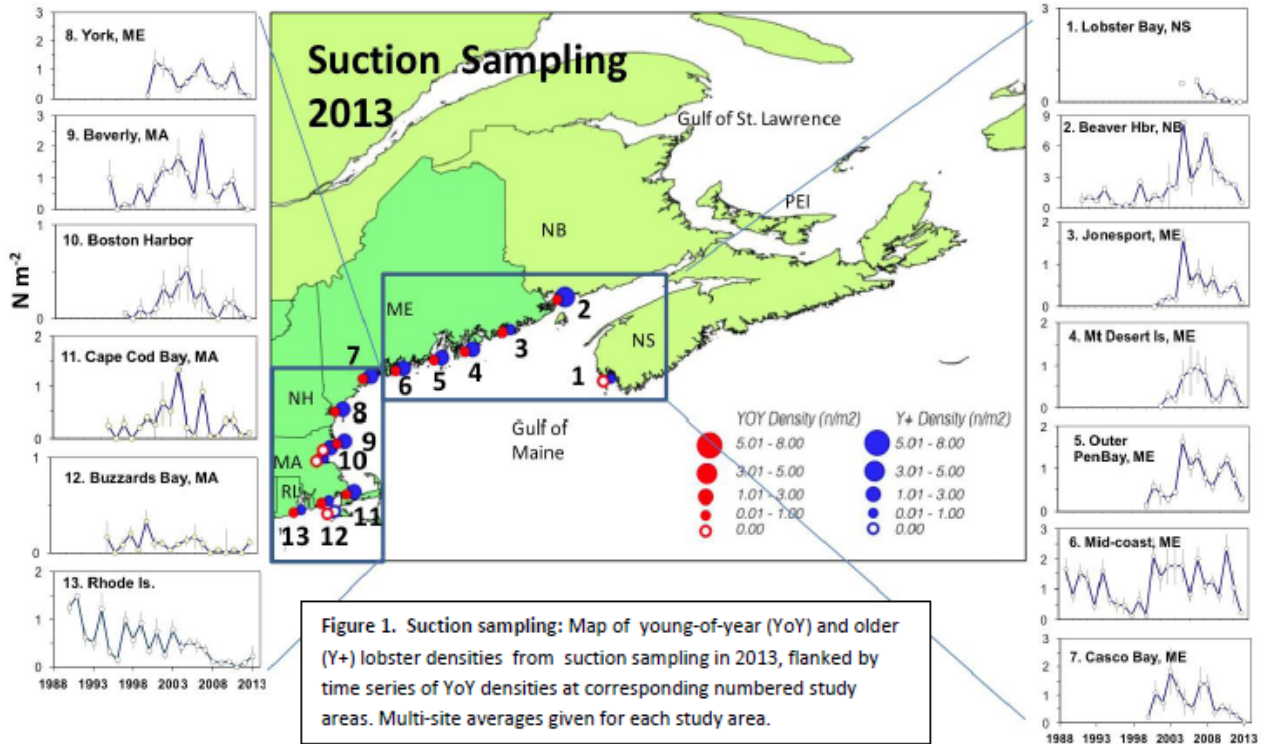


Figure 2. Map taken from NEFMC HOA2 draft environmental impact statement, with Closed Area II superimposed.



**Connectivity:** The density and persistence of ovigerous females in this area occurs annually, suggesting importance of this area to egg brooding and/or egg release. Given the location of this area and the circular currents that persist in the Gulf of Maine, lobster in this area could be supplying larvae to Georges Bank, as well as inshore fisheries in the Gulf of Maine and/or Southern New England (Figure 2). In view of the declining settlement rates in inshore areas (Wahle et. al, 2013; Figure 3), it is extremely important to characterize location, size composition, and catch rates of egg bearing lobster in the CA II, which will prompt a greater understanding of their potential recruitment contribution to inshore fisheries.



**Figure 3. Atlantic Lobster Sustainability Index (ALSI) data, originally published in the 2013 ALSI Annual Report, courtesy of Rick Wahle.**

While the scientific community has yet to definitively conclude the interconnectivity of inshore and offshore lobster populations, the body of literature does support the hypothesis that migration and larval transport connect regional lobster populations. We note the following papers and conclusions, as example. Cowan and Watson (2007) show that ovigerous lobster, particularly large females, move offshore to optimize temperature degree days and reduce temperature variability when brooding eggs. Tagging studies show that inshore ovigerous lobster migrate to deeper water in the winter (Campbell, 1986) and offshore lobster migrate inshore in the summer (Cooper and Uzmann 1971). Watson (unpublished, 2007) in collaboration with AOLA did related tagging work showing that ovigerous lobster reside in deep water in the winter and move to shallower water in the summer. He found that offshore eggers move more than inshore and that larger lobster (>90mm CL) moved much farther than smaller ones. Data collected by AOLA members since 2001, show that most of the female egg bearing lobster

within CA II are greater than 90 mm carapace length (CL). Watson (unpublished, 2009) also found evidence for brooding-site fidelity, although this work was not done on Georges Bank. He also tracked lobster movement from inshore New Hampshire to offshore Gulf of Maine.

In regard to larval transport, a number of studies potentially link the inshore and offshore lobster stocks. Work by Canadians in the 1980s and 1990s document larval lobster in the waters above Georges and Browns Bank in the summer and suggest that ovigerous females release larvae from shoal areas (Harding, et. al, 2003 review). From drifter work they inferred that larvae released offshore would be transported inshore (as described by Hare, 2005). Harding and colleagues (1983) found that oceanographic data (wind, tidal forces, seasonal surface circulations and occasional plumes escaping the northern edge of Georges Bank) and the ability of later stage larvae to conduct directional swimming support a high level of offshore to inshore connectivity and suggest that the Gulf of Maine, inclusive of Georges Bank, could be considered a single lobster recruitment system with larvae expected to move counterclockwise. Lawrence and Trites (1983) modeling surface oil from Georges/Brown Bank region in the summer found frequent impacts on coastlines of southwestern Nova Scotia and Bay of Fundy.

Incze, Xie and colleagues have published a series of papers related to modeling larval dispersal and population connectivity in the Gulf of Maine (Incze and Naime, 2000; Incze, et al., 2006, Xue et al., 2008; Incze, et. al, 2010). Their work suggests that recruitment can be a very local event, but there is potential for long distance dispersal, especially when females hatch eggs farther from shore. Modeling work by Fogarty (1998) of the NOAA Fisheries Northeast Fisheries Science Center found that even relatively low levels of larval transport from offshore to inshore could explain resilience of the inshore population despite high levels of fishing mortality. Hare (2005) of the NOAA's National Ocean Service, advocates for the "*precautionary approach*", noting that offshore larval supply need be considered when managing inshore lobster fisheries.

South of Cape Cod, Katz et al. (1994) sampled larvae along an offshore-inshore transect (Hydrographers Canyon to Rhode Island waters) and found a gradient of stages with a greater proportion of earlier stage lobster larvae offshore and later stage lobster larvae inshore, suggesting hatching offshore and transport inshore. Further, Crivello et al. (2005) used genetic methods to link Long Island Sound larval lobster to female lobster from Hudson Canyon, suggesting that up to 45% of the larvae in Long Island Sound came from Hudson Canyon females. There is also morphometric evidence from throughout the region supporting mixing of inshore and offshore stocks (Harding et al., 1993; Cadrin, 1995). Documenting aggregations of egg bearing females is a critical step in understanding the eventual location of settlement.

**Current Sampling Levels:** As clearly and repeatedly stated in Addendum XVII to Amendment 3 to the American Lobster Fishery Management Plan, current catch, effort, and biological data collection programs for lobster are exceedingly inadequate, particularly in offshore waters. According to the most recent lobster stock assessment report (p. 113):

*“Enhanced sea sampling and port sampling to create a more complete record of biological characteristics of the catch and harvest would also improve the usefulness of these [landings] data. This is especially needed in offshore waters. In addition, investigations are needed to*

*determine where lobster are being caught and if and how this changes over time. These types of programs are essential for accurate lobster assessments and must have dedicated funding.”*

In recent years, NOAA NMFS has improved sea sampling coverage of the federal lobster fleet, from an average of one LCMA 3 observed trip (5-10 days) per year from 2000 to 2011, to 80 days in federal waters (LCMA 3 and federal components of other LCMAs) in 2012, 120 days in 2013, and 216 days scheduled for fishing year 2014. However, given the length of offshore lobster trips and the geographic scope encompassing the federal lobster fishery - Maine to Maryland, six management areas, three stock areas, and over 20 statistical areas- this level of coverage is still insufficient, particularly for LCMA 3, persecuted entirely in federal waters.

The need for enhanced sampling data for lobster is reflected in the ACCSP's FY 2013 biological sampling priority and bycatch monitoring matrices. These matrices are created by technical committees to address sampling needs and to guide funding decisions for grant proposals. The Biological Review Panel ranked lobster in the upper 25 percentile based on sampling priority and sampling adequacy. Increased biological sampling for lobster received the highest priority ranking (5 out of 5) from ASFMC, and a high ranking (3 out of 5) from NOAA NMFS, with current sampling levels marked as inadequate. The ACCSP Bycatch Prioritization Committee ranked the New England lobster pot fishery in the top quartile based on the adequacy of current sampling and it was determined that 452 sea days would be needed to adequately sample this fishery.

Since 2000, a small group of AOLA lobster harvesters have participated in an industry led fishery dependent data collection effort. The biological data collected by AOLA has been vetted by the ASMFC and will be included in the forthcoming lobster stock assessment. This dataset, while relatively small, does include quarterly samples from statistical area 562/CA II which document ovigerous lobster aggregation. A second industry sampling effort, organized by the Commercial Fisheries Research Center (CFRF), began in 2013 and will continue at least through spring 2015 with data provided to ASMFC. The CFRF pilot research fleet includes three vessels that fish CA II.

Any data collected by industry fishing CA II during the proposed study period will be included in data analysis and reporting. However, in order to validate industry data and better characterize and understand the seasonal lobster fishery and resource on eastern Georges Bank, we propose to deploy independent, NOAA certified, fishery observers to collect catch and effort, bycatch and biological data aboard commercial vessels during one fishing trip per month (approximately 10 days each) during the months of June-October, 2015, or when funds become available.

#### RESULTS AND BENEFITS:

The benefits of this project will be two fold. The current sampling intensity for lobster in offshore waters is not adequate to properly characterize the fishery and the lobster SAS is forced to characterize landings from a very large area on a limited number of biological samples. The biological data collected during this project will be used by the lobster SAS for the next assessment. This will benefit all partner states from Maryland to Maine, as well as NMFS. Additionally, this information could provide managers

with critical data to make a decision regarding the opening of CAll to mobile gear on Georges Bank. This project could potentially identify a critical brooding area on Georges Bank. The continued protection of this area could benefit the entire resource as the connection between inshore and offshore waters is still not fully understood.

These data will bolster the offshore data available for lobster stock assessment. As a result of poor data resolution, the ASMFC's lobster SAS is forced to characterize offshore landings from a very large area based on a limited number of samples, from disjointed time periods, and from a limited number of discrete offshore areas. This has the potential to introduce significant bias into fishing mortality estimates, such as the Gulf of Maine, or in areas where the entire fishery occurs offshore, such as Georges Bank. This problem was highlighted by the 2005 ASMFC lobster model review panel who stated *"the data available are woefully inadequate for the management needs of this fishery, and that the primary limitation on the ability to manage is lack of data rather than choice of models."*

The biological data collected during this project will provide additional biological samples and catch, effort, and bycatch data for the offshore fishery so that the SAS can properly characterize the fishery and may provide insight into the heavily skewed sex ratio on Georges Bank. The skew has been a concern of the SAS for some time. Further, these data will provide information important to understanding connectivity of offshore and inshore lobster populations, particularly important as settlement continues to be documented at low levels inshore and climate change alters the distribution of lobster. Documenting aggregations of egg bearing females is a critical step in understanding the eventual location of settlement.

It is critical that lobster baseline data be gathered as soon as possible, given this area may be open to mobile gear in future fishing years. As is stated in the NEFMC's draft omnibus amendment, the lobster fishery and resource is not well characterized in the area, making it impossible to properly conduct an impact analysis. This project will use sea sampling and volunteer log books to characterize the lobster population in this area of concern. Furthermore, data collected under this project will provide more information on the spatial distribution of egg bearing lobster in SA 561 and 562.

#### APPROACH:

This proposal will provide data to address biological, bycatch, and catch and effort data needs for the lobster resource and New England lobster pot fishery. The focus will be on biological and CPUE information, but sea samplers will be following the standard fishery dependent data gathering protocols of the Northeast Fisheries Observer Program (NEFOP), which includes collection of bycatch information. Bycatch in the offshore lobster fishery is not well characterized and data collected under this project will provide additional bycatch information.

New Hampshire Fish and Game staff will provide project supervision, however the majority of the project's components will be administered by AOLA staff. Heidi Henninger of AOLA will serve as Project Coordinator, in charge of finalizing the experimental design, communication with all participants, contracting observers, recruiting lobster harvesters, analyzing data and writing reports. All abovementioned duties will be discussed with the principle investigator and the advisor to the project. Project results will be distributed by representatives at NHFG and AOLA.

**Project Design:** Observers will collect information using NEFOP standard crustacean sampling protocols. Biological information collected on sub-samples will include size, sex, shell condition, presence of eggs, egg condition, shell hardness, number of claws, and presence of v-notch. Additionally, observers will collect gear, effort, and bycatch information. Sampling protocols, data transmission, and storage protocols will be confirmed and finalized via collaboration with project advisor, Burton Shank of the Northeast Fisheries Science Center (NEFSC).

To determine the spatial distribution of egg bearing females within SA 561 and 562, lobster harvesters fishing within these SAs will be given logbooks to record the number of ovigerous lobster per trawl and the location of each trawl. This information can then be plotted out via GIS to determine CPUE and location of egg bearing females within these SAs and within CA II. This information will then be used to assess the location of egg bearing females and to compare catch rates within and outside of CA II. The specifics of sampling protocol are subject to change upon discussions with Burton Shank and the lobster technical committee.

**Deployment:** Observers will be deployed on federal lobster vessels during the months of June-October, 2015 (assuming availability of funds). Observers will sample one lobster trip each month for a total sample not to exceed 50 sea days. Trips in Closed Area II are typically 8-10 days in length. Observers will be deployed in a manner consistent with the random coverage composing NEFSC's Standard Bycatch Reporting Methodology (SBRM), to ensure that the data collected can be fully incorporated in the stock model. For example, we will define the ports to hail from in order to target the CA II fleet, but will not assign the vessel to be sampled. This methodology will be confirmed with Burton Shank before deploying observers.

Vessels fishing in SA 561 and 562 will be recruited by AOLA to collect the following information from June-October 2015: Date, location of trawl (latitude & longitude), number of traps per trawl, number of egg bearing females per trawl. This information will then be used to determine the CPUE associated with egg bearing lobster in SA 561 and 562 and then it will be plotted out using GIS to determine the spatial distribution of associated catch rates.

**Distribution of Results:** Collected data will be submitted directly to NEFSC via standard NEFOP methods. These data, with the permission of the fleet, will be shared with AOLA to allow for initial data analysis. AOLA, in consultation with NHFG and NEFSC staff, will conduct a general analysis of the data in order to report results to regional management bodies. These data will further be used by ASMFC for stock assessment and other scientific purposes.

#### GEOGRAPHIC LOCATION:

The project will be administered by staff at the NHFG Region 3 office in Durham, NH. Collaborators will be involved from NOAA NMFS NEFSC staff in Woods Hole, MA and AOLA staff in Little Compton, RI and Dover, NH. The project's research area will be statistical areas 561 and 562 within eastern Georges Bank. Participating lobster harvesters will hail from ports in New Hampshire and Massachusetts.

**MILESTONE SCHEDULE:**

	March 2015 – February 2016											
	M	A	M	J	J	A	S	O	N	D	J	F
Finalize Sampling Design												
Hire Observer Company												
Schedule Vessel Participation												
Sea sampling												
Industry Data Gathering												
Initial Analysis of Data												
Project Report												

**PROJECT ACCOMPLISHMENTS MEASUREMENT:** *Dates subject to availability of funds.*

Objective	Progress Metric
Deploy NOAA certified observers on randomly selected federal lobster vessel hailing from ports in NH and MA. Observers will collect data in the SA 561 and 562 on board one multi-day trip per month over the course of 5 months (June-October, 2015) for a total of not more than 50 sea days	<ol style="list-style-type: none"> <li>At sea observer vendor contracted by May 1, 2015.</li> <li>Sea sampling commenced by June 20, 2015 or when funding becomes available.</li> <li>One sampling trip conducted each month June – October, 2015.</li> </ol>
Observers will follow NEFOP standard data gathering and transmission protocols. Data will be stored and shared following standard SBRM observer data protocols. Experimental design to be finalized via collaboration with NEFSC and ASMFC.	<ol style="list-style-type: none"> <li>Finalize sampling, data transmission, and storage protocol by April 15, 2015.</li> <li>Provide necessary documents and directions to observer company by May 15, 2015.</li> </ol>
Vessels operating in SAs 561 and 562 during the study period, will record catch of egg bearing females per trawl, as well as location of each trawl.	<ol style="list-style-type: none"> <li>Recruit a minimum of 12 vessels to collect data by May 31, 2015.</li> </ol>
Circulate results to inform Council, Commission, and NOAA NMFS management and science efforts.	<ol style="list-style-type: none"> <li>Results reported to NEFMC at January 2016 meeting.</li> <li>Results reported to ASMFC at February 2016 meeting..</li> </ol>

COST SUMMARY:

We are requesting \$74,423.00 to complete the work described above.

**Personnel:** NHFG will be the lead agency supervising this project (90 hours x 40.26 rate) with the AOLA providing staff to conduct much of the project’s coordination and administration. Heidi Henninger, AOLA Program Coordinator, will serve as the Project Coordinator (360 hours x 30 rate). David Borden, AOLA Executive Director, will be donating his time to this project as an in-kind contribution (60 hours x 50 rate).

**Contractual:** The bulk of the budget will go toward funding at sea observers. MRAG Americas, a NOAA Certified company operating in the Northeast, has quoted a price of \$1200/day (50 days x 1200 rate). This price includes NEFOP processing charges.

ITEM	REQUESTED FUNDS	IN KIND
<i>PERSONNEL</i>		
Project Supervisor, NHFG	\$3,623.00	
Project Coordinator, AOLA	\$10,800.00	
Consulting , AOLA		\$3000.00
<i>CONTRACTUAL</i>		
NMFS Certified Observers	\$60,000.00	
<b>TOTAL</b>	<b>\$74,423.00</b>	<b>\$3,000.00</b>

## Summary of Proposal for ACCSP Ranking

**Proposal Type:** New Project

### **Primary Program Priority to ACCSP modules:**

Catch and Effort: Observers will be collecting catch and effort information during trips aboard commercial vessels. These observer trips will be linked to the vessel trip reports by the NMFS “vessel permit number” and catch and effort from vessel trip reports (VTRs) will be checked for accuracy with observer trips. Additionally, fishermen will be collecting CPUE data on egg bearing females which will be used to plot the spatial distribution of egg bearing females in stat area 562 and 561.

Biological Sampling: Biological data will be the primary focus of this grant and the NMFS observer data will be used in the American Lobster Stock Assessment. The current level of biological sampling in offshore waters is inadequate and the lobster technical committee is forced to characterize landings from a very large area on a limited number of samples. This data will be used in future stock assessments and all the biological data will be uploaded into the ACCSP data warehouse. Furthermore, the ACCSP Biological Review Panel ranked lobster in the upper 25 percentile based on sampling priority and sampling adequacy. Increased biological sampling for lobster received the highest priority ranking (5 out of 5) from ASFMC, and a high ranking (3 out of 5) from NOAA NMFS, with current sampling levels marked as inadequate.

Bycatch: Observers will be collecting bycatch during all trips aboard commercial lobster vessels. Each observer trip will be linked to the VTR by the NMFS vessel permit number and bycatch recorded by fishermen will be checked for accuracy by data collected by observers. The ACCSP Bycatch Prioritization Committee ranked the New England lobster pot fishery in the top quartile based on the adequacy of current sampling, and it was determined that 452 sea days would be needed to adequately sample this fishery.

### **Project Quality Factors:**

Regional Impact: The benefits of this project will be two fold. The current sampling intensity for lobster in offshore waters is not adequate to properly characterize the fishery and the American Lobster Stock Assessment Subcommittee (SAS) is forced to characterize landings from a very large area on a limited number of biological samples. The biological data collected during this project will be used by the lobster SAS for the next assessment. This will benefit all partner states from Maryland to Maine, as well as NMFS. Additionally, this information could provide managers with critical data to make a decision regarding the opening of CAII to mobile gear on Georges Bank. This project could potentially identify a critical brooding area on Georges Bank. The continued protection of this area could benefit the entire resource as the connection between inshore and offshore waters is still not fully understood.

Funding transition plan: This is a one year project and additional funding beyond year one will not be requested. Since biosamples aren’t needed on a yearly basis for stock assessment purposes, this increased sampling intensity for one year will greatly benefit the stock assessment. Furthermore, the increased sampling intensity by NMFS and the inclusion of volunteer data in future years will benefit the stock assessment.



*In-kind Contribution:* The partner contribution is listed on page 11.

*Improvement in Data Quality/Quantity/Timeliness:* Currently the amount of biological samples from sea sampling is not adequate to accurately characterize the offshore lobster fishery. This has been confirmed by the American Lobster Technical Committee, the ACCSP Biological Review Panel and the ACCSP Bycatch Prioritization Committee. This project will increase the quantity of biological samples from the offshore fishery that will be available to the lobster SAS for the next stock assessment. Furthermore, this project will provide additional bycatch information for the New England lobster pot fishery.

*Potential Secondary Module as a By-Product:* None

*Impact on Stock Assessment:* As a result of poor data resolution, the ASMFC Lobster Technical Committee is forced to characterize offshore landings from a very large area based on a limited number of samples, from disjointed time periods, and from a limited number of discrete offshore areas. This has the potential to introduce significant bias into fishing mortality estimates, such as the Gulf of Maine, or in areas where the entire fishery occurs offshore, such as Georges Bank. This problem was highlighted by the 2005 ASMFC lobster model review panel who stated “the data available are woefully inadequate for the management needs of this fishery, and that the primary limitation on the ability to manage is lack of data rather than choice of models.” The biological data collected during this project will provide additional biological samples for the offshore fishery so that the technical committee can properly characterize the fishery. Increased biosample intensity for one year will benefit the stock assessment as the length frequencies are very consistent in the lobster fishery and yearly samples are not required. Furthermore, the increased sampling intensity by NMFS and the inclusion of volunteer data in future years will benefit the stock assessment.

*Properly Prepared:* NHFG and AOLA followed ACCSP guidelines and pertinent documents when preparing this proposal.

## WORK CITED

- ASMFC. 2006. Stock Assessment Report No. 06-03 (Supplement) of the Atlantic States Marine Fisheries Commission. American Lobster Stock Assessment for Peer Review. ASMFC American Lobster Stock Assessment Subcommittee. 352p.
- ASMFC. 2009. Stock Assessment Report No. 09-01 (Supplement) of the Atlantic States Marine Fisheries Commission. American Lobster Stock Assessment for Peer Review. ASMFC American Lobster Stock Assessment Subcommittee. 298p
- ASMFC, 2012. Assessment of Trawl-Induced Damage to American Lobster: Report to the American Lobster Management Board By the American Lobster Technical Committee. August 2012.
- Attard, J. and C. Hudon (1987). Embryonic Development and Energetic Investment in Egg Production in Relation to Size of Female Lobster (*Homarus americanus*). Can J. Fish Aquat. Sci. 44: 1157-1164
- Cadrin, S.X. (1995). Discrimination of American lobster (*Homarus americanus*) stocks off southern New England on the basis of secondary sex character allometry. Can J. Fish Aquat. Sci. 52: 2712-2723
- Campbell A. (1986) Migratory movements of ovigerous lobsters, *Homarus americanus*, tagged off Grand Manan, Eastern Canada. Can J. Fish Aquat. Sci. 43: 2197-2205
- Cooper R.A. and J.R. Uzman (1971) Ecology of juvenile and adult *Homarus*. In: Cobb JS, Phillips BF (Eds) The Biology and Management of Lobsters, vol 2. Academic, New York, pp 97-142
- Cowan, D., Watson, W., Solow, A., and A. Mountcastle (2007). Thermal histories of brooding lobsters, *Homarus americanus*, in the Gulf of Maine. Mar Biol 150: 463-470
- Crivello, J., Landers, D., and M. Keser (2005). The contribution of egg-bearing female American lobster populations to lobster larvae collected in Long Island Sound by comparison of microsatellite allele frequencies. J Shellfish Res. 24:831-839.
- Fogarty, M. (1998). Implications of migration and larval interchange in American lobster (*Homarus americanus*) stocks: spatial structure and resilience. In Jamieson, G. and Campbell, A. (Ed.) Proceedings of the North Pacific Symposium on Invertebrate Stock Assessment and Management. Can. Spec. Publ. Fish. Aquat. Sci 125 (pp 273-283)
- Harding, G.C., K.F. Drinkwater & W.P. Vass. (1983). Factors influencing the size of American lobster (*Homarus americanus*) stocks along the Atlantic coast of Nova Scotia, Gulf of St. Lawrence, and Gulf of Maine: a new synthesis. Can. J. Fish. Aquat. Sci. 40: 168-184.
- Harding, G. Kenchington, E. and Z. Zheng (1993). Morphometrics of American lobster (*Homarus americanus*) larvae in relation to stock determinations in the Maritimes, Canada. Can. Journal of Fish. and Aquat. Sci 50: 43-52
- Harding G., Drinkwater, K., Vass, P., Reimer, D., Pringle, J., Fraser, A., and J. Prena (2003). Ongoing Studies of Larval Lobster Dispersal in Canadian Sector of the Gulf of Maine. [http://www2.mar.dfo-mpo.gc.ca/science/review/1996/harding/harding\\_e.html](http://www2.mar.dfo-mpo.gc.ca/science/review/1996/harding/harding_e.html)
- Hare (2005). The Use of Early Life Stages in Stock Identification Studies. In S. Cadrin et al. (Ed.) Stock Identification Methods (pp 89-117)
- Incze, L. and C. Naime (2000). Modelling the transport of lobster (*Homarus americanus*) larvae and postlarvae in the Gulf of Maine. Fish. Oceanogr. 9: 99-113

- Incze, L., Wahle, R., Wolff, N., Wilson, C., Steneck, R., Annis, E., Lawton, P., Xue, H. and Y. Chen (2006). Early Life History and a Modeling Framework for Lobster (*Homarus americanus*) Populations in the Gulf of Maine. *J. of Crustacean Biology*. 26(4): 555-564
- Incze, L., Xue, H., Wolff, N., Xu, D., Wilson, C., Steneck, R., Wahle, R., Lawton, R., Pettigrew, N. and Y. Chen (2010). Connectivity of lobster (*Homarus americanus*) populations in the coastal Gulf of Maine: part II. Coupled biophysical dynamics. *Fish. Oceanogr.* 19: 1-20
- Katz, C., Cobb, J., and M. Spaulding (1994). Larval behavior, hydrodynamic transport, and potential offshore-to-inshore recruitment in the American lobster *Homarus americanus*. *Mar. Ecol. Prog. Ser.* 103: 265-273
- Lawrence, D. and R. Trites (1983). Surface oil spill trajectory modelling for Georges and Browns Bank. *Can. Tech. Report of Hydrography and Ocean Sciences No. 29*
- Smith, E. and P. Howell (1987). The effects of bottom trawling on American lobster, *Homarus Americanus*, in Long Island Sound. *Fisheries Bulletin US*, 85:737-744.
- Wahle, R., Jekielek, P., and C. Bergeron (2013). Atlantic Lobster Settlement Index Update 2012. <http://www.umaine.edu/marine/people/sites/rwahle/ALSIPage.htm>
- Watson, W. (2007, unpublished). The influence of water temperature of the distribution of berried females and duration of egg development in American lobsters. Northeast Consortium completion report.
- Watson, W. (2009, unpublished). The relationship between seasonal migrations of berried female lobster *Homarus americanus*, egg development and larval survival. NH Sea Grant completion report.
- Xue, H., Incze, L., Xu, D., Wolff, N. and N. Pettigrew (2008). Connectivity of lobster populations in the coastal Gulf of Maine: Part I: Circulation and larval transport potential. *Ecol. Modelling* 210: 193-211

**J O S H U A T . C A R L O N I**

**Work experience**

**November 2005-Present**

**NH Fish and Game Department Durham, NH**

*Marine Biologist, Project Leader-Lobster Research & Sampling Programs*

- Management of five lobster monitoring programs, including sea sampling, port sampling, ventless trap sampling, juvenile lobster sampling and the lobster settlement survey index. Duties include data collection, data analysis, writing scientific federal aid reports, and supervising employees on field research, data entry/audits and report writing.
- Atlantic States Marine Fisheries Commission (ASMFC) American Lobster Technical Committee member since 2008
- Chair of ASMFC American Lobster Technical Committee, 11/1/2011-11/1/2013
- Member of American Lobster Stock Assessment Subcommittee since 1/1/2012
- ACCSP Biological/Bycatch Committee member since 2008
- Manage/Development Access databases for the above mentioned programs
- Experience developing budgets and writing grant proposals
- Member of the department's SCUBA dive team since 2009
- Extensive experience (**1500+ hours**) operating and maintaining department's 38 foot research vessel.

**May 2002 – October 2005**

**NH Fish and Game Department Durham, NH**

*Biological Aide, Department of Marine Fisheries*

- Worked with Portsmouth and Seabrook commercial fisherman's coops to obtain and analyze samples of catch from vessels fishing for northern shrimp and spiny dogfish and American lobster.
- Conducted field surveys on Horseshoe crabs and American eels.
- Assisted in the maintenance and operation of 7 coastal fishways to facilitate anadromous fish migration (river herring, American shad, sea lamprey, and Atlantic salmon)
- Conducted relative abundance studies of juvenile finfish using beach seines
- Conducted angler interviews for Marine Recreational Fishing Statistics Survey
- Conducted creel survey interviews of rainbow smelt ice fisherman on the Great Bay and tidal rivers of New Hampshire

**Education**

**2012-Present University of New Hampshire Durham, New Hampshire**

*M.S. Zoology, expected date of graduation December 2014*

**1997– 2001 Johnson State College Johnson, Vermont**

*Bachelor of Science, Natural Resources*

**Heidi Pye Henninger**

Fishery Biologist  
(p) 603.828.9342 | (e) heidi@offshorelobster.org

**Education**

---

2002-2004	M.S. Zoology (Thesis: American Lobster physiology)	University of New Hampshire
1998-2001	B.S. Zoology	University of New Hampshire

**Employment History**

---

2007-Present	<b>Program Coordinator</b>	Atlantic Offshore Lobstermen’s Assn
2006-2007	<b>Science Learning Specialist</b>	Gulf of Maine Research Institute
2006	<b>Federal Contractor NMFS Coop. Research</b>	Environmental Temps, Inc.
2005-2006	<b>Middle and High School Science Teacher</b>	Epping NH School District
2004-2007	<b>Scientific Grants Consultant</b>	Atlantic Offshore Lobstermen’s Assn
2002-2004	<b>Graduate Student (Teaching &amp; Research Asst.)</b>	UNH – Advisor Dr. Winsor Watson II
2001-2002	<b>Laboratory Assistant</b>	University of New Hampshire

**Recent Awards**

---

Atlantic Lobster Sustainability Foundation (2013). “Genetic analysis of lobster population differences among 28 US inshore and offshore commercial sites.” *Boston University and the Atlantic Offshore Lobstermen’s Association*

NOAA Research Set Aside (2012-2013). “Real-time Electronic Bycatch Report Pilot Project, Phase 2” *Coonamessett Farm Foundation, Inc. and Olrac-North America East (formerly Olfish-AOLA)*.

NH Sea Grant (2011) Project Development Funds. “Designing and testing an American lobster juvenile collector suitable for use by offshore vessels.” *University of New Hampshire and Atlantic Offshore Lobstermen’s Association*

NOAA NE contract (2010-2011). “Commercial Fishing Vessel Electronic Trip Reporting Pilot Study”. *Gulf of Maine Research Institute and Olfish-AOLA (presently Olrac NAE)*.

NOAA Research Set Aside (2010-2011). “Real-time Electronic Bycatch Report Pilot Project” *Coonamessett Farm Foundation, Inc. and Olfish-AOLA*.

Northeast Consortium (2010-2011). “Is the Olfish electronic monitoring system a feasible tool for improving fishery-dependent data for the deep water red crab fishery?” - *Gulf of Maine Research Institute, New England Red Crab Harvesters Association, and Olfish-AOLA*.

NOAA’s Saltonstall-Kennedy Grant Program (2009-2011). “Connectivity between offshore and inshore lobster populations in Southern New England: genetics and morphology” *Boston University and the Atlantic Offshore Lobstermen’s Association*

**Recent Presentations and Publications**

---

**Henninger H.** (2012) Presentation: “Olrac Electronic Logbook: U.S. Scallop Fishery Case Study”. American Fisheries Society Conference.

**Henninger H.** (2012) Presentation: “Moving Beyond Paper: Electronic Solutions for Fisheries”. Maryland Watermen’s Association Annual Expo and Virginia Watermen’s Association meeting.

**Henninger H.** (2011) Technical Expert. Maryland Blue Crab Industry Design Team; Design Team Meeting # 10.

**Henninger H.** (2011) Contributor. MRAG Americas for Environmental Defense Fund -Guiding Principles for Development of Effective Monitoring Programs Report.

Proposal Submitted to:  
Atlantic Coastal Cooperative Statistics Program  
Operations and Advisory Committees  
1050 N. Highland Street, Suite 200 A-N  
Arlington, VA 22204

**Continued Web Portal Development for  
American Lobster Settlement Index  
Data Submission and Reporting**

Submitted by

Mark Gibson  
Deputy Chief for Marine Fisheries  
Rhode Island Division of Fish and Wildlife  
3 Fort Wetherill Road  
Jamestown RI 02835  
phone 401-423-1935  
mark.gibson@dem.ri.gov

**Applicant Name:** Mark Gibson, Deputy Chief for Marine Fisheries Rhode Island  
Division of Fish and Wildlife

**Project Title:** Continued Web Portal Development for American Lobster  
Settlement Index Data Submission and Reporting

**Project Type:** New

**Principal Investigator:** Richard A. Wahle, Research Professor, University of Maine,  
School of Marine Sciences

**Requested Award Amount:** \$53,342

**Requested Award Period:** 1 year beginning after the receipt of funds

**Date Submitted:** June 30, 2014

## **Objective**

Implement QA/QC and reporting protocols, finalize uploads of historical data and development of enhancements for the American Lobster Settlement Index web portal hosted by ACCSP over the coming year.

## **Need**

The American Lobster Settlement Index (ALSI) is an annual survey of American lobster (*Homarus americanus*) nursery grounds in coastal New England and Atlantic Canada. The survey is supported by participating marine resource agencies, academic institutions, and the fishing industry. The survey gathers data not only on newly settled, young-of-year (YoY) lobsters, but also older juveniles and associated fauna, such as fishes and crabs. Sampling is conducted by diver-based suction (airlift) samplers or vessel-deployed passive postlarval collectors. Approximately 100+ sites are sampled annually. The Principal Investigator of this proposal founded the ALSI in 1989. His lab has served as the program's data hub as it has expanded over the years, to compile and analyze data from the contributing partners. As the program has grown, so have the data management challenges.

To meet those challenges, ACCSP generously offered to create and host a web portal for ALSI data submission and reporting. Its staff has worked closely with the PI and ALSI partners to implement protocols needed to upload raw data and to provide widely used reports. The ALSI portal went live in February 2014, and so began the long process of uploading some 25 years of data and tuning reports to user needs.

ALSI partners met with ACCSP staff in April 2014 to review the status of the portal and make recommendations for improvements and enhancements of the data upload and reporting features. This proposal reflects those recommendations. For this proposal Rhode Island Division of Fish and Wildlife is serving as the applicant on behalf of the Principal Investigator, who is based at the University of Maine. ACCSP funds will be used to support UMaine staff and an ACCSP contracted programmer to liaise with ALSI participants in Maine, New Hampshire, Massachusetts and Rhode Island to complete data uploading, and enhancements in report products for the ALSI portal.

## **Results and Benefits**

ALSI measures the pulse of newly settled lobsters that repopulate rocky coastal nursery grounds in New England and Atlantic Canada. Quantifying this segment of the life history is especially valuable because it is the only time when one can identify with certainty the strength of an individual year class. It is a pivotal life stage that sheds light on the ocean processes that deliver larvae to nurseries and is useful as a predictor of future trends in recruitment to the fishery. ALSI data are used in stock assessments and forecasting, and have contributed to over 30 peer-reviewed publications.

The transition from the manual compilation and distribution of these data to centralized storage and use of the portal has already proven beneficial. Completing the final stages of this project will result in an application that allows for increased access and usability of the dataset. The timeliness of data availability each spring will also be greatly increased. These benefits will be experienced during the conduct of scientific studies, stock assessments and management



activities. Additionally, the flexibility of to the portal has allowed for further exploration of the data being collected on species other than lobster. The future benefits of enhanced utility of these regional level data from the portal is undetermined but highly probable.

## **Approach**

1. Data Uploading and QA/QC
  - a. UMaine staff will work with each state and ALSI partner and liaise with ACCSP staff to complete data entry and uploading of the remaining data of the 25-year time series.
  - b. UMaine staff will establish protocols for QA/QC of data on an annual basis.
  
2. Reports general
  - a. Implement either dynamic file name during export or add chosen parameters to export file.
    - i. The current file export includes no information on the parameters that have been chosen during the report creation. The purpose of this item is to someone provide uniqueness to files on exports. Two options have been suggested by the group; however, they are open to alternatives as deemed fit by the programmer.
    - ii. Suggested alternatives:
      1. Dynamic file names. Allow the user to name the file on export.
      2. Chosen parameters as part of export file. The chosen parameters are written in to the export file. This would be similar to how file export currently works in the ACCSP Data Warehouse.
  - b. Associate the site name with a state. During site selection have pull down list show a concatenation of site name and state. State does not need to be part parameter choice.
  - c. Distinguish between when a species is sampled and not present versus not sampled. UMaine staff will confer with ALSI partners to define when and where species have been included in the sampling and will ensure they are properly defined at the ALSI web portal.
    - i. There are certain species that have historically not been sampled at all sites. The group would like to be able to distinguish between a null value that results from the lack of individuals of the species present in the sampling versus the species not being looked for during sampling.
    - ii. Considerations (Requirements needs to be coordinated with programmer.)
      1. This is one of those metadata attributes that is useful, but not easy to hang on to the report results.
      2. Option is to create a table for species of interest:
        - a. This table could be managed either by Administrators or Data Entry level users.
        - b. A report of the field could be available for Administrators, Data Entry and Reports only users. It would require the user to check this table either prior to or after running a query.
        - c. Fields would include:

- i. Species (linking to the project species table)
    - ii. Partner
    - iii. Site
      - 1. Linking to site table
      - 2. Only necessary if sampling at the Partner level varies by site
    - iv. Sample Start Year
    - v. Sample End Year (null would indicate still sampling)
  - d. Handle presence/absence data. The purpose of this enhancement is to deal with those records that have no claw, length, sex, etc. attributes, but still indicate the presence or absence of the species during sampling.
    - i. Coordination with ALSI partners would need to happen to determine their objectives for this item. UMaine staff will confer with ALSI partners to define which species for which we have only presence/absence data.
    - ii. This may be similar to the 3.c in that it is not something that can be incorporated into the existing reports, but rather something that would have to be its own report.

### 3. Reports specific

The following reports need to be designed in consultation with the ALSI partners.

UMaine staff will liaise between ACCSP and partners to ensure they meet partner needs.

- a. Regression
  - i. Scatter plot to compare age classes
    - 1. Creation of a graphic that would be added to this report. The table should continue to be generated and exported as currently exists, with data organized consecutively by year.
    - 2. Graphic (xy scatter plot)
      - a. User should be able to choose calculated age class densities (Length 1, Length 2 and Length 3) for as the x and y variables.
      - b. Graph should have a density on both the x and y axes and dots as shown in Figure 5 of the original requirements document.
  - ii. Include option for creating a lag in densities
    - 1. This could be a turn off/on option that would add columns to the table.
    - 2. Current columns are Study Area, Year, Length 1, Length 2 and Length 3.
    - 3. New columns would be Next Year Length 2 and Next Year Length 3.
- b. Time series
  - i. Dynamic labeling of the figure based on chosen parameters
    - 1. Current labeling is dynamic for the years and study areas.
    - 2. Possible additions would be species and/or display size group.
  - ii. Include ability to choose sites within the chosen areas.

1. Currently the user is restricted to choosing up to 3 study areas.
2. Options for expansion of this report
  - a. Allow user to choose a study and then pick up to 3 sites in that study area OR
  - b. Allow user to choose up to 3 study areas and then choose sites within each of these study areas with the default being all sites within each study area.
4. Public access
  - a. Level of public access needs to be determined by ALSI partners in consultation with UMaine staff. The ALSI partners need to determine what existing and possibly new reports will be available to the public user.
  - b. Public reports need to be made available through a public login option.
    - i. Once step 3.a has been completed by the ALSI partners. Some of the reports will need to be available through a public option.
    - ii. ALSI partners will need to determine between the following two options:
      1. Public level of access that can be granted to a user in the same manner as the current login, but limited to specific reports.
      2. Automatic login of public level user. This would grant anyone who hits the public button access to the public reports and they wouldn't have to contact an ALSI partner for login access/creation.
5. Additional reports
  - a. Dynamic reports of the lookup tables available to data entry users. All lookup tables available through the Administration tab, with the exception of the users, should be available as a not editable dynamic table reports.
  - b. Add study area and site latitude and longitude to the raw data table. These three fields need to be added to the raw data report.

### Geographic Location

University of Maine, School of Marine Sciences, Darling Marine Center, Walpole, ME and ACCSP offices, Alexandria, Virginia

### Milestone Schedule

	Month											
	1	2	3	4	5	6	7	8	9	10	11	12
<b>1. Data uploading and QA/QC</b>	X	X	X	X	X							
<b>2. Reports general</b>												
Define species sampled	X	X	X	X								
Presence/absence data			X	X	X	X						
<b>3. Reports specific</b>												
Regression					X	X						
Time series							X	X				
<b>4. Public Access</b>						X	X	X	X	X	X	
<b>5. Testing/Documentation</b>					X		X		X	X	X	X

**Project Accomplishments Measurement**

The objectives of the project will have been met if all data have been uploaded to the portal and vetted, and all enhancements recommended by the partners have been implemented. All enhancements will be thoroughly tested and application documentation and training materials updated to reflect new features.

**Cost Summary**

Rhode Island Division of Fish and Wildlife is serving as the applicant on this proposal on behalf of the Principal Investigator who is based at the University of Maine.

*UMaine Personnel:*

*UMaine Principal Investigator:* Requested is 0.25 months of academic year salary per year for the second PI, R. Wahle.

*UMaine Research Associate:* The Research Associate is budgeted at 3 months of salary. The Research Associate is the primary liaison between ACCSP staff and the ALSI participants from Maine, New Hampshire, Massachusetts and Rhode Island, as well as Atlantic Canada. The Research Associate will conduct and assist participants with data entry and uploading, QC/QA and vetting of newly developed report products.

*Fringe Benefits:* UMaine’s fringe benefit rate is 51.6% of salary.

*ACCSP Contractual:* A programmer is budgeted for 120 hours at \$250 per hour. The programmer will conduct the coding for all enhancements and changes described in the proposal.

*Indirect Costs:* Indirect costs apply only to UMaine salary and fringe; not to the ACCSP Contractor. UMaine’s indirect cost rate is 42.8% of MTDC.

Description	In-Kind Contribution		Requested of ACCSP	
	Caclulation	Cost	Caclulation	Cost
<b>UMaine Personnel</b>				
UMaine PI	\$10968 x 0.25 months	\$ 2,742	\$10968 x 0.25 months	\$ 2,742
UMaine Research Associate	\$3450 x 1.5 months	\$ 5,175	\$3450 x 3 months	\$10,350
UMaine Fringe	51.6% of salary	\$ 4,085	51.6% of salary	\$ 6,755
<b>ACCSP Contractual</b>				
ACCSP Programmer			\$250 x 100 hrs	\$25,000
<b>Total Direct Costs</b>				\$49,847
<b>Indirect costs on UMaine sal &amp; fringe</b>	not allowed by ACCSP guidelines		42.8% of salary & fringe	\$ 8,495
<b>Total (sum of Direct and Indirect)</b>		<b>\$12,002</b>		<b>\$53,342</b>

## **Principal Investigator**

Richard Wahle, Research Professor, University of Maine, School of Marine Sciences

CV Attached

## **Summary of Proposal for Ranking Purposes**

Proposal Type: New

Primary Program Priority:

*Biological*: 100%

Project Quality Factors:

### *Multi-Partner/Regional impact including broad applications:*

Although this proposal is being submitted by a single ACCSP program partner, the members of the ALSI partnership range from RI to Atlantic Canada. Multiple ACCSP partners will benefit from full completion of the portal. Additionally, the portal will be useful during the stock assessments, which are primarily conducted by staff from the ASMFC. Improved access and utility of non-lobster data on a large regional scale through the portal (See pages 3-4).

### *In-kind contribution:*

13.95% (see cost table on page 7). Please note that no ACCSP funding has been requested for the development of the portal to this point.

### *Improvement in data quality/efficiency/timeliness:*

Use of the ALSI portal will allow for direct access to compiled regional level data for all species that have been quality checked available upon data upload. This is a significant improvement in accessibility, efficiency and timeliness from the previous manual compilation and distribution of data. (See pages 3-4).

### *Impact on stock assessment/management:*

This dataset is an important input in the assessment process of American lobster. Forecasting is likely to play an increasingly valuable role in the management of the species. Improvements in the availability and flexibility of the use of these data will be beneficial to both the assessment process and successful management of the species. (See pages 3-4).

**RICHARD A. WAHLE**  
**CURRICULUM VITAE**

**PROFESSIONAL EXPERTISE:** For the proposed research the PI has particular expertise on the biology, ecology, and larval rearing of the American lobster.

**EDUCATION:** B.A., Zoology, University of New Hampshire, 1977  
M.S., Biology, San Francisco State University, 1982  
Ph.D., Zoology, University of Maine, 1990

**PROFESSIONAL EXPERIENCE:**

**Research Professor**, Univ. Maine, School of Marine Sciences, 2013 - present  
**Research Associate Professor**, Univ. Maine, School of Marine Sciences, 2009 - 2013  
**Senior Research Scientist**, Bigelow Laboratory for Ocean Sciences, 1997 - 2009  
**Research Scientist**, Bigelow Laboratory for Ocean Sciences, 1995 - 1997  
**Postdoctoral Research Associate/Lecturer**, University of Rhode Island, 1992 - 1994  
**Postdoctoral Research Associate**, Brown University, 1990 - 1992

**FIVE PUBLICATIONS MOST RELEVANT TO PROPOSAL**

- Wahle, R.A.**, K. Castro, O. Tully, S. Cobb. 2013. Chapter 4: *Homarus*. In: B. Phillips (ed.) *Lobsters: Biology, Management, Fisheries and Aquaculture, 2nd edition*. Wiley-Blackwell, Oxford, UK.
- Mills, K.E., A.J. Pershing, C.J. Brown, Y. Chen, F.-S. Chiang, D.S. Holland, S. Lehuta, J.A. Nye, J.C. Sun, A.C. Thomas, and **R.A. Wahle**. 2013. Fisheries management in a changing climate: Lessons from the 2012 ocean heat wave in the Northwest Atlantic. *Oceanography* 26:191–195, <http://dx.doi.org/10.5670/oceanog.2013.27>.
- Caputi, N., S. Frusher, **R.A. Wahle**. 2013. Chapter 9: Impacts of climate change. In: B. Phillips (ed.) *Lobsters: Biology, Management, Fisheries and Aquaculture, 2nd edition*. Wiley-Blackwell, Oxford, UK
- Wahle, R.A.**, D. Tshudy, J.S. Cobb, J. Factor, M. Jaini\*. 2012. Astacidea (Marine Lobsters). In, F. R. Schram & J. C. von Vaupel Klein (eds.), *Treatise on Zoology: Crustacea Decapoda, Vol. 9B (66)* pp 3-108. Brill, Leiden
- Wahle, R.A.** & M. Fogarty. 2006. Chapter 1-Growth & Development: Understanding and modeling growth variability in lobsters. B.F. Phillips (Ed.) *Lobsters: biology, management and aquaculture*. Blackwell Publishing. Pp. 1-44.

**FIVE OTHER RELATED PUBLICATIONS (\*Students)**

- Pershing, A.J., **R.A. Wahle**, P.C. Meyers, P. Lawton. 2012. Large-scale coherence in New England lobster settlement associated with regional atmospheric conditions. *Fisheries Oceanography*. doi:10.1111/j.1365-2419.2012.00629.x
- Wahle, R.A.**, M. Gibson, M.J. Fogarty. 2009. Distinguishing disease impacts from larval supply effects in a lobster fishery collapse. *Mar. Ecol. Prog. Ser.* 376: 185–192.
- Wahle, R.A.** & L.S. Incze. 1997. Pre- and post-settlement processes in recruitment of the American lobster. *J. Exp. Mar. Biol. Ecol.* . 212: 129-208.
- Wahle, R.A.** 2003. Revealing the stock-recruitment relationship in lobsters and crabs: Is experimental ecology the key? *Fish. Res.* 65: 3-32.
- Incze, L., H. Xue, N. Wolff, D. Xu, C. Wilson, R. Steneck, **R. Wahle**, P. Lawton, N. Pettigrew, and Y. Chen. 2010. Connectivity of lobster (*Homarus americanus*) populations in the coastal Gulf of Maine: part II. Coupled biophysical dynamics. *Fisheries Oceanogr.* 19: 1-20

## **SYNERGISTIC ACTIVITIES:**

**Co-investigator, NSF Project** - Title: Coastal SEES (Track 2), Collaborative Research: Resilience and Adaptation of a Coastal Ecological-Economic System in Response to Increasing Temperature (2013-2017; \$1.1M with A. Pershing, Y. Chen, J. Nye and others)

**Co-founder, Bigelow Laboratory's NSF-REU Site Program** (2008-2010)

**Gulf of Maine Council – Ecosystem Indicator Partnership:** Steering committee, 2010-present

**Editor - *The Lobster Newsletter*:** 2008 - present

**Manuscript Reviewer:** *Ecology, Mar. Ecol. Prog. Ser., Mar. Freshw. Research, J. Crust. Biol., J. Exp. Mar. Biol. Ecol., Fish. Bull., Ecol. & Society, Bull. Mar. Sci., Fish. Oceanogr.*

## **COLLABORATORS OTHER THAN CO-EDITORS (last 48 mos)**

Dr. David Fields, Bigelow Laboratory

Dr. Gabriel Gerlach, Univ. Oldenburg, Germany

Dr. Jonathan Grabowski, Northeastern University

Dr. Kevin Hovel, San Diego State University

Dr. Peter Lawton, DFO Canada

Dr. Andrew Pershing, University of Maine

Dr. Remy Rochette, University of New Brunswick, St. John, NB

Dr. Jenny Sun, Gulf of Maine Research Institute

Dr. Michael Sieracki, Bigelow Laboratory

Dr. Kevin Stokesbury, University of Massachusetts, Dartmouth

Dr. Andrew Thomas, University of Maine

Dr. David Towle, Mt. Desert Island Biological Lab

Dr. John Tremblay, DFO Canada

Dr. Huijie Xue, University of Maine

## **GRADUATE ADVISORS & POST-DOCTORAL SPONSORS**

Dr. Robert Steneck, School of Marine Science, University of Maine (Ph.D. Advisor)

Dr. Mark Bertness, Dept. Ecology and Evolutionary Biology, Brown Univ. (Postdoc mentor)

Dr. Steve Gaines, Life Sciences Dept., University of California Santa Barbara (Postdoc mentor)

Dr. J. Stanley Cobb, Biological Sciences, University of Rhode Island (Postdoc mentor)

## **THESIS ADVISEES & COMMITTEE ASSIGNMENTS**

Jesica Waller, MS, in progress, UMaine (chair)

Noah Oppenheim, MS Dual Degree, in progress, UMaine (co-chair)

Skylar Bayer, PhD, in progress. UMaine (chair)

Darren Scopel, PhD, in progress, University of New Hampshire (committee member)

Morgan Brunbaur, MS, 2013, UMaine (chair)

Stephanie Boudreau, PhD, 2012. Dalhousie University (external examiner)

Jon Carey, MS, 2011, UMass Dartmouth (committee member)

Mahima Jaini, MS, 2011, University of Maine (chair)

Charlene Bergeron, MS, 2011, University of Maine (chair)

Victoria Burdett-Coutts, MS, 2011, Memorial University (co-supervisor)

Peter Milligan, MS, 2009, University of Massachusetts, Dartmouth (committee member)

Curtis Brown, MS, 2007, University of Maine (chair)

Julien Gaudette, MS, 2004, Université Laval, Quebec (chair)

Nate Gerald, Fellowship advisor 2001, 2002, Island Institute, Maine

Carl Wilson, MS, 1999, University of Maine (committee member)

Steven Jury, PhD, 1999, University of New Hampshire (committee member)

Alvaro Palma, PhD, 1998, University of Maine (committee member)

Proposal for Funding made to:  
Atlantic Coastal Cooperative Statistics Program  
Operations and Advisory Committees  
1050 N. Highland Street, Suite 200 A-N  
Arlington, VA 22204

**Update and enhance Atlantic Coastal Cooperative Statistics Program data transmission methods for North Carolina Division of Marine Fisheries**

Submitted by:

Stephanie McNerny  
North Carolina Division of Marine Fisheries  
3441 Arendell Street; P.O. Box 769  
Morehead City, NC 28557  
[stephanie.mcinerny@ncdenr.gov](mailto:stephanie.mcinerny@ncdenr.gov)



**Applicant Name:** North Carolina Division of Marine Fisheries

**Project Title:** Update and enhance Atlantic Coastal Cooperative Statistics Program data transmission methods for North Carolina Division of Marine Fisheries

**Project Type:** New

**Principal Investigator:** Stephanie McNerny  
Commercial Statistics Biologist

**Requested Award Amount:** \$75,620

**Requested Award Period:** For one year, beginning after the receipt of funds

**Original Date Submitted:** June 13, 2014

**Revision Submitted:** August 27, 2014

## **Objective**

To update and enhance the process used to submit North Carolina trip ticket data to the Atlantic Coastal Cooperative Statistics Program (ACCSP) Data Warehouse to ensure accuracy and timeliness.

## **Background/Need**

The North Carolina Division of Marine Fisheries (NCDMF) has managed a commercial trip ticket system since 1994. The trip ticket program is a one ticket monthly dealer reporting system that captures all finfish and shellfish landed commercially in North Carolina; data are collected at the trip level according to state and ACCSP commercial data collection standards. Tickets can be submitted electronically using state and federally approved reporting software or by mailing paper tickets to NCDMF. Paper tickets are double key entered while electronic tickets are uploaded directly to the database. After all tickets for the month have been incorporated into the database, the tickets are screened by commercial port agents for accuracy. Warnings reports are provided to each port agent to assist in the editing process by flagging suspicious tickets based on quality assurance and quality control look up tables that associate appropriate gear, waterbody, and species combinations. In addition to initial monthly editing, tickets are taken through a more rigorous editing process biannually to further ensure data accuracy. The NCDMF trip ticket program processes approximately 150,000 trip tickets per year including both paper and electronic tickets. The number of records reported each year range from about 380,000 to approximately 770,000. Price data are submitted voluntarily by dealers for each species and market grade. These prices are used to estimate the ex-vessel value for each observation in the database and are used by the NCDMF economist to prepare economic profile reports and sections for fishery management plans (FMPs).

Currently, the NCDMF monitors daily landings of five commercially caught finfish species that are managed under state or federal quotas: summer flounder (*Paralichthys dentatus*), striped bass (*Morone saxatilis*), black sea bass (*Centropristis striata*), spiny dogfish (*Squalus acanthias*), and river herring (*Alosa* spp.). There are additional species monitored monthly to ensure their respective harvest limits are not exceeded (e.g., bluefish, red drum, horseshoe crab, etc.). With changing regulations, there is potential for the development of quotas for several more species commonly landed in North Carolina such as American shad and smooth dogfish.

Since 2001, the NCDMF has submitted finalized annual data to the ACCSP data warehouse on a yearly basis. These data are converted from variables and codes used by the NCDMF to those employed by ACCSP. This process has been cumbersome and requires the collaborative effort of the commercial statistics biologist from the NCDMF trip ticket program and NCDMF Information Technology (IT) personnel. North Carolina trip ticket data are edited when corrections are needed. Corrections may be due to late reports or erroneous data discovered during review or analysis. Currently, the NCDMF does not have a way to send edited records to the ACCSP Data Warehouse without resending an entire year of data. In 2012, each year of data between 1994 and 2011 were resent to incorporate edited records, but this process took over a year to complete because of the cumbersome nature of the existing process. A method to identify edited, deleted, or added records across all years and then convert and send them to ACCSP is needed to keep data in the Warehouse as accurate and current as possible without creating further burden on staff.

In 2013, a process to automate preliminary monthly data submissions to the ACCSP FTP site was attempted, but completion of this project was interrupted due to technical issues re-implementing the processes from a Windows 2003 server to a Windows 2008 server. These issues are unresolved due to the lack of technical resources for time and effort. Currently, data are sent as text to the FTP site to be manually uploaded by ACCSP data analysts. An alternative way to send data to the ACCSP needs to be established to expedite the submission and upload processes once the data are received by the ACCSP. Once the submission process is reestablished and automated, monthly data submissions would increase

timeliness and access to current trip ticket data for North Carolina which in turn will provide improved monitoring of landings for species managed under quotas.

When data submitted by NCDMF are accessed from the ACCSP Data Warehouse by ACCSP analysts fulfilling requests for data, these data are typically reviewed by NCDMF staff for consistency before being distributed. When differences in summarized data between NCDMF and ACCSP are discovered, it can take substantial time to determine which records are at the root of these differences. The NCDMF needs a process to verify observations uploaded into the Data Warehouse with observations from the trip ticket program at the record level. This process would also result in identifying records found in one data source but not in the other (NCDMF and ACCSP). Once edited data are sent on a regular basis, it will be important to know whether the edited, deleted, or added records are being incorporated into the Data Warehouse in a way that matches existing data in North Carolina. This process will also help the commercial statistics biologist easily identify questionable records while verifying data for North Carolina data requests processed through the ACCSP, stock assessments, **state and regional FMPs**, or Southeast Data Assessment and Review (SEDAR) workshops.

In the past few months, concerns about record duplication in the participant files sent to the ACCSP have been raised by data analysts within the ACCSP during the upload process. Uploading participant, vessel, and dealer files sent by North Carolina have to be done manually and require more time to complete than many of the other partner states. At this time, the NCDMF does not have a method to verify records provided in the participant, vessel, and dealer files. A verification process to evaluate these files needs to be developed to ensure that the data are translated correctly and to reduce duplication currently existing in the participant file and that may exist in the vessel and dealer files.

NCDMF IT staff does not have the knowledge of Oracle databases, time, or resources to devote to updating these transmission processes.

### **Approach**

Staff at NCDMF and ACCSP have discussed and agreed that the NCDMF will partner with the ACCSP to successfully execute this project. If approved, this project will be best achieved by being included as part of the ACCSP Administrative Grant (Geoff White, personal communication). Current state budget limitations and contract procedures limit the NCDMF's ability to fund this project. By approaching this project jointly, the NCDMF can work directly with the contractor to complete development and modification of transmission code while maintaining ACCSP standards. We propose that the ACCSP handle all contracting for this position in lieu of the North Carolina State contractual process. In the past, the ACCSP has demonstrated the ability to secure contractors with the technical programming skills required to successfully accomplish the objectives of this project. The NCDMF will work closely with the ACCSP to approve all expenditures.

The commercial statistics biologist and NCDMF IT will work directly with the person hired under this grant to modify the stored procedures used to translate data from the trip ticket program to ensure correct data structure. All changes to stored procedures will be documented within the procedure's SQL code. Once enhanced procedures are developed, the NCDMF will conduct all necessary program testing and work with the contractor to debug the programs.

New processes and stored procedures will be documented thoroughly to describe the primary function, data tables being accessed, and corresponding variables. **Stored procedures and any appropriate metadata will be provided to ACCSP as part of the grant completion report.**

### **Results and Benefits**

Successful fulfillment of this project will provide:

- A much needed evaluation of the data transmission process for North Carolina

- Updates to codes and transmission protocols as set forth by ACCSP
- Increased quality and accuracy of North Carolina data in the ACCSP Data Warehouse
- Increased timeliness of data submissions to the ACCSP
- Accelerated data availability to fisheries managers for stock assessments
- Reduced verification time for the NCDMF
- Reduced upload time for the ACCSP
- Increased functionality of North Carolina data to monitor quotas

**Geographic Location**

The NCDMF Headquarters are located in Morehead City, North Carolina. This project may be performed remotely and does not require the position to be located in North Carolina. Travel to meet with the commercial statistics biologist and NCDMF IT is required throughout the project, when appropriate.

**Milestone Schedule** (start date depending on time of grant award):

Task	Month											
	1	2	3	4	5	6	7	8	9	10	11	12
ACCSP will hire Contractor	X	X										
NCDMF will meet with Contractor to discuss current database structure and modification of existing stored procedures		X	X									
Contractor will develop a process to extract edited records and translate to the ACCSP format; Testing by NCDMF will occur as needed			X	X	X							
Contractor will develop an alternative process to transmit data to the ACCSP Data Warehouse and automate this process; Testing by NCDMF will occur as needed					X	X	X					
Contractor will develop a process to compare and verify records in the ACCSP Data Warehouse with North Carolina trip ticket data; Testing by NCDMF will occur as needed							X	X	X			
Contractor will evaluate participant, vessel, and dealer files as well as stored procedures to create these files									X	X		
Contractor will modify stored procedures to eliminate duplications in participant, vessel, and dealer files if applicable; Testing by NCDMF will occur as needed										X	X	X

The contractor is not expected to work 40 hours a week on this project. Report writing will follow the requirements of two semi-annual status reports due at the end of the seventh and thirteenth months, respectively, and a final report due at the end of the fifteenth month, depending on time of the grant award.

**Project Accomplishments Measurement**

<b>Projects</b>	<b>Accomplishments</b>
Develop process to extract edited records and translate to the ACCSP format; Testing will occur as needed	<ul style="list-style-type: none"> <li>• Process completed and fully documented</li> <li>• Process is tested and meets data standards</li> </ul>
Develop an alternative process to transmit data to the ACCSP Data Warehouse and automate this process; Testing will occur as needed	<ul style="list-style-type: none"> <li>• Process completed and fully documented</li> <li>• Process is tested and meets data standards</li> </ul>
Develop process to compare and verify records in the ACCSP Data Warehouse with North Carolina trip ticket data; Testing will occur as needed	<ul style="list-style-type: none"> <li>• Process completed and fully documented</li> <li>• Process is tested and meets data standards</li> </ul>
Modify stored procedures to eliminate duplications in participant, vessel, and dealer files if applicable; Testing will occur as needed	<ul style="list-style-type: none"> <li>• Code is completed and fully documented</li> <li>• Code is tested and meets data standards</li> </ul>

**Project Personnel**

Stephanie McInerny—Commercial Statistics Biologist, NCDMF License and Statistics Section  
 Don Hesselman—Section Chief, NCDMF License and Statistics Section  
 Al Schmidt—Database Administrator, NCDMF IT Section  
 Brett Messner—Business Technology Analyst, NCDMF IT Section  
 Felisa Benton— Business Technology Analyst, NCDMF IT Section

**Budget Narrative**

The cost summary table below shows an explanation for each budget item. The indirect rate for the Contractor is based on the standard ACCSP indirect rate of 35%. NCDMF will not charge an indirect fee for the Contractor.

**Cost Summary**

Category	Expense	Units	Cost	ACCSP Request	State In-Kind	Explanation
<b>Personnel</b>	Contractor	1	\$50,000	\$50,000		One Analyst @ \$100.00/hr for 500 hrs
	Commercial Statistics Biologist	1			\$3,519	\$3,519/month for 1 month (160 hrs)
	NCDMF IT Staff	3			\$5,602	Average salary of \$5,602/month for combined 1 month of work (160 hrs)
Subtotal				\$50,000	\$9,121	
<b>Fringe</b>	Retirement, Social Security, Health Insurance				\$2,973	Fringe=22.77% of salary plus \$5,378/year for health insurance (1 month insurance = \$448*2)
<b>Indirect</b>				\$17,500	\$1,843	Indirect for Contractor = 35% of salary Indirect for NCDMF Staff=20.2% of salary
Subtotal				\$17,500	\$4,816	
<b>Travel</b>	Workshops with NCDMF staff	4	\$1,380	\$5,520		4 in-person workshops (Mon-Fri) with NCDMF Hotel: Max of \$150 per night for 4 nights = \$600 Per Diem: \$56 per day for 5 days = \$280 Flight: Max of \$500 for round trip = \$500
Subtotal				\$5,520		
<b>Supplies</b>	Computer	1	\$2,500	\$2,500		Contractor will need remote access to NCDMF servers so may need NCDMF issued computer for North Carolina Identity Management (NCID) login.
	External Hard Drive	1	\$100	\$ 100		
Subtotal				\$2,600		
Column Totals				\$75,620	\$13,937	Total project cost = \$89,557
Total Request				\$75,620		
Percent				84%	16%	Percentage calculated from total cost

**Funding Transition Plan**

This project should be completed within the grant cycle and will not require additional funding in subsequent years to be maintained. NCDMF IT and the commercial statistics biologist have maintained the current process in place to submit data to ACCSP and are prepared to maintain new code developed under this grant.

## **Summary of Proposal for Ranking Purposes**

**Proposal Type:** *New*

### **Program Priority**

**Catch and Effort:** **100%**

**100%** of all commercial dealers submit trip-level **catch and effort** data to the trip ticket program for **100%** of the species they harvest. **100%** of the data in the trip ticket program are sent to the Data Warehouse since 2001. (See page 3)

**Biological Sampling:** **0%**

**Bycatch/Species Interactions:** **0%**

**Social and Economic:** **5%**

The NCDMF trip ticket program collects prices by species and market grade from dealers on a voluntary basis to estimate the ex-vessel value for each species reported to the program. This value is used by the NCDMF economist when creating economic profile reports and writing socio-economic sections of state FMPs. Value and price data are provided to the ACCSP Data Warehouse with trip level landings data.

### **Metadata:**

The NCDMF provides metadata to the ACCSP in several forms including data mapping tables that provide a definition of each ACCSP variable with respect to NCDMF variables and species mapping tables that provide grade and condition codes appropriate for NCDMF species along with conversion factors for each species. New and edited stored procedures created during this project will include documentation on primary function, data tables being accessed, and corresponding variables within the procedure's SQL code. Stored procedures will be provided to ACCSP as part of the grant completion report. (See page 4)

### **Project Quality Factors**

#### **Multi-Partner/Regional impact including broad applications:**

Although this project only covers data for North Carolina, many species within North Carolina are managed regionally and by quotas such as summer flounder, striped bass, black sea bass, and spiny dogfish. Regional management agencies such as the ASMFC and Mid-Atlantic Fishery Management Council (MAFMC) would benefit from having more accurate and timely trip-level data from North Carolina. (See page 3)

#### **Contains funding transition plan/Defined end-point:**

The goals defined in this project should be completed within the grant cycle. Maintenance of new processes developed through this project can be maintained by existing NCDMF staff (see Page 7)

#### **In-kind contribution:**

16% (See cost table on page 7)

#### **Improvement in data quality/quantity/timeliness:**

Projects identified in this proposal will greatly improve data quality by providing a method for

incorporating data edits and fixing duplication issues in participant files. Data timeliness will be greatly improved with an automated process of sending monthly data to the ACCSP as well as an improved method for transmitting data to the Data Warehouse. (See page 3)

**Potential secondary module as a by-product:**

None

**Impact on stock assessment:**

Although this project only covers data for North Carolina, many species within North Carolina are managed regionally and by quotas such as summer flounder, striped bass, black sea bass, and spiny dogfish. Regional management agencies such as the ASMFC and MAFMC would benefit from having more accurate and timely trip-level data from North Carolina. (See page 3)



## Stephanie McInerny

North Carolina Division of Marine Fisheries  
3441 Arendell St.  
Morehead City, NC 28557  
(252) 808-8020  
[stephanie.mcinerney@ncdenr.gov](mailto:stephanie.mcinerney@ncdenr.gov)

---

### EXPERIENCE

#### Marine Fisheries Biologist II (Commercial Statistics Biologist)

2008 – Current North Carolina Division of Marine Fisheries (NCDMF) Morehead City, NC

##### *Data, Statistics, and Writing*

- Provide commercial data, analyze life history data, write technical reports, and give presentations at data workshops for SEDAR stock assessments for NOAA Fisheries and ASMFC as part of the life history and commercial workgroups (e.g., red drum, black grouper, red grouper, red snapper, Spanish mackerel, blueline tilefish, gray triggerfish, king mackerel, and cobia)
- Run statistical analyses on SEDAR stock assessment input data and plot data using Excel and R (e.g., weight-length regressions, nonlinear growth models, length and age compositions, CV, natural mortality, landings trends)
- Provide commercial data and indices of abundance, write working papers, update sections, and participate in data workshops for NCDMF fishery management plans (e.g., southern flounder, blue crab, bay scallop, striped mullet)
- Perform commercial fishery landings data queries, compilations, and analyses using Mainframe SAS, PC-SAS, SQL, Microsoft Access, and Microsoft Excel for a large variety of species from large commercial landings database containing millions of records
- Access, verify, and perform quality control on ACCSP, NOAA, and NCDMF fisheries data for NC using SAS, SQL, Oracle SQL Developer, and SQL\*Plus
- Write species and economic profile reports on species of interest to NC
- Serve on the NCDMF Biological Review Team (BRT) Technical Committee, BRT Biological User Group, BRT Life History Subcommittee, Hook & Line Workgroup, Software Change Control Board, and IT Steering Committee
- Write Standard Operating Procedures for Eel Monitoring, Biological Database Extraction and Analysis, etc.

##### *Lab/Field Work*

- Participate in gutted to whole weight conversion factor project by taking biological samples (e.g., length, weight, sex, etc.)

##### *Specialized Training*

- “SAS Programming I: Essentials” (completed 7/11/2008)
- “SAS Programming II: Data Manipulation Techniques” (completed 11/13/2009)
- “SAS SQL I: Essentials” (completed 4/27/2010)
- “SAS Macro Language I: Essentials” (online – completed 8/22/2011)
- “SAS Statistics I: Introduction of ANOVA, Regression, and Logistic Regression” (completed 8/1/2012)
- “SAS Statistics II: ANOVA and Regression” (completed 9/26/2012)
- ASMFC Mock Data Workshop Training (completed 2/10/2011)
- ASMFC Mock Assessment Workshop I (completed 12/9/2011)
- ASMFC Mock Assessment Workshop II (completed 11/16/2012)
- USGS Learn R In-Depth Webinar Course (completed 8/25/2011)
- Oracle SQL by Example (in progress)

**Contract Lab Technician (Aging Lab Technician)**

2004 – 2008 National Marine Fisheries Service

Beaufort, NC

*Data, Statistics, and Writing*

- Completed statistical analyses using SAS and Excel (e.g., weight-length regressions, nonlinear growth models, length and age compositions, CV, natural mortality), wrote technical reports, and gave presentations as part of the life history section of SEDAR stock assessments for NOAA Fisheries (e.g., red snapper, greater amberjack, vermilion snapper, Spanish mackerel)
- Wrote age and growth manuscripts for publication
- Maintained and developed large biological sample databases
- Performed data queries and compilations using Oracle SQL Developer from federal fishery database (i.e., TIP)
- Participated in otolith aging workshops (SCDNR, FWC) and otolith processors meetings (FWC, GOM) within the southeastern United States and Gulf of Mexico
- Served as co-coordinator of the 2007 NOAA/NMFS fall seminar series

*Lab/Field Work*

- Removed, sectioned, and aged otoliths from commercial and recreational fish species
- Removed stomachs and tissue samples for diet, histological, chemical, and DNA analysis
- Participated in NOAA Bridge Net sampling for ichthyoplankton with a neuston plankton net

**Volunteer Lab Technician (Aging Lab Technician)**

2003 – 2004 National Marine Fisheries Service

Beaufort, NC

- Removed sagittal otoliths from commercial and recreational reef fish
- Sectioned, aged, and measured red drum otoliths from the Gulf of Mexico and completed statistical analyses using SAS and Excel
- Prepared age and growth manuscript on Gulf of Mexico red drum

---

**EDUCATION**

July 2007 University of North Carolina Wilmington Wilmington, NC  
**M.S., Marine Biology with Applied Statistics Certificate**

Fall 2006 North Carolina State University Raleigh, NC  
**Post Baccalaureate Studies – Quantitative Fisheries Management (3 sem. hrs)**

December 2002 East Carolina University Greenville, NC  
**B.S., Biology/Marine Biology**

**CERTIFICATIONS**

NAUI Advanced SCUBA—2001 (Recertification—2011)  
USCGA Boating Safety—2001  
First Aid/CPR/AED—2014

Atlantic Coastal Cooperative Statistics Program  
1050 N. Highland St. Ste. 200 A-N  
Arlington, VA 22201

**FY15 South Atlantic Shrimp Catch and Effort Automation**

**Total cost \$125,000**

Submitted by:

David R. Gloeckner, Ph.D.  
USDOC/NOAA/NMFS/SEFSC/FSD  
75 Virginia Beach Drive  
Miami, FL 33149

**Applicant Name:** NOAA Fisheries, Southeast Fisheries Science Center

**Project Title:** FY15 South Atlantic Shrimp Catch and Effort Automation

**Project Type:** New Project

**Requested Award Amount:** \$125,000

**Requested Award Period:** 10/1/2014-9/30/2015

### **Objectives**

Combine trip level commercial effort and landings information from the SEFSC's South Atlantic Shrimp System with trip ticket data for shrimp from NC, SC, GA and FL, available at ACCSP. Trip level effort information, including days fished and hours fished, were collected or estimated by state port agents, for inclusion in the South Atlantic Shrimp System (SAS) using methods that must be applied to current trip ticket data to be consistent with the historical data in the SAS. This project will yield a standardized approach to arriving at a shrimp landings and effort data set to be used in stock assessments for estimating bycatch from the shrimp fishery and estimating protected resources takes in the shrimp fishery. The current methods used to combine these data sets results in fluctuating information that is sometimes improperly used by scientists. This effort will result in a single authoritative data set for use by scientists seeking information on effort and landings in the SA shrimp fishery.

**Principal Investigators:** Dave Gloeckner, SEFSC Monitoring Branch Chief

### **Need**

The SEFSC relies heavily on estimates of the number of fish released at sea in commercial finfish fisheries for both coastal and highly migratory species for stock assessments. The SEFSC also relies on the estimates of takes of protected species in biological opinions. Both of these estimates are dependent on accurate estimates of effort from the South Atlantic shrimp fishery. Currently, this requires integrating data from two very different databases: ACCSP trip ticket data and the SEFSC's South Atlantic Shrimp System (SAS).

The availability of information in the SAS system varies by state. For NC and GA the time series starts in 1978, while SC starts in 1979 and FL starts in 1981. The time series terminates as states begin their own trip ticket program, which also varies by state. Once a state begins a trip ticket program, the data used for shrimp effort comes from ACCSP. Unfortunately, merging these two systems has proven difficult, resulting in estimates that are difficult to reproduce and information that is difficult to use.

The SAS data is trip level for federal vessels and summary for state registered vessels (see Appendix 1). The number of trips reported are accurate across the dealer, state, date, schedule number and vessel, but results in duplicate effort if gear, area, species are included. Days away and hours fished must be aggregated across gears and areas to be accurate for each combination

of dealer, state, date, schedule number and vessel. Additionally, hours and days fished are only collected for a subset of interviews and are estimated by port agents for the rest of the interviews.

The SAS information must be combined with the ACCSP trip ticket data, which has detailed effort for some states (SC, GA and FL) and not others (NC). SC, GA and FL supply time fished, but NC only supplies days away, so time fished must be estimated. Where effort is not complete for trips in NC-FL, that effort will need to be estimated. These differences have it made it difficult to combine the data from SAS and ACCSP in a consistent manner, resulting in conflicting estimates of discards or takes. It has taken weeks in many instances to determine the cause of the differences between runs and satisfactorily address these differences. These delays result in an inability to meet report deadlines.

Given the demand for this information and the large impact it has on SEFSC analyses, the estimates of effort from the South Atlantic shrimp fishery must be consistent and timely. The methodology to generate these estimates must be standardized and the generation of these methods must be automated to ensure data are readily available to analysts when needed.

## **Approach**

- Contract a developer and analyst to develop methodology for estimating effort and landings from the SA shrimp fishery and make them available through web interface.
- Analyst reviews program information for SA Shrimp database, each trip ticket program and state feeds to ACCSP. Identify what data is available and how it was collected.
- Analyst reviews SAS program currently used and document faults.
- Analyst develops standard methods for aggregating data and estimating missing information from each system.
- Analyst will utilize information from the SEDAR SA Shrimp Methods workshop (July 2014) to aid in developing methodology.
- Analyst will compare results with previous published estimates of SA shrimp effort (Epperly et al, 2002) and ensure consistency or document reasons for inconsistencies.
- Analyst will work with developer to automate generation of estimates from the sources available and ensure the results are consistent between runs.
- Analyst will document estimation methods used and program code in metadata files.
- Developer makes results available through a standard web interface.
- Developer will conduct testing of web interface to ensure usability and accuracy.
- Make web interface available to authorized partners.
- SEFSC will maintain system after project completion.
- ACCSP will have access to the entire time series through a DB link.

## **Results and Benefits**

This project will make effort and landings data from the SA shrimp fishery available from a web portal as needed using a methodology that ensures results are repeatable. This will ensure that partners are using the same information when computing estimates of effort and landings from the SA shrimp fishery and the data will be available much sooner than they are presently. This

will also ensure consistency in the data used to estimate fish bycatch from the SA shrimp fishery for assessments and protected resources bycatch in biological opinions. The result will be greater confidence in the ability of scientists to estimate impacts of the shrimp fishery on marine resources in the South Atlantic.

**Geographic Location**

All work will be carried out at the SEFSC in Miami, FL

**Program Metrics**

The success of the project will be determined by the following metrics:

- Standardized estimation for effort and landings.
- Repeatability of effort and landings calculations.
- Web access to effort and landings estimates match those generated by the standardized methodology.
- Web access accepted by test users.

**Milestone Schedule**

Task	1	2	3	4	5	6	7	8	9	10	11	12
Contract Analyst	X											
Review data feeds and data collection methods		X	X									
Review current SAS program			X	X								
Review information from SEDAR methods workshop				X	X							
Develop standard methods						X	X					
Compare results with Epperly et al								X				
Automate generation of effort and landings								X	X			
Design web interface for access										X	X	
User testing											X	
Restrict access through confidentiality agreements												X

**Budget**

Personnel

Item	ACCSP Share	Direct Share	Total
Supervising Biologist (10%)	\$0.00	\$8,625.00	\$8,625.00
DBA (5%)	\$0.00	\$3,562.50	\$3,562.50
Fisheries Biologist/Analyst (100%)	\$71,250.00	\$0.00	\$71,250.00
Developer (25%)	\$22,500.00	\$0.00	\$22,500.00
Fringe benefits 25%	\$31,250.00	\$4,062.50	\$35,312.50
Total	\$125,000.00	\$16,250.00	\$141,250.00

Equipment

Item	ACCSP Share	Direct Share	Total
Analyst PC	0.00	1,500.00	1,500.00
Developer PC (25%)	0.00	500.00	500.00
Office supplies	0.00	2,000.00	2,000.00
Phone line/internet	0.00	500.00	500.00
Total	0.00	4,500.00	4,500.00

Total

Item	ACCSP Share	Direct Share	Total
Total Direct Charges	\$125,000.00	\$20,750.00	\$145,750.00
Percentage	86%	14%	

**Budget justification**

We estimate it will take 1 year of a fishery biologist’s time to work with partners and review current data extraction and summary routines and develop the methodology for standardized effort estimation in the South Atlantic shrimp fishery. A developer will need approximately 3 months to work with the biologist on automation and then developing the web interface and conduct testing. SEFSC will cover the DBA and supervisory biologist time, as well as any equipment costs.

**Summary of Proposal for Ranking**

Proposal Type: New project

Primary Program Priority: Catch and Effort

Project Quality Factors:

Multi-partner Regional Impact: Project includes merging data from multiple partners, which will be used to address regional issues. Improving this data will provide better estimates of bycatch for multiple species, which may benefit multiple partners. Better bycatch estimates will benefit constituents in the entire South Atlantic area. This project will covered 100% by the Catch and Effort module.

Transition Plan: Project contains transition plan, which includes project duration of 1 year and SEFSC taking over maintenance after project completion.

In Kind Contribution: SEFSC is providing management and equipment. This contribution covers nearly 15% of the project costs.

Improvement in data quality/quantity/timeliness: This project will greatly increase the quality of shrimp effort and landings data currently used in SEDAR assessments and NMFS biological opinions. This project will also increase the timeliness for availability of this data. Currently, only 1 staff is assigned to this data and other priorities interfere with providing data. ACCSP will be given access to this data and partners will have direct access to the web interface.

Potential secondary module as a by-product: This project will improve the estimates of effort and landings in the shrimp fishery, which will result in improvements in bycatch estimation, so as a by-product, bycatch data may be affected.

Impact on stock assessment: This project will improve bycatch estimation for several species that will be assessed in the next couple year, which include: red snapper and red drum. The resulting data set can be organized in a fashion suitable for the warehouse, so it can be easily extracted for use in stock assessments.

Other: Proposal is properly prepared, including the elements required in the funding decision document.



SOUTH ATLANTIC SHRIMP SYSTEM

=====

OVERVIEW

=====

DATE THIS DOCUMENT WAS LAST UPDATED:

=====

January 31, 1995

November 29, 1995 by Linda Hardy

December 5, 1995 by Susan Gold

May 8, 2012 by David Gloeckner

April 24, 2014 by David Gloeckner

PURPOSE:

=====

This document is an adaptation of a document originally written in June of 1990. It is intended as an overview of the data collection program.

INTRODUCTION:

=====

The Southeast Fisheries Science Center SEFSC, in cooperation with the South Atlantic states, collects South Atlantic shrimp data from dealers and fishermen and archives these data on the SECPR server. These data are collected to provide catch, value, area caught, and effort data for individual commercial fishing trips. It should be noted that some states are not providing effort data. Although this objective is never totally achieved, the SEFSC's data do provide a near-census of the commercial catches, the majority of which are for consolidated trips. This documentation has been prepared to describe the structure of the computer files in which these data are stored.

## HISTORY

=====

The historical South Atlantic shrimp data collection dates back to 1956 when hard copy reports were published reporting commercial catches by state, port, month, species, size, pounds (heads-on), and value of shrimp landed. These reports are published and available through 1978. Starting with 1962, these reports were computerized; however, the computerized reports do not contain species or size compositions. Beginning in 1978 for the states of North Carolina and Georgia, 1979 for South Carolina, and the Florida East Coast in 1981, the detailed shrimp statistics data collection system became operative. This system was designed by the Shrimp Technical Committee of the South Atlantic States Marine Fisheries Commission and was oriented towards individual trip data collection. Beginning in 1982, the SEFSC and the four coastal states in the South Atlantic established a cooperative program for the collection and processing of shrimp statistics. Although the data collection and processing were shared by the SEFSC and the State Cooperators, it was agreed that the data would be maintained on a mainframe computer owned by the NMFS, but accessible by all partners. Currently, these data are stored on the NMFS SECPR Oracle server in Miami, Florida.

After 1992, North Carolina and Florida quit collecting detailed shrimp information. The Florida data does not include Monroe County or bait shrimp. South Carolina data includes mariculture shrimp and Georgia includes bait shrimp.

## Data Base Description and Record Format

=====

As established by the Shrimp Technical Committee, data for this data base are collected for individual trips. A trip is defined as the time when a vessel (or boat) departs to conduct fishing activities until the vessel (or boat) returns and unloads its catch. Port samplers that collect the data from seafood processors and dealers are instructed to prepare a separate data entry form or schedule for each trip that the dealer has sales information for.

The organization of the data in the data base also follows the trip concept. However, because the data base uses a fixed-record format, it is likely that more than one record exists for a single trip. The reason for multiple records per trip is that a single record is used for each species, size and area/subarea where the shrimp were reportedly caught.

Thus, if both pink and brown shrimp were caught in two separate areas, then there would be four records associated with this fishing trip. The user must be aware of this organization when using the data base. It is recommended that when users need information about individual fishing trips, the data be sorted by schedule number, port, date and dealer number. Sorting the data with these parameters (fields) will assure that all of the records associated with a single trip will be physically located together in the (sorted) data file. For trip effort information, the file needs to be indexed on state, year, month, day, county, dealer, schedule unique.

It should also be noted that the number of trips is recorded in one of two fields. If the trip was made by a vessel (i.e., a craft that is five net tons or greater), the number of trips is recorded in the Vessel Trip field, i.e., the 10th field in the record (note, the record format and field names are provided in the Appendix). If the trip (or trips) was (were) made by a boat, then the number of trips is recorded in the Boat Trip field, i.e., 11th field in the record. Thus, if the user wants the total number of trips, then the values in both of these fields must be summed. For the majority of the records, the value in either of these two fields is 1; however, port samplers do combine information from more than one trip on a single schedule in some situations. For example, if the identification numbers for several vessels are not known, then the port agents are instructed to consolidate the data from these trips into one schedule for the same date of return. Trip consolidation is also used when the trips are made by boats because they do not have a registration number that has been issued by the U.S. Coast Guard, and the data collection policy is not to record data by state registration number. In addition, port agents in Georgia have been instructed not to record vessel identification number, either Coast Guard or State registration numbers. Beginning in 1991 for South Carolina, the number in the vessel field is total trips of vessels and boats - not total trips for vessels.

The U.S. Coast Guard registration number is provided in the 14th field, Vessel ID Number. If the trip is for a single vessel and the U.S. Coast Guard number is unknown, a value of 999999 is entered in the ID Number field. For consolidated schedules and the records for fishing that occurred in Georgia, this field is filled with zeroes.

Calendar Days Fished is a record of the trip duration, described as the number of days spent fishing on a particular trip. Days, in this case, are defined as any part of a day (12:01 A.M. to midnight) in which a craft actually catches or tries to catch shrimp. When more than one area or subarea is fished during a trip, the calendar days are prorated according to the percentage of time spent fishing in each area for that trip. In this case the calendar days fished may include decimals and would give the

total trip duration only when added to calendar days of other listings with the same schedule number, port number, date, and dealer number.

South Carolina has two sources of Calendar Days Fished data. Forty percent of the data is reported by shrimp dealers, with the remaining data calculated by port agents. Prior to 1986, Calendar Days Fished was assigned by the agent based only on the amount of the catch and size of the vessel. Since 1986, all data not supplied by dealers is assigned by comparing trip tickets with the last date of unloading, along with the amount of the catch and the agent's fishery knowledge. Beginning in 1991, South Carolina stopped collecting effort data.

The Tenths of Days Fished field is a number obtained by dividing the actual number of hours that the net was in the water while fishing in a particular area by 24. This result is given in decimal form. (For example 090 would be 9 days fished and 003 would be .3 days fished.) In South Carolina this field shows the actual tenths of days fished only for those trips in which an interview was conducted - about five percent. For all other trips, a value of 7.5 is assigned to this field.

The point of landing is listed by state and county in the first two fields. In South Carolina, however, the state and county listed are for the first point of purchase, rather than the point of landing.

The shrimp data includes a grading code which gives information about whether the shrimp size listed is based on the actual size after sorting (code 2) or on an average catch size (code 1). Georgia and South Carolina do not follow this coding system. Instead, Georgia codes all shrimp as 1 whether they have been sorted and graded or not. For South Carolina, a coding of 1 means that either no grading occurred or that only one grade was recorded for the trip. Code 2 signifies that the catch was graded and that more than one grade was landed.

The distance from shore a catch was taken is given in the Subarea field for all offshore areas. An offshore area is generally described as being a geographic location extending from any point of land on the coast line out to the open ocean excluding sounds, inlets, rivers, bays, intercoastal waterways, etc. These offshore areas are further divided by subareas which are in three distinct groups according to distance from the shore line; i.e. 0-3 miles, 3-12 miles, and 12-200 miles. Inshore areas are generally described as bodies of saltwater other than offshore areas including sounds, inlets, bays, tidal portions of rivers, estuaries and other salt or brackish water.

Area and subarea fields may show the following irregularities. The subarea code 00 is given by Georgia port agents when the subarea is unknown. In South Carolina, the county code 64 is used for both Jasper and Beaufort counties.

Pounds: The quantity for each species and size. The quantity is the actual weight of the shrimp in pounds, heads-off.

Unit Cost is the average ex-vessel price per pound paid to the fisherman for heads-off shrimp for each species and size reported. The ex-vessel price does not include charges for unloading, grading, icing, packing, cartage, etc. The unit cost is obtained from dealers' records, personal observation, and from information acquired through interviews. For landings in South Carolina, ex-vessel price data have been assigned by computer algorithm based on monthly dealer prices and known packing and heading costs.

Identification of commonly co-occurring shrimp species in South Carolina is carried out by applying the results of independent state surveys to all commercial catches. These surveys are conducted in the following way: Prior to 1985, species composition was determined by counting the proportion of each species in a sample of fifty shrimp and applying that result to the entire catch. The current procedure uses samples weighing two to three pounds that contain at least 50 shrimp each. These samples are sorted by species and are then weighed, giving an estimate of the species make-up for that trip and grade.

The Date of Landing field gives the unloading date for a trip by month, date and year. South Carolina gives the exact unloading date only for those landings which are recorded by trip specific weigh-outs; about 70 percent. Information for the remaining landing dates is reported via monthly dealer reports which give the landing date as the 15th of the month, unless the trawling season was not open for the entire month for that area fished. In this case the date is coded with the modal day. In 1991 South Carolina started coding the date of landings as 7, 14, 21 and 28 (first week, second week etc.) Day 29 would represent days 29, 30 and 31, and Day 15 would represent a monthly report. North Carolina dates most of its consolidated schedules on the Friday of each week because nearly all buyers calculate weekly catch totals and settle accounts with the fishermen on Friday.

Appendix 1

SOUTH ATLANTIC SHRIMP FORMAT  
of the Flat files as  
they were stored on the A10

=====

COLUMN	FIELD
1 - 2	State Landed
3 - 4	County Landed
5 - 8	Area Caught
9 - 10	Distance From Shore
11 - 13	Dealer Number
14 - 19	Date Landed(mmddy)
20 - 22	Schedule Number
23	Grading
24	Gear Code
25 - 30	Vessel Trip
31 - 36	Boat Trips
37 - 39	Calendar Days Fished
40 - 44	Tenth Of Days Fished
45 - 50	Vessel ID Number
51	Species Code
52 - 53	Size
54 - 58	Pounds Caught (heads off)
59 - 62	Unit Cost (price per pound)
63 - 65	Filler

STATE CODES

=====

STATE CODE	STATE
=====	=====
36	North Carolina
43	South Carolina
13	Georgia
10	Florida (east coast)

COUNTY CODES

=====

NORTH CAROLINA	SOUTH CAROLINA	GEORGIA	FLORIDA
=====	=====	=====	=====
Dare (90)	Horry (60)	Chatham (33)	Nassau (22)
Hyde (91)	Georgetown (61)	Bryan (34)	Duval (23)
Beaufort (92)	Charleston (62)	Liberty (35)	St.Johns (24)
Pamlico (93)	Colleton (63)	McIntosh (36)	Volusia (25)
Carteret (94)	Beaufort (64)	Glynn (37)	Brevard (26)
Onslow (95)		Camden (38)	St.Lucia (27)
New Hanover (96)			
Brunswick (97)			
Pender (98)			
Craven (99)			

AREA AND SUBAREA CODE FORMATS

=====

AREA	SUBAREA CODE	DESCRIPTION
====	=====	=====
XXX0	X1	Offshore location of 0 to 3 miles
XXX0	X2	Offshore location of 3+ to 12 miles
XXX0	X3	Offshore location of 12+ miles
XXXZ	XX	Inshore location

(X is any digit 0 to 9, Z is any digit 1 to 9)

GEAR TYPE

=====

Shrimp Trawl (A)  
Channel Net (B)  
Butterfly Net (C)  
Other [prior to 6/84] (D)  
Pound Net [after 6/84] (D)  
Crab Trawl (E)  
Fish Trawl (F)  
Cast Net (G)  
Seine (H)  
Skimmer Trawl (I)  
Other (Z)

GRADING CODE

=====

1 - Average Size Caught  
2 - Actual Size



SPECIES

=====

- 1 - Brown
- 2 - Pink
- 3 - White
- 4 - Sea Bobs
- 5 - Royal Red
- 6, 7, & 9 - Aquaculture
- 8 - Rock
- B - Bait

SIZE - NUMBER OF SHRIMP PER POUND

=====

- 11 - Under 15
- 21 - 15 - 20
- 31 - 21 to 25
- 41 - 26 to 30
- 51 - 31 to 35
- 52 - 36 to 40
- 61 - 41 to 45
- 62 - 46 to 50
- 71 - 51 to 55
- 72 - 56 to 60
- 81 - 61 to 70
- 91 - Over 70

**David R. Gloeckner**

**Home address:**

4719 Hayes Street  
Hollywood, Florida 33021  
954-593-5456 (cell)

**Office address:**

SEFSC  
75 Virginia Beach Drive  
Miami, Florida 33149  
305-361-4257 (work)  
[David.Gloeckner@noaa.gov](mailto:David.Gloeckner@noaa.gov)

---

**Education**

**B.S.** (Zoology), Ohio State University, Columbus, Ohio, 1996.

**M.S.** (Biology), East Carolina University, Greenville, North Carolina, 2002.

**Ph.D.** (Coastal Resources Management), East Carolina University, Greenville, North Carolina, 2009.

**Work Experience**

***July 2010***

***to Present***

**Supervisory Survey Statistician**

Southeast Fisheries Science Center

National Marine Fisheries Service

Miami, Florida

- Supervise 20 scientific staff running 5 data programs
- Oversee distribution of fishery dependent data to the stock assessment process
- Manage development of new data collection methods in the Southeast

***August 2003***

***to July 2010***

**Fishery Biologist**

Southeast Fisheries Science Center

National Marine Fisheries Service

Beaufort, North Carolina

- Dockside sampling (TIP) coordinator
- Data manager for landings, vessel and TIP databases
- Provide data and analyses on length sampling for stock assessments

***May 2003***

***to August 2003***

**Marine Fisheries Biologist 1**

DMF Central Offices

NC Division of Marine Fisheries

Washington, North Carolina

- Lead biologists for riverine gill net survey and long-haul gillnet fishery
- Oversaw training, sampling and scheduling of 2 technicians
- Provided reports on trends in the long-haul seine fishery

***July 1998***

***to May 2003***

**NMFS Port Agent**

Northeast Regional Office

National Marine Fisheries Service

Beaufort, North Carolina

- Collected, edited and entered federal landings data for NC
- Monitored and forecasted quota for summer flounder
- Served as part of scientific crew aboard research vessels

***March 1998***

***to July 1998***

**Fisheries Research Technician** Ohio State University

Aquatic Ecology Laboratory

Columbus, Ohio

- Collected black and white crappie samples in Ohio reservoirs
- Serviced and repaired sampling equipment and vehicles

***April 1997 to***

***October 1997***

**Fisheries Research Assistant**

Aquaculture Laboratory

Ohio State University

Columbus, Ohio

**David R. Gloeckner**

- Managed closed system aquaculture laboratory
- Carried out culturing and research on sea lamprey and zebra mussels

**December 1996  
to April 1997**

**Field Biologist**

NMFS Observer Program

Alaskan Observers Inc.

Seattle, Washington

- Collected catch and effort data aboard commercial fishing vessels operating in the Bering Sea.

**Committee Participation**

ACCSP Bio-sampling Committee (2005-2010)

ACCSP Commercial Technical Committee (2007-Present)

Fishery Information System (FIS) Electronic Reporting Professional Specialty Group (2007-Present)

**Publications**

**Gloeckner, D.** 2001. Assessment of North Carolina commercial finfish fisheries: Long-haul seine fishery assessment. Completion Report for Project 2-IJ-63, North Carolina Division of Marine Fisheries.

Summers, K., S. McKeon, J. Sellars, M. Keusenkothen, J. Morris, **D. Gloeckner**, C. Pressley, B. Price and H. Snow. 2003. Parasitic exploitation as an engine of diversity. *Biological Reviews*, 78:639-675.

**Gloeckner, D.** and J. Luczkovich. 2008. Tri-level trophic interactions in a North Carolina seagrass bed: The effects of the exclusion of gulf flounder and spot on benthic polychaetes. *Journal of Experimental Marine Biology and Ecology*, 357: 109-120.

Proposal for Funding made to:

Atlantic Cooperative Statistics Program

Operations and Advisory Committees

1050 N. Highland Street, Suite 200 A-N

Arlington, VA 22204

## **Identification of Potential Errors and Development of a Data Flag System for the Trip Interview Program**

**Submitted by:**

**Lawrence Beerkircher**

**NOAA Fisheries Southeast Fisheries Science Center**

**Miami Laboratory**

**75 Virginia Beach Drive**

**Miami FL 33149**

**[Lawrence.r.beekircher@noaa.gov](mailto:Lawrence.r.beekircher@noaa.gov)**

**Applicant Name:** NOAA Fisheries Southeast Fisheries Science Center

**Project Title:** Identification of Potential Errors and Development of a  
Data Flag System for the Trip Interview Program

**Project Type:** New

**Principal Investigator:** Lawrence R Beerkircher,  
Chief, Fisheries Sampling Branch Miami Laboratory

**Requested Award Amount:** \$ 82,250

**Requested Award Period:** For one year, beginning after the receipt of funds

**Date Submitted:** June 27, 2014

**Objective:**

To examine the Trip Interview Program (TIP) data for potential data errors and miscodings, and to develop a flag system that will allow users to quickly filter data to exclude any combination of error type.

**Need:**

Implemented in 1984, the TIP represents a State-Federal partnership to collect biosamples and other associated data from a representative sample of commercial fishing trips throughout the Southeast and U.S. Caribbean. These data provide critical information for the stock assessment process for commercially and recreationally important Federally-managed species in the Southeast Region, including catch at age and catch at size. In addition, ACCSP partner states can access the data for intra-state assessment needs (e.g. Florida for flounder, black drum, etc.). Of the 5 southeast species listed in the upper quartile in the current ACCSP Biological Sampling Priority Matrix, TIP contains 262,957 observations for the south Atlantic alone.

The data collected via TIP is stored in a large, relatively (for fisheries data) complex database; which for the South Atlantic region alone is made up of 86,821, 406 pieces of information stored in 6 data tables with a total of 206 data fields. TIP data are all manually key punched directly into production database tables via a web-based data entry application. Presently length data are not collected by electronic fish measuring boards, so individual length observations are manually entered one at a time using this web application.

TIP data collection protocols have historically been provided to samplers via a combination of written manuals, written formal memoranda and informal correspondence, and during occasional sampler conferences. However, sampler adherence to the protocols was never formally monitored in a universal or pervasive fashion. An ad hoc system of quality assurance has been generally employed; as data users made the TIP Coordinator aware of suspect data, the Coordinator would attempt to identify if this was a coding error being made by either a single sampler, or a larger number of samplers, and then react accordingly.

TIP data quality control has been, until relatively recently, handled in a similar fashion to above. Samplers would generally enter their own data themselves, and the apart from some constraints built into the data entry program itself, entered data was assumed to represent the actual data as collected by the sampler. In 2010, the Federal TIP samplers initiated a system of “cross-checking”, a data proofing process where one sampler sends the original data sheet to a coworker, who compares it the key-punched data in the database. If any discrepancies are found, they are resolved and the trip is considered final. However, Federal samplers account for only 45% of the interviews in TIP; the balance being made up by State and Territorial samplers who do not employ documented proofreading procedures. Additionally, although suggested data forms are provided in the TIP manual, the multi-partner nature of TIP and the fact that completed data forms are not able to be reviewed by the TIP coordinator prior to entry make significant reduction of errors via data form updates inefficient.

Beginning in 2012, the NOAA Fisheries Southeast Fisheries Science Center began a process to review the TIP data collection protocols and identify areas where samplers were not adhering to established documented procedures. During this review, it became clear that there were a number of areas where samplers were interpreting the protocols incorrectly. This led to the development of a new and expanded TIP manual which implemented standardized protocols in 2014 and perhaps just as importantly a set of monitoring procedures which are intended to be used to identify deviations from the established

protocols. Timely correction of these recent deviations is intended; however correction of historical issues is not being addressed.

During the TIP standardization project not only were deviations from established protocols found, but obviously errant data were also discovered. This was not surprising in a database of this size, and in fact some prior view tables built on the data had already flagged some out of range data. For example, 7,843 length observations are flagged as being “unusual” (either unreasonably high or low).

Identifying errant data and data that did not conform to established protocols, or developing a system to quickly identify these data, should significantly reduce the amount of time spent by assessment staff or others in this data prep work. As assessment needs increase, the time demands on staff with the skill to conduct the necessary analyses become more critical, and developing a way to more efficiently conduct the data preparation will have significant benefits.

### **Results and Benefits:**

Although the number of samplers currently involved in TIP data collection relative the number who have been involved over the years is relatively low, we still believe we will be able to correct a number of obviously errant data in the TIP files. Because these data are used so often as input for stock assessment, the increased data quality should be beneficial.

The most important result from the proposed work it should create the ability for very quick data filtering. Depending upon the type of analysis being done, a certain data flag may indicate that a record should be excluded, or at least warrant closer examination by the analyst. This should save the analyst time which can then be directed in to the analysis itself, or faster completion of the analysis.

### **Approach:**

#### **Development of flag system:**

Global changes in historical data based on unreasonable values are not going to be considered in this approach, this will allow for data continuity. Instead, a system of data flags will be developed that will allow for identification of a potential error in each record for which a flag is present. The goal will be to create a system where the flags based upon sufficiently specific criteria to allow a user to potentially unconditionally filter records with a give flag, but not be so specific that the number of different potential flags become unwieldy and inhibits their usefulness to the end users.

A flag coding system will be developed for each of the 6 main data tables in TIP. Due to the relative complexity of the data collected, flags will only be developed for relatively common errors or errors that directly affect the viability of the record itself (the record becomes essentially useless for any purpose if the flag is representative of an actual error). Flag fields will be developed for each of the 6 main data tables in TIP. The number of flag fields needed in each table will be dependent upon the identification of how many potential different error types could occur in that table’s data fields.

Since the use of flags by the end applicants is one of the main goals, frequent consolation with end users of TIP data will take place during the development. This will serve to make certain that the flag system is practical for use by the analysts.

**Review to identify records to be flagged:**

A set of queries will be developed to search the data tables for out of range data, null values where unexpected, or values that are not consistent with the values of other variables associated with that record. In cases where the sampler who collected the data is available for contact, and effort will be made to resolve the discrepancy and if necessary having the sampler make a correction. If the sampler is no longer available or cannot help to resolve the issue, the record will be marked for potential flagging. The records marked for potential flagging will be categorized by flag type and the number of records for each flag type summed. Final review to determine which records will receive flags will then occur depending on the number of the records affected, of the nature of the flag.

**Insertion of flags to the database and documentation:**

Flag columns will be added to the main TIP data tables and populated with the appropriate flag codes. Associated view tables will also be modified to allow population of the flag codes. Complete documentation of all flag codes will be produced and made available to all TIP data users and entered into the SEFSC metadata for TIP. This documentation will not only include the type of flag and the criteria used to assign that flag to a record, but also examples and a number records that the flag applies to.

**Geographic Location:**

TIP data collection occurs in all South Atlantic Coastal States, as well as Gulf Coast States and U.S. Caribbean (Puerto Rico and the U.S. Virgin Islands). The actual location of the PI and the contract biologist working on the project will be at the NOAA Fisheries Southeast Fisheries Science Center Miami Laboratory.

**Table 1. Milestone Schedule**

Task	Month											
	1	2	3	4	5	6	7	8	9	10	11	12
Contract Award	X											
Hire Staff	X	X										
Staff familiarize themselves with TIP		X	X	X	X	X						
Development of flag system				X	X	X	X	X				
Identification of data to be flagged						X	X	X	X	X		
Apply flags									X	X	X	
Create documentation											X	X

Two semi-annual reports will be submitted at the end of the seventh and thirteenth month with the final report submitted fifteen months after receipt of funds.

**Project Goals and Metrics:**



The overall goal is to develop an effective, user-friendly data flagging system for and apply it to the Trip Interview Program database. The goal will be met if the system allows users to quickly identify and/or filter data they do not believe is correct for use in analyses.

**Cost Summary and Outlook on Future Funding:**

Costs for this project are mainly in labor with a small amount for purchase of a computer. SEFSC staff will provide overall direction to the staff involved in the project. This request is expected to be a single occurrence. Once the flag system is developed and historical data edited, SEFSC Staff will maintain quality on incoming data and apply flags as needed. No transition from ACCP funded activities to NOAA-funded activities should be necessary; this is a review of historical data and is expected to be fully completed by the end of the funding period.

**Table 2. Cost summary for TIP data error identification and flag system development.**

Description	Calculation	Cost	In Kind
<b>Personnel (a)</b>			
Fishery Biologist II	\$40/hr	\$81,600	
Principal investigator	1% of \$110,000		\$1,000
TIP Coordinator	5% of \$70,000		\$3,500
TIP database administrator	5% of \$95,000		\$4,750
<b>Fringe (b)</b>			
N/A			
<b>Travel (c )</b>			
N/A			
<b>Other (e )</b>			
Computer	1 @ \$650 ea	\$650	
Monitor	1 @ \$250 ea		\$250
Office Supplies			\$100
<b>Totals</b>			
Total Direct Charges (f)		\$82,250	
Indirect Charges (g)			
Total (sum of Direct and Indirect) (h)		\$82,250	
Total In-Kind			\$9,600

**Cost Details:**

**1. Fishery Biologist II:**

Estimate 1 year of a single contract employee for identification of errors and development of flag system. In Kind represents oversight and support by existing SEFSC staff.

**2. Computer:**

Purchase of a desktop PC for use by the contract employee. In Kind represents provision of a monitor by the SEFSC.

**3. Office Supplies:**

Complete In Kind provision of consumable office supplies for the contract employee.

**Table 3. Totals by Federal Grant Object Classes:**

Description	Federal Share
Equipment:	\$650
Contractual:	\$81,600
Total Direct:	<b>\$82,250</b>

**Summary of Proposal for Ranking Purposes**

**Proposal Type:** *New*

**Primary Program Priority:**

**Biological Sampling:** Project is targeted towards improving quality and usefulness of a critical commercial biosampling database, and will cover the biological (100%) module.

**Project Quality Factors:**

**Multi-Partner/Regional impact including broad applications:**

Data quality improvements resulting from this project will affect both data used in Federal species management as well as species managed by specific state partners. In addition, efficiencies of data preparation will be realized by all partner analytical staff.

**Greater than year 2 contains funding transition plan:**

Not applicable this is a one year proposal.

**In-kind contribution:**

12%. SEFSC will provide staff time in support of the project, as well as some equipment and supplies.

**Improvement in data quality/quantity/timeliness:**

The project will improve quality of data in the commercial sector by identification and resolution of potential errors in the TIP biosampling database. Timeliness improvements will result from decreases in data preparation times when analyst apply selected flag filters.

**Potential secondary module as a by-product:**

Not applicable

**Impact on stock assessment:**

Should improve both the quality of the biosampling data used in stock assessments as well as decrease time demands on assessment scientists.

**Primary investigator's Curriculum Vitae:**

**Lawrence Ronald Beerkircher**

**Education:**

May 2000: M.S. Marine Biology/Coastal Zone Management, Nova Southeastern University, Davie Florida

December 1996: B.S. (with Highest Distinction) Fisheries and Aquaculture, University of Rhode Island, Kingston RI

**Experience:**

National Marine Fisheries Service, Miami, Florida (2010-Present). Supervisory Fisheries Biologist (ZP-IV) Chief, Fishery Sampling Branch. Responsible for the coordination of the Federal Port Agents in the southeast as well as supervising the staff of the Pelagic Observer program. As Trip Interview Program (TIP) Coordinator, responsible for database table updates and extractions.

National Marine Fisheries Service, Miami, Florida (1998-2010). Research Fisheries Biologist Various positions within the Pelagic Observer Program (ultimately Coordinator). Duties include coordination of observer deployments with commercial fishermen and observers, training of observers in pelagic fish species and sex identification, and sea safety training. Responsible for debriefing of observers and maintenance and quality control of observer database. Produce technical memoranda (program data summaries) for publication as required. Produce both white and grey literature as time permits.

South Florida Aquaculture, Florida City, Florida (Jan 1997- July 1998; July 1998 – Dec 2001 consultant) Commercial fish culture operation, duties include all aspects of fish systems maintenance, product harvest, and delivery. Develop/oversee water quality monitoring program, diagnose and treat disease, research new species and technology for future use at the facility. Identify and remove/control exotic vegetation on the property. Job site outdoors adjacent to the Everglades National Park.

### **Achievements, Memberships, and Training:**

2011 NMFS Employee of the Year Award (Supervisor Category), 2011 Department of Commerce Bronze Medal Award, 2004 Department of Commerce Bronze Medal Award, 2000 Nova Southeastern University Distinguished Student of the Year (Oceanography), 1996 URI L. Robert Crandall Scholarship, 1996 URI Durfee Scholarship. Member, Phi Kappa Phi Honor Society. CPR certification (American Red Cross), fishery observer certification (National Marine Fisheries Service), marine safety instructor certification (Alaska Marine Safety Education Association), associate fisheries scientist certification (American Fisheries Society). Attended sea turtle handling/gear removal trainings 7/26/01, 6/5/02, and 5/27/03.

### **Selected Publications:**

Beerkircher, L., E. Cortes, and M. Shivji. 2003. A demographic analysis of the silky shark, (*Carcharhinus falciformis*): implications of gear selectivity. *Fishery Bulletin* 101:168-174.

Beerkircher, L., E. Cortes, and M. Shivji. 2008. Elasmobranch bycatch in the pelagic longline fishery off the southeastern U.S., 1992-1997. *in* Sharks of the Open Oceans. Ocean Wildlife Campaign.

Beerkircher, L.R. 2004. Characteristics of blue, *Prionace glauca*, and shortfin mako, *Isurus oxyrinchus*, shark bycatch observed on pelagic longlines in the northwest Atlantic, 1992-2003. *ICCAT SCRS/2004/106*.

Beerkircher, L. R. 2004. Length to weight conversions for wahoo, *Acanthocybium solandri*, in the northwest Atlantic. *ICCAT SCRS/167*.

Beerkircher, L.R., D.W. Lee, and G.F. Hinteregger. 2008. Roundscale spearfish *Tetrapturus georgii* (Lowe 1840); morphology, distribution, and relative abundance in the western North Atlantic. *Bull. Mar. Sci.* 2(1):155-170.

Beerkircher, L., C.A. Brown, and V. Restrepo. 2009. Pelagic observer program data summary, Gulf of Mexico bluefin tuna (*Thunnus thynnus*) spawning season 2007 and 2008; and analysis of observer coverage levels. *NOAA Technical Memorandum NMFS SEFSC-588*

Beerkircher, L, F. Arocha, A. Barse, E. Prince, V. Restrepo, J. Serafy, and M. Shivji. 2009. Effects of species misidentification on population assessment of overfished white marlin *Tetrapturus albidus* and roundscale spearfish *T. georgii*. *End. Sp. Res.* 9:81-90.

Beerkircher, L. R., and J.E. Serafy. 2011. Using head measurements to distinguish white marlin *Kajikia albida* from roundscale spearfish *Tetrapturus georgii* in the western North Atlantic. *Bull. Mar. Sci.* 87(1):147-153.

Burgess, G.H., L.R. Beerkircher, G.M. Cailliet, J.K. Carlson, E. Cortes, K.J. Goldman, R.D. Grubbs, J.A. Musick, M.K. Musyl, and C.A. Simpfendorfer. 2005. Is the collapse of shark populations in the Northwest Atlantic Ocean and Gulf of Mexico real? *Fisheries* 30(10):19-26.

Shivji, M, J. Magnussen, L. Beerkircher, G. Hinteregger, D. Lee, J. Serafy, and E. Prince. 2006. Validity of the roundscale spearfish: a morphological and molecular perspective. *Bull. Mar. Sci.* 79(3):483-491.

Cortes, E, C. A. Brown, and L.R. Beerkircher. 2007. Relative abundance of pelagic sharks in the western north Atlantic Ocean, including the Gulf of Mexico and Caribbean Sea. *Gulf and Carib. Res.* 19(2):37-52.

Carlson, J. K., E. Cortes, J.A. Neer, C.T. McCandless, and L.R. Beerkircher. 2008. The status of the United States Population of Night Shark (*Carcharhinus signatus*). *Mar. Fish. Rev.* 70(1):1-13.

Cortes, E., F. Arocha, L. Beerkircher, F. Carvalho, A. Domingo, M. Huepel, H. Holtzhausen, M. Santos, M. Ribera, and C. Simpfendorfer. 2009. Ecological risk assessemnt of pelagic sharks caught in Atlantic pelagic longline fisheries. *Aquat. Living Resour.* 22:1-10.

MacNeil, M.A., J.K. Carlson, and L.R. Beerkircher. 2009. Shark depredation rates in pelagic longline fisheries: a case study in the Northwest Atlantic. *ICES Jour. Mar. Sci.* 66:708-719.

Beerkircher, L.R. and D. Gloeckner. 2013. Fractions of Blueline Tilefish and Gray Triggerfish to Total Tilefishes and Triggerfishes from Sampling Data (TIP) 1983-2012. SEDAR 32 working paper.



## Atlantic Coastal Cooperative Statistics Program

1050 N. Highland Street, Suite 200A-N | Arlington, VA 22201  
703.842.0780 | 703.842.0779 (fax) | [www.accsp.org](http://www.accsp.org)

To the members of the Operations and Advisory Committees:

The FY2015 Administrative Budget request is similar to the FY2014 Administrative Budget request as we do not anticipate any significant changes in the Program's activities that are funded through the ACCSP Administrative Budget.

Changes to the FY2015 Administrative Budget request for this year includes an increase of approximately 5.5%. This includes a planned increase in overall personnel costs caused by normal salary increases and increase of 2% in the estimated fringe benefits from 25% to 27% requested by the Atlantic States Marine Fisheries Commission, and an increase in travel costs associated with the Recreational Technical Committee and additional outreach in response to the 2012 Independent Program Review.

Attachment 2 of the FY2015 Administrative Budget request contains the Implementation Plan and provides an overview of the high level tasks and milestones expected for the coming year.

Sincerely,

Michael S Cahall,

Director, ACCSP

**Funding Proposal  
FY15 ACCSP Administrative Budget**

Applicant Name: Atlantic States Marine Fisheries Commission

Project Title: Administrative Support to the Atlantic Coastal Cooperative Statistics Program

Principal Investigator: Michael S. Cahall, Director, ACCSP

Requested Award Amount: \$1,731,666 w/o New Jersey and New York State Support  
\$2,065,993 with New Jersey and New York State Support <sup>1</sup>

Request Type: Maintenance/Administrative

Requested Award Period: March 1, 2014 through February 28, 2015

**A. Goals**

The Atlantic Coastal Cooperative Statistics Program (ACCSP) is a state-federal cooperative partnership between 23 entities responsible for fisheries management, and fisheries data collection on the Atlantic Coast: the 15 Atlantic coast states and the District of Columbia, two federal fisheries agencies (Commerce's NOAA Fisheries and Interior's U.S. Fish and Wildlife Service), three regional fisheries management councils (New England, Mid-Atlantic and South Atlantic), the Potomac River Fisheries Commission, and the Atlantic States Marine Fisheries Commission (ASMFC). Partner agencies are listed in the original [ACCSP Memorandum of Understanding](#).

The Program was established in 1995 to design, implement, and conduct marine fisheries statistics data collections programs and to integrate those data into a single data management system that will meet the needs of fishery manager, scientists and the general public.

By establishing and maintaining data collection standards and providing a data management system that incorporates state and federal data, ACCSP will ensure that the best available statistics can be used for fisheries management.

**B. Objectives (based on the 2014-2018 Strategic Plan)**

1. Manage and expand a fully integrated data set that represents the best available fisheries data;
2. Continue working with the program partners to improve fisheries data collection and management in accordance with the evolving ACCSP standards within the confines of limited funds;
3. Explore the allocation of existing Program funds and work with partners to pursue additional funding;
4. Maintain strong executive leadership and collaborative involvement among partners at all committee levels;
5. Monitor and improve the usefulness of products and services provided by the ACCSP;
6. Collaborate with program partners in their funding processes by providing outreach materials and other support to demonstrate the value of ACCSP products and the importance of

---

<sup>1</sup> This is an estimate based on previous years and subject to revision based on the review outcome.

maintaining base support for fishery-dependent data collection programs to state partners and their executive and legislative branches as well as to all other partner agencies

7. Support nationwide systems as defined in the Magnuson-Stevens Fishery Conservation and Management Act (MSA).

### **C. Need**

Various state and federal fishery management agencies on the Atlantic coast collect data on the status and trends of specific fish populations and the fisheries that utilize these resources; however, it is often difficult to develop sound recommendations to fisheries managers due to inconsistencies in the way data are collected and managed. The various data sets often cannot be integrated to provide accurate information at the state, regional, or coast-wide level. In addition, the disparate manner in which these data are collected and managed places duplicative burdens on fishermen reporting to multiple state and federal agencies and regions. Due to rapidly changing stock conditions, within-season regulatory changes and catch quotas have become common fishery management strategies. Timely and accurate harvest information for both recreational and commercial fisheries is required to determine the need for and effects of these management measures.

The [Atlantic Coastal Fisheries Cooperative Management Act of 1993](#) mandated a cooperative state-federal program for the conservation of Atlantic coastal fisheries. Section 804 of the Act requires the Secretaries of Commerce and the Interior to develop a program to support state fisheries programs and those of the Atlantic States Marine Fisheries Commission (ASMFC), including improvements in statistics programs. Since the mid-1990s, the ASMFC has provided administrative support for this coordinated effort to improve data collection and management activities.

In 1995 the states, the ASMFC, and the federal fishery management agencies on the Atlantic coast entered into a [Memorandum of Understanding \(MOU\)](#) to develop and implement a cooperative state-federal statistics program that will meet the management needs of all participating agencies. All program partners signed the MOU for the ACCSP at the Commission's 54th Annual Meeting in Charleston, South Carolina. Following signing, an Operations Plan was developed to outline the specific tasks and timetables required to develop and initiate implementation of this program. Annual Operations Plans are developed by the ACCSP to provide guidance on further development and implementation of the program.

### **D. Results and Benefits**

The ACCSP developed and adopted 1999, 2004 and 2012 versions of the Program Design (now renamed [Atlantic Coast Fisheries Data Collection Standards](#)), which document the standards and protocols for collection and management of commercial, recreational, and for-hire fisheries statistics (available at [www.accsp.org](http://www.accsp.org)). Program partners developed and approved minimum data elements for collection of catch, effort, biological, social, and economic statistics. The ACCSP also developed standard codes and formats to ensure consistency of all data collected under the program. These standards require periodic review and revision as the needs of fisheries managers and the state of the art of fisheries science changes.

In 2000, the first version of the [ACCSP Data Warehouse](#) was made available to the program partners. Since then, it has grown to encompass a 50 plus year time series of fisheries dependent catch and effort data. Loading of biological data has begun. These data are constantly reviewed and updated as needed.

In 2004, the first version of the [Standard Atlantic Fisheries Information System \(SAFIS\)](#) was deployed. This system is used to collect Program compliant data from commercial and recreational fishermen and dealers and is now deployed from Maine to Virginia. Efforts are under way to deploy it as far south as Georgia. SAFIS is an ongoing and evolving system, requiring support, review and revision.

The ACCSP will continue to reduce duplication of effort by dealers and fishermen, make more efficient use of limited funds, promote education of resource users, and provide a more complete information base for



formulating management policies, strategies, and tactics for shared resources. An integrated multi-agency program using standard protocols for reporting compatible information will lead to more efficient and cost-effective use of current federally and state funded data collection and management programs. The ACCSP will reduce the burden on the fishing industry to provide information in multiple formats to multiple agencies, and will provide more accurate and timely information to achieve optimum public benefits from the use of fishery resources along the Atlantic coast. The ACCSP will ensure the timely dissemination of accurate data on commercial and recreational fisheries for use in stock assessments and fisheries management through a comprehensive and easily accessible data management system.

## **E. Approach**

The ACCSP is managed collaboratively by committee; the Coordinating Council, composed of high level fisheries policy makers from all the Program Partners, is the governing body, the Operations Committee provides guidance in standards setting and funding priorities. An Advisory Committee provides industry input into the process. A number of other technical committees provide input into various aspects of the process.

Program planning builds on basic principles related to the goals stated in the ACCSP MOU, the 2006 Peer Review Report and the 2012 Independent Panel Review:

- Development of data collection standards and the implementation of data collection programs will be done cooperatively, across jurisdictional lines,
- Consistent coast-wide data collection standards will be implemented by all Program Partners that include data on all fishing activities -- commercial, recreational, and for-hire fisheries,
- Once achieved, data collection improvements will be maintained,
- These data will be loaded and maintained in a central data repository and provided to data users through a user-friendly query system,
- Program planning will be done collaboratively, by consensus,
- The program will be responsive and accountable to partner and end-user needs, and
- Focus on activities that yield maximum benefit

The FY15 Implementation Plan (Attachment 2) details activities to be conducted by ACCSP staff and committees under the FY15 Administrative Budget.

The ACCSP initially developed common standards collaboratively, by consensus, then began to work with program partners to implement the standards, according to a commonly agreed upon priority. All ACCSP committees, except for the Advisory Committee which is composed of industry and recreational representatives, are composed of managers and staff of the partner agencies and set policy by consensus.

The standards, known as the [Atlantic Coast Fisheries Data Collection Standards](#), for data collection and management are developed and maintained by ACCSP Technical Committees, with review and oversight by the Operations Committee, and advice from the Advisory Committee. The ACCSP Coordinating Council makes policy level decisions to adopt the program standards. The full-time ACCSP staff coordinates all activities conducted by the ACCSP.

The [Atlantic Coast Fisheries Data Collection Standards](#) documents all completed standards and provides the basic framework for full implementation of the ACCSP by all program partners. Several aspects of the ACCSP are still in development and implementation of several ACCSP modules is occurring in various jurisdictions. The ASMFC has been given the responsibility to provide administrative support to ACCSP activities. To this end, funding is required to provide for full-time staff for all ACCSP activities, as well as for travel and meeting expenses.

The ACCSP Director provides executive leadership for the program, overall programmatic management and guidance, and is responsible for the day-to-day operations. The ACCSP Program Manager provides assistance to the Director, coordinates Program activities and publicizes the availability and benefits of the

ACCSP Program. The Program Assistant provides staff support for program and technical committees and drafts, maintains and coordinates program documents. The Software Team Leader coordinates the development and management of ACCSP data management systems. The Systems Administrator manages the information systems infrastructure. The Data Team Leader provides guidance for all data related activities. The Data Analyst, Data Coordinators and Fisheries Programmer provide programming capabilities and system support required to develop and fine-tune the data management system and assist users as they access the system. The Data Coordinators also directly participate in data intensive activities such as a stock assessment data workshop as needed. The Information System staff provides expert consultations to partners as they implement new reporting and licensing/permitting systems. They also will continue to support development of SAFIS.

ACCSP staff will follow the FY15 Implementation Plan during FY15, in consultation with all ACCSP partners. Specific tasks to be accomplished during the period include initiation and maintenance of Partner data feeds from the commercial, recreational, and biological modules; continued implementation of SAFIS; transition to state conduct of MRIP dockside survey; and support of other partner projects (such as the ASMFC lobster trap tag allocation system) by providing technical expertise as necessary.

The ASMFC has basic responsibility for the logistics of all committee meetings which support the development of the ACCSP, including: the ACCSP Coordinating Council, the ACCSP Operations Committee, the Advisory Committee, the Outreach Committee (now combined with the ASMFC Outreach Committee), the Recreational and Commercial Fisheries Statistics Technical Committees and Subcommittees, the Information Systems Committee, the Biological Review Panel, the Bycatch Prioritization Committee, the ASMFC Stock Assessment Committee (used by ACCSP), and the ASMFC Committee on Economic and Social Science (used by ACCSP). Full-time ACCSP personnel staff these committees for planning of work, providing minutes and other documents, and other follow-up.

The ACCSP has helped foster an improved atmosphere of cooperation among its partners. The program has succeeded in establishing coast-wide fisheries data standards that all program partners have agreed to adopt. Data collection and management systems will be developed and deployed as the standards and Partner needs evolve. Program partners remain engaged in the process, and the program has made substantial progress towards its goals.

**1. Geographic Location:** Atlantic Coast from Maine through Florida.

**2. Milestone Schedule:** See FY15 Implementation Plan (Attachment 2)

This is a continuation from previous projects. Table 1 contains the base administrative budget amounts by year since implementation began in 1999.

**Table 1. Administrative funding for ACCSP from 1999-2014**

Year	Funding	Number of Staff
1999	\$907,902	3
2000	\$681,451	3
2001	\$1,054,466	5
2002	\$1,178,677	6
2003	\$1,302,768	7
2004	\$1,298,319	8
2005	\$1,409,545	8
2006	\$1,380,598	8
2007	\$1,489,189	8
2008	\$1,447,620	9
2009	\$1,527,996	9
2010	\$1,509,899	9

2011	\$1,530,699	9
2012	\$1,509,555	9
2013	\$1,582,780	9
2014	\$1,718,447	9.5

**3. Cost Summary:** The ACCSP requests \$1,281,715 for administrative support, committee travel and systems operations during FY15. The addition of the 35% overhead rate raises the request to \$1,730,316. If accounting for support for New Jersey and New York is included, the totals are: \$1,529,365 and \$2,064,643 respectively

The funds used for the Atlantic Coastal Cooperative Statistics Program shall be accounted for separately from all other ASMFC funds.

#### 4. Personnel

All Program personnel, except the Information Systems Manager are dedicated 100% to the ACCSP, and are full-time employees of the Atlantic States Marine Fisheries Commission. The Systems Manager is a shared position with the ASFMC under the joint supervision of the ACCSP Director and the ASMFC Director of Finance. Fringe benefits which include health care, vision, dental, annual and sick leave are calculated at 27%. ASMFC salaries are kept confidential, thus only totals are displayed.

- ACCSP Director - Michael S. Cahall
- Program Manager - Ann McElhatton
- Program Assistant – Elizabeth Wyatt
- Information Systems Manager – Edward Martino
- Software Team Leader - Karen Holmes
- Fisheries Programmer – Nicolas Mwai
- Data Team Leader - Geoffrey White
- Data Analyst - Jennifer Ni
- Senior Data Coordinator - Julie Defilippi
- Data Coordinator – Joseph Myers

<b>Salaries and Wages (ACCSP)</b>	<b>2015</b>
Total Salary	\$837,610
Benefits @27%	\$ 226,155
<b>Total Costs</b>	<b>\$ 1,063,764</b>

#### 5. Travel

Travel is broken down into two general categories; committee meetings and staff travel. The bulk of travel is in support of committee meetings. While significant savings have been achieved by using remote meeting technologies (such as on-line meetings), face-to-face meetings are often required to complete the tasks assigned. In general, each committee will have at least one face-to-face meeting during the year. In addition to staff travel to support committee meetings, staff travel is needed for implementation planning, data collection activities, outreach efforts, and information system development meetings with partners.

The Program funds fares to and from the meeting sight, per diem according to Office of Personnel and Management guidelines and facilities costs for the meeting itself. (The daily rate per meeting includes cost of airfare or mileage, lodging, meals and other travel related expenses.) Reimbursable participants include

state fisheries directors and biologists, state and university scientists, law enforcement personnel and citizen advisors from Maine through Florida. Meetings will be held in various locations on the Eastern Seaboard, including but not limited to: Annapolis, MD; Norfolk, VA; Charleston, SC; Philadelphia, PA; Alexandria, VA; Providence, RI; Jacksonville, FL; Washington, D.C. In addition, travel is included for various states to attend recreational data collection methodology and review workshops at the request of the Recreational Technical Committee (Attachment 4).

The Travel Budget is based on an estimated \$250 per day multiplied by meetings multiplied by days multiplied by membership plus staff. Additionally the budget includes travel to two recreational survey data coordination and review meetings as requested by the Recreational Technical Committee (Attachment 4) as well as additional travel for outreach as a response to the 2012 Independent Program Review.

<b>Committee Travel</b>	<b>Meetings</b>	<b>Days</b>	<b>Membership</b>	<b>Total</b>	<b>Staff</b>	<b>Total</b>	<b>Grand Total</b>
<b>Advisory Committee</b>	1	1.5	10	\$3,750	1	\$300	<b>\$4,050</b>
<b>Biological Review Panel</b>	0	1	12	\$0	1	\$0	<b>\$0</b>
<b>Bycatch Prioritization</b>	0	1	12	\$0	1	\$0	<b>\$0</b>
<b>Commercial Technical Committee</b>	1	1.5	14	\$5,250	1	\$300	<b>\$5,550</b>
<b>Coordinating Council (with ASMFC)</b>	4	0.5	12	\$6,000	2	\$800	<b>\$6,800</b>
<b>Operations Committee</b>	2	2	12	\$12,000	2	\$1,600	<b>\$13,600</b>
<b>Outreach</b>	1	1	10	\$2,500	1	\$200	<b>\$2,700</b>
<b>Recreational Technical Information Systems Committee</b>	2	2	14	\$14,000	1	\$800	<b>\$14,800</b>
	1	1	14	\$3,500	1	\$200	<b>\$3,700</b>
<b>Total Committees</b>				\$47,000		\$4,200	<b>\$51,200</b>
<b>Staff Travel</b>							
<b>Partner Coordination</b>	4	1	1	\$1,000			
<b>Data Support (Stock assessments, etc.)</b>	3	2	1	\$1,500			
<b>IT Support</b>	2	2	1	\$1,000			
<b>Outreach</b>	4	2	1	\$2,000			
<b>GulfFIN Coordination</b>	1	2	1	\$500			
<b>Recreational (Wave meetings)</b>	2	3	6	\$10,000			
<b>NJ Travel</b>				\$4,615			
<b>Total Staff Travel</b>				\$20,615			
<b>Grand Total</b>							<b>\$71,815</b>

Attachment 5 provides a tentative schedule of the funding cycle and calendar of meetings.

## 6. Supplies

Supply costs include supplies not covered by the ASMFC overhead. This includes ACCSP specific materials for outreach, smaller information systems items such as network switches and cables.

<b>Supplies</b>	<b>2015</b>
Misc Hardware (cables, network hubs etc)	\$4,651
Backup Tapes	\$2,000
	\$6,651

## 7. Equipment

ACCSP maintains several large server systems and related hardware in support of the Data Warehouse, Web Site, SAFIS and administrative functions. These systems typically have a 5 year life cycle after which they require upgrade or replacement. In cases of the larger items, lease options have been explored, but it appears that, in part due to current staffing, it is more cost effective to own and maintain the equipment internally. Note that in 2015 the Program plans no major system upgrades.

Included are the costs are normal life cycle replacements of laptop and desktop systems, assuming replacement of 3 systems annually. Costs are based upon current market surveys and an estimate of our needs. We assume the replacement of one major infrastructure component (server, router, firewall, etc.) yearly. We assume the replacement of three desktop/laptop systems per year.

<b>Equipment</b>	<b>2015</b>
Infrastructure Replacements (servers, UPS systems etc)	\$12,000
Desktop/Laptop Systems	\$5,000
<b>Total</b>	<b>\$17,000</b>

## 8. Other Costs

Hardware and software support are supplied by a number of different vendors and includes costs associated with licensing and maintenance fees (such as *Oracle* licensing).

The Program maintains two high speed internet connections and associated infrastructure in support of the server systems. The first is the primary connection used of all incoming and outgoing public traffic. The second is a dedicated line to the NOAA Fisheries Greater Atlantic Regional Fisheries Office (GARFO). This second line provides full time secure connectivity requested by the Region.

Outside vendors include Hewlett Packard for systems hardware and software support; Oracle for database management systems support; DLT Solutions and Trident Solutions for hardware support. All pricing is based on the GSA schedule.

Communications supports high-speed internet connectivity for ACCSP and related systems and a direct secure connection to the GARFO Data Center in Gloucester, MA. Costs are based upon negotiated contracts with Cogent Communications, Level 3 Communications and Verizon.

Software maintenance and development workload at times exceeds staff's resources. Contract services will be utilized to provide services that staff may be unable to perform.

### Other Expenses

<b>Other Expenses</b>	<b>2014</b>

Software Support		\$40,600
Hardware Support		\$7,500
Communications		\$27,500
Printing (outreach)		\$2,500
Contract Services		\$50,000
<b>Total</b>		<b>\$128,100</b>

### Budget Summary

Budget Summary	2015
Personnel	\$837,610
Fringe Benefits	\$226,155
Travel	\$67,200
Equipment	\$17,000
Supplies	\$6,651
Other	\$128,100
Total Program	\$1,282,715
ASMFC Overhead	\$448,950
Sub Total	\$1,731,666
NOAA Fisheries 5%	\$91,138
Total Request	\$1,822,803

## **2015 Planned Program Activities: Summary of tasks using funding from other sources**

### ***Data Collection and Management*** (Goals 1 and 2)

Staff are also working on a transition of the Marine Recreational Information Program (MRIP) Access Point Angler Intercept Survey (APAIS) from federal management to state management through the Program. As of this writing, final plans are not yet approved or in place. This document is intended to provide an overview of the process only, with much more extensive planning documentation to be generated as the Program moves through the planning process. (The Program is funding ACCSP/ASMFC planning, actual execution will be **funding through MRIP**)

### **Data Warehouse**

#### **User Interface (Data Queries)**

Work will continue on replacing the existing Oracle Discoverer tool based on feedback from the end users and research conducted by staff and the Information Systems Committee. (**Funding source NMFS/ST Fisheries Information System**)

### ***Ensure that Data are Disseminated and Used*** (Goals 1, 5, and 6)

Part of the mission of the ACCSP is to facilitate the use of data and better acquaint fisheries managers and scientists with the data managed by the Program. To that end, the ACCSP plans to participate in stock assessment and data workshops whenever ACCSP data might be of assistance to the process. The program will continue to provide custom queries as necessary, and provide access to end users through the on-line query tool

#### **Manage and Execute Outreach**

The web site will be redeveloped in FY15 taking into account input from Program constituents and end users. The Program Manager will manage the development process and keep web site content up to date in order to provide a consistent public face for the Program and ensure that timely and accurate information is released. (**Using FIS Funds**)

Regional data workshops or presentations will be conducted to provide data consumers with up to date information on the Programs progress and capabilities, and to bring them up-to-date on the data available. (**Some related to consolidation of efforts and minimizing overlap will use FIS funds**)

### ***Implement Program Review Recommendations*** (All goals)

Approved recommendations of the Independent Program Review will continue to be implemented. Program staff and committees will work toward implementing recommendations endorsed by the Coordinating Council and monitored by the IPR Monitoring Committee. These may include: a written Standard Operating Procedure (SOP), changes in Program structure and changes to Program processes. (**Some will use FIS and MRIP funds**)

### ***Support the National Fisheries Information System (FIS) and Marine Recreational Information Program (MRIP)*** (Goal 7)

ACCSP will continue to participate in both the FIS and MRIP programs, providing resources as appropriate to the various committees of the programs. In accordance with the MSA, ACCSP will provide data for the Atlantic Coast to the FIS when requested.

FY15 Implementation Plan for the  
Atlantic Coastal Cooperative Statistics Program

**Purpose**

This plan is intended to provide guidance in achieving the goals of the ACCSP in FY2015 (March 1, 2015 – February 28, 2016). References within this plan are to the ACCSP 2014-2018 Strategic Plan. A more detailed Project Plan which gives more specific timelines and dependencies is attached.

Please note that some of the tasks to be accomplished during FY15 are funded from outside sources. They are shown in Appendix 1 along with the funding source.

**Strategic Plan Program Goals**

1. Manage and expand a fully integrated data set that represents the best available fisheries data;
2. Continue working with the program partners to improve fisheries data collection and management in accordance with the evolving ACCSP standards within the confines of limited funds;
3. Explore the allocation of existing Program funds and work with partners to pursue additional funding;
4. Maintain strong executive leadership and collaborative involvement among partners at all committee levels;
5. Monitor and improve the usefulness of products and services provided by the ACCSP;
6. Collaborate with program partners in their funding processes by providing outreach materials and other support to demonstrate the value of ACCSP products and the importance of maintaining base support for fishery-dependent data collection programs to state partners and their executive and legislative branches as well as to all other partner agencies
7. Support nationwide systems as defined in the Magnuson-Stevens Fishery Conservation and Management Act (MSA).

**2015 Planned Program Activities: Summary**

***Data Collection and Management*** (Goals 1 and 2)

Planned activities for Fiscal Year 2015 are targeted towards operation, maintenance and expansion of commercial dealer landing and fisherman catch reporting, expansion of the data warehouse to include biological data, deployment of electronic reporting in the for-hire fisheries, and the implementation of processes designed to improve the integrity of data in the Data Warehouse. These activities include: the continued maintenance and deployment of SAFIS based fisherman and dealer reporting, expansion of the hand held version of the SAFIS dealer and trips reporting (SAFIS/M) systems, and the loading of available legacy biological and bycatch sample data.

Staff are also working on a transition of the Marine Recreational Information Program (MRIP) Access Point Angler Intercept Survey (APAIS) from federal management to state management through the Program. As of this writing, final plans are not yet approved or in place. This



document is intended to provide an overview of the process only, with much more extensive planning documentation to be generated as the Program moves through the planning process.

Program data staff, working with the appropriate partner staff, will maintain a 'best available' data set to be used where accurate totals are needed (an example might be Fisheries of the United States), and an 'all available' data set to be used for detailed analysis. Staff will provide a yearly matrix showing data sources and suppliers for the combined data sets as preliminary metadata.

## **Data Warehouse**

### **Catch/Effort**

Current data feeds will continue to be maintained and enhanced. Staff will work with program partners to improve timeliness and resolve any data issues that may arise. A routine feedback loop for data will continue to be maintained, providing partners with the opportunity to review data stored in the warehouse. Quality assurance procedures will be implemented in accordance with recommendations from the appropriate committees.

### **Biological Data**

Progress will be made in populating the biological tables in the Data Warehouse. Based on the recommendations of the Biological Committee, staff will work with program partners to feed pilot biological sample data sets to the warehouse where it will be loaded. Working with the Biological Committee, staff will build the biological query interface using these pilot sample data. Once the loading process has been proven and the query interface tested, the larger NOAA Fisheries biological data sets will be loaded.

### **Bycatch Data**

Progress will be made in populating the Bycatch data set in the Data Warehouse. Staff will work with program partners to develop and implement routine Bycatch data feeds for priority data sets as identified by the Bycatch Committee.

### **User Interface (Data Queries)**

Work will continue on replacing the existing Oracle Discoverer tool based on feedback from the end users and research conducted by staff and the Information Systems Committee.

## **SAFIS**

### **System Maintenance and Enhancements**

SAFIS will be maintained and enhanced based on requirements from the program partners. Additional partners will be brought on line as needed. The Program expects to deploy a handheld version of both the dealer and trip reporting systems, additional deployments of voluntary angler systems, and electronic reporting in some for-hire fisheries.

## **Other Systems**

1. **Lobster Allocation System (LOBSTAH)** – The LOBSTAH system will be fully deployed and in maintenance mode. Staff expect to make minor enhancements as the system and management requirements evolve.
2. **American Lobster Settlement Index (ALSI)** - ALSI will have additional functionality added to make it more user friendly and to give it the ability to perform basic summary analysis tasks. It is expected that this will be a contract effort funded

## **Transition of the MRIP APAIS**

Planning for the transition will continue, and actual execution of the transition to state conduct of the APAIS is scheduled for January 1, 2016. Planning activities include:

- Coordinating individual state budgets and plans
- Estimating ACCSP and ASMFC staffing requirements
- Drafting cooperative agreements and contracts between ASMFC/ACCSP and Partner agencies
- Estimating workload and staffing requirements for ASMFC/ACCSP
- Drafting specifications for data management hardware and software

The actual transition to state conduct is tentatively planned for January 1, 2016. Activities required to support the transition include:

- Putting the appropriate cooperative agreements and contracts in place
- Hiring of ACCSP/ASMF staff required to support the project
- Acquisition of hardware and software
- Facilitating the training of state personnel
- Perform a single Wave (Wave 6) as a training and test exercise

***Ensure that Data are Disseminated and Used*** (Goals 1, 5, and 6)

Part of the mission of the ACCSP is to facilitate the use of data and better acquaint fisheries managers and scientists with the data managed by the Program. To that end, the ACCSP plans to participate in stock assessment and data workshops whenever ACCSP data might be of assistance to the process. The program will continue to provide custom queries as necessary, and provide access to end users through the on-line query tool

**Manage and Execute Outreach**

Established outreach processes will continue. These include: routine automated updates for meetings, changes and/or updates in data and significant events, quarterly newsletters, data sheets detailing the status of the Program, articles in 'Fisheries Focus', and the preparation and publication of the Annual Report. Additional opportunities to get the message out to Program constituents and the public will be sought out and exploited and are outlined in the 2014-2018 Communications and Outreach Strategic Plan.

Outreach will maintain a schedule of fisheries related events, reviewing them periodically to identify opportunities to establish or improve stakeholder communications. Appropriate staff will be detailed to these events to ensure that the ACCSP is represented.

The web site will be redeveloped in FY15 taking into account input from Program constituents and end users. The Program Manager will manage the development process and keep web site content up to date in order to provide a consistent public face for the Program and ensure that timely and accurate information is released.

Regional data workshops or presentations will be conducted to provide data consumers with up to date information on the Programs progress and capabilities, and to bring them up-to-date on the data available.

Appropriate Congressional staff and key stakeholders will be kept apprised of the Program through the routine distribution of informational materials.

**Participate in Data Intensive Activities**

Staff will track various stock assessments, conferences, and other data intensive activities with an eye towards participating as fully as possible. Data will be provided where appropriate. This task would include the presentation of papers or posters in support of Program objectives.

### ***Implement Program Review Recommendations*** (All goals)

Approved recommendations of the Independent Program Review will continue to be implemented. Program staff and committees will work toward implementing recommendations endorsed by the Coordinating Council and monitored by the IPR Monitoring Committee. These may include: a written Standard Operating Procedure (SOP), changes in Program structure and changes to Program processes.

### ***Manage and Execute the ACCSP Processes*** (Goals 1, 2, 3 and 4)

#### **Funding Process**

As in all years, the ACCSP will continue to manage the funding process, track performance on funded projects, and report to its' constituents on progress towards Program goals. Revisions to the process will be made as needed based on the recommendations from the Independent Program Review or constituent input.

The funding subcommittee and finance committee will continue to meet in order to refine the funding decision process and explore alternate avenues to pursue additional funding for the Program.

#### **Program Standards**

The Program will conduct routine reviews of standards to ensure that they are both current and relevant. In addition, the Recreational Technical Committee will be working to complete revisions to the Recreational section of the Atlantic Coast Fisheries Data Collection Standards document in order to incorporate the results of the MRIP PSE project and the MRIP For-hire project.

#### **Executive Engagement**

The Executive Committee and Coordinating Council will continue to meet quarterly in order to provide Executive level managers with the most up-to-date information and provide greater opportunities for input into Program related activities.

#### **Metrics**

Metrics developed during 2009 will continue to be performed. These include the collection of system usage statistics, user surveys, and data load and availability statistics. The metrics will be distributed throughout the year, but will be summarized in the Annual Report.

### ***Support the National Fisheries Information System (FIS) and Marine Recreational Information Program (MRIP)*** (Goal 7)

ACCSP will continue to participate in both the FIS and MRIP programs, providing resources as appropriate to the various committees of the programs. In accordance with the MSA, ACCSP will provide data for the Atlantic Coast to the FIS when requested.

### **Summary List of Major Tasks**

#### **Program Area – Program Management**

- Manage the funding cycle (**Director, Program Manager, Operations Committee, and Coordinating Council**)
  - Manage and follow Funding Decision Process
  - Work with finance and funding committees as needed
- Manage the ACCSP Process (Technical Meetings)
  - Commercial Technical

- Recreational Technical
  - Information Systems
- Implement Independent Program Review Recommendations (**Director, Staff, Coordinating Council, Appropriate Committees**)
  - Coordinate activities with IPR Monitoring committee
- Plan and implement the transition of the MRIP APIS to state conduct
- Participate in FIS and MRIP processes (**Staff and Committees as needed**)
  - Participate in FIS and MRIP processes and meetings as necessary
- Outreach and Education (**Director, Program Manager, Staff, Committees**)
  - Monitor Program Success Metrics
    - Publish relevant metrics (**Program Manager**)
      - Newsflash
      - Quarterly newsletter
      - Annual report
      - Press Releases
  - Maintain the feedback loop to gauge the success of the Program in meeting the needs of its constituents
  - Participate in face-to-face meetings to increase awareness and support of ACCSP
    - Regularly meet or communicate with policy level constituents
    - ACCSP staff attends stock assessment data workshops
    - Contact partners to receive agendas for monthly advisory committee meetings and attend those that include relevant issues
    - Participate in Council and Commission meetings as needed
    - ACCSP Director will provide ACCSP updates to Coordinating Council
    - Exhibit at appropriate venues
  - Manage media relations to encourage news stories mentioning ACCSP
    - Contact partners to be added to their press release lists and public notices and state newsletter distribution lists
    - Issue press releases when relevant
    - Maintain a media list
    - Publish in fisheries related publications and journals
  - Promote the use of the Data Warehouse
    - Clearly identify to users data available
    - Provide end-user support for use of the query interface
    - Solicit feedback to improve the system
    - Quickly respond to data requests
    - Identify opportunities to offer training sessions or workshops

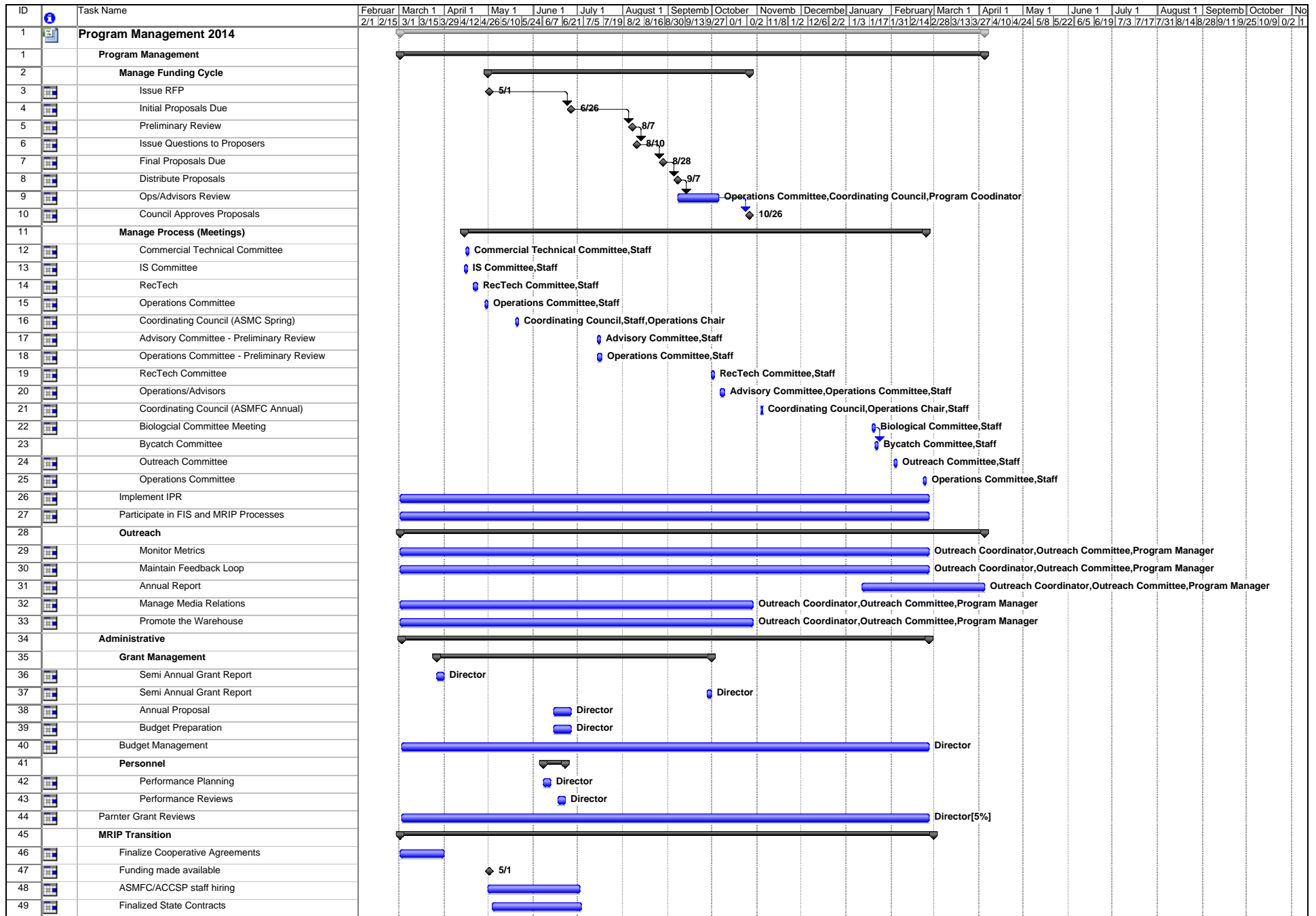
#### **Program Area – Data Management (Data Team Lead, Data Coordinators)**

- Continue catch/effort data quality review and reconciliation with supplying partners (**Data Team Lead, Data Coordinators, Appropriate Technical Committees, Partner Staff**)
  - Monitor data for quality issues and reconcile as necessary
  - Review current standard codes, and make adjustments as necessary.
  - Verify ACCSP data against source data sets
  - Implement data quality processes as recommended
- Support and improve partner catch/effort data loads (**Data Coordinators, Partner Staff**)
  - Complete loading of 2014 Commercial and Recreational Catch/Effort/Landings data into the data warehouse and make it available to the end-user query interface and Fisheries of the United States.
  - Continue work on identifying and loading legacy catch/effort data sets
- Biological Data (**Data Coordinators, Biological Committee, Partner Staff**)
  - Continue loading biological data sets as identified by the Biological Committee
  - Continue deployment of the Biological Query System

- **Bycatch Data (Data Coordinators, Bycatch Committee, Information Systems Committee)**
  - Begin loading legacy Bycatch data sets
  - Develop data use requirements
- **Provide support for the following fisheries data intensive activities (Data Coordinators)**
  - Stock Assessment Activities (SEDAR, SAW/SARC, ASMFC and state assessments)
  - Custom data requests
  - FUS
  - Others as necessary
- **Maintain and update infrastructure (Data Team Lead, System Administrator)**
  - Maintain existing infrastructure
  - Upgrade Data Warehouse server
  - Update software as needed
  - Acquire and deploy hardware and software for the MRIP APAIS

**Program Area - Software Development and Maintenance**

- **Maintain SAFIS applications (Software Team)**
  - eDR
  - eTRIPS
  - eLogbook
  - e1-Ticket
  - SMS
  - HMS
- **Deploy SAFIS mobile application**
- **SAFIS Auditing (Software Team, Audit Subcommittee)**
  - Continue auditing enhancements as needed
- **Simple Query Interface (Software Team, Data Team, Technical Committees)**
- **Internal Applications (Staff)**
  - Enhance website
  - Maintain website
  - Administrative applications



Project: ACCSP2014.mpp  
Date: Fri 6/27/14

Task		Progress		Summary		External Tasks		Deadline	
Split		Milestone		Project Summary		External Milestone			



Date: June 30, 2014

Dear Mike Cahall,

The Atlantic Coastal Cooperative Statistics Program's (ACCSP) Recreational Technical Committee would like to request a \$10,000 inclusion in ACCSP's administration budget to support travel for State Partners that do not perform sampling with state staff in the conduct of National Marine Fisheries Service (NMFS) Marine Recreational Information Program (MRIP) fisheries surveys. Currently, five states on the Atlantic Coast met this criteria, including Rhode Island, Connecticut, New York, New Jersey and Virginia, and request funding to travel MRIP survey methodology workshops. Due to the change in travel expense arrangements with the contractor (RTI), state employees are no longer directly reimbursed for travel requiring state payment for out of pocket expenses. The requested funding would cover travel expenses for one representative from each of these states to attend the October 2015 and February 2016 wave meetings. Travel expenses are estimated at \$1000 per person per meeting. Therefore, the total funding request for five states at \$1000 per meeting, for two meetings per year is \$10,000.

ACCSP standards support state partners' conduct of the APAIS. ACCSP is evaluating the transition of conduct of the survey from a contractor to a cooperative agreement involving states at various levels. If state conduct of the APAIS is not possible, the standards support having states participate in the data review meetings and having states directly involved in the maintenance of the site register and for-hire vessel directory. Funding travel for state representatives to MRIP survey workshops is one way to increase state partners' participation in the APAIS. MRIP survey workshops allow NMFS staff, the contractor's regional representatives, and state agency sub-contractors to review and discuss catch and effort estimates as well as other timely recreational fishing issues and survey protocols. Continued attendance at these meetings will not only allow state agencies the opportunity to critically review and provide comments on the preliminary estimates, it will also allow them to improve their understanding of how the surveys are conducted, as well as improve communication with the contractor and regional representatives conducting the surveys within their state. This improved communication can lead to tangible benefits. Participation in these meetings is critical to increasing state involvement in the APAIS.

Typically, two workshops are held each year in October and February. : October (mid-year review including Wave 3 and 4 estimates), and February (annual review and coordination for the upcoming year). The Recreational Technical Committee believes it would be most beneficial and cost effective for state biologists to continue to attend the October and February workshops. This would allow state biologists to coordinate on methodology changes as they are made within the MRIP. It is critical for state partners to attend survey workshops to learn more about the new survey protocol and its potential effect on catch estimates and biological data collection.

The Recreational Technical Committee supports state partner participation in survey workshops. Funding was included in the FY2013 ACCSP administration budget for representatives from six states to attend the October 2013 and February 2014 workshops. By participating in these workshops, state partners were able to review preliminary catch and effort estimates, and receive updates on MRIP pilot projects (including updates on upcoming changes to the APAIS and effort surveys). Due to budgetary restraints, many state agencies have been forced to put travel restrictions in place. Without this funding it is likely that none of these states would be able to send representatives to the workshops to improve recreational data collection. We hope that ACCSP will consider including this additional funding in their administration budget.

Sincerely,  
Scott Newlin  
ACCSP Recreational Technical Committee Chair





# Atlantic Coastal Cooperative Statistics Program

1050 N. Highland Street, Suite 200A-N | Arlington, VA 22201

703.842.0780 | 703.842.0779 (fax) | [www.accsp.org](http://www.accsp.org)

## Attachment 5: TENTATIVE SCHEDULE

March 1:	Start of FY15
March 2-6:	South Atlantic Fishery Management Council (SAFMC) Meeting (St. Simons Island, GA)
April 14-16:	Mid-Atlantic Fishery Management Council (MAFMC) Meeting (Long Branch, NJ)
Week of April 20:	Operations Committee Spring WebEx; Funding Process; new project review
April 21-23:	New England Fishery Management Council (NEFMC) Meeting (Mystic, CT)
May 4-7:	Atlantic States Marine Fisheries Commission (ASMFC) Meeting (Alexandria, VA); Atlantic Coastal Cooperative Statistics Program (ACCSP) Coordinating Council Meeting; ACCSP issues request for proposals
June 8-12:	SAFMC Meeting (Key West, FL)
June 9-11:	MAFMC Meeting (Virginia Beach, VA)
June 15:	Initial Proposals are due
June 16-18:	NEFMC Meeting (Portland, ME)
June 19:	Initial Proposals distributed to Operations and Advisory Committees
Week of July 6:	Review of initial proposals for Operations and Advisory Committees (WebEx)
July 20:	Feedback submitted to PIs
August 4-6:	ASMFC Meeting (Alexandria, VA)
August 11-13:	MAFMC Meeting (TBD)
August 17:	Revised proposals due
August 24:	Revised proposals distributed to Operations and Advisory Committee
Week of August 31:	Preliminary ranking exercise for Advisors
Week of September 7:	FY2014 Proposal Review Webinar – Maintenance and New
September 14-18:	SAFMC Meeting (Hilton Head Island, SC)
September 24-25:	Annual Advisors and Operations Committee Joint Meeting (in-person; location TBD)
September 29-October 1:	NEFMC Meeting (TBD, MA)
October 6-8:	MAFMC Meeting (Philadelphia, PA)
End of October (TBD)	ASMFC Annual Meeting (Location TBD)
November 17-19:	NEFMC Meeting (Newport, RI)
December 7-11:	SAFMC Meeting (Atlantic Beach, NC)
December 8-10:	MAFMC Meeting (Annapolis, MD)

*Our vision is to be the principal source of fisheries-dependent information on the Atlantic coast through the cooperation of all program partners.*

## RESUME

Michael Sheldon Cahall  
22659 Davdison Lane  
Lexington Park, MD 20653

email: mcahall@comcast.net

### Education:

- West Virginia University, Morgantown, WV  
(Cum Laude) B.M. - Violin Performance  
8/83
- Peabody Conservatory of Music, Baltimore, MD  
Post Graduate (not completed)  
8/84
- College of Southern MD, Leonardtown, MD  
Paramedic Certificate  
8/11

### Skills:

#### Management

Experienced Project/Program Manager  
Worked with widely coordinated/collaborative projects  
Good personnel management skills  
Able to deliver projects on time, on budget, in scope  
Positive 'can do' attitude  
Worked within budgets and budgeting processes  
Managed IT budgets in numerous organizations  
Experience in the budget formulation process

#### IT Related

Highly Proficient with Oracle RDBMS  
16+ years of experience with Database Administration, Design, and Oracle development tools  
Good grasp of database design and implementation in both warehousing and OLTP  
System Administration/Management  
Administered a wide variety of UNIX systems (AIX, HP, LINUX and Solaris)  
Managed multiple server NT networks  
Skilled with Online Analysis Applications  
Functioned as Administrator and Designer  
Very familiar with Microsoft Networking  
10+ years of Microsoft Network design and management  
Familiar with NT/Win200/WinXP networks and management  
Able to respond quickly to changes in technology

#### Other Areas

Worked in a wide variety of subject specialties  
Developed Fisheries Information Systems  
Comprehensive Commercial/Recreational Data Warehouse  
Commercial Data collection systems  
Very familiar with Federal and DOD logistics systems (MIL 1388, MILSTRIP, FEDSTRIP)  
Developed two logistics management and integration systems for NOAA/NWS  
Knowledge of Supply and Logistics life cycle planning  
Experience in Commercial Development

American Radiology Services – developed financial and customer tracking warehouse  
Developed software to transfer data between disparate applications  
Very familiar with federal Information Systems Policies  
Managed Contract Efforts  
Managed several large Federal Procurements  
Contracting Officers Technical Representative Level II Certification  
Worked with Various Medical Systems  
HL/7 Communication Protocol  
Managed Centralized Message System  
Developed Patient Information Systems

**Employment History (10 year, additional available on request):**

**Atlantic States Marine Fisheries Commission**

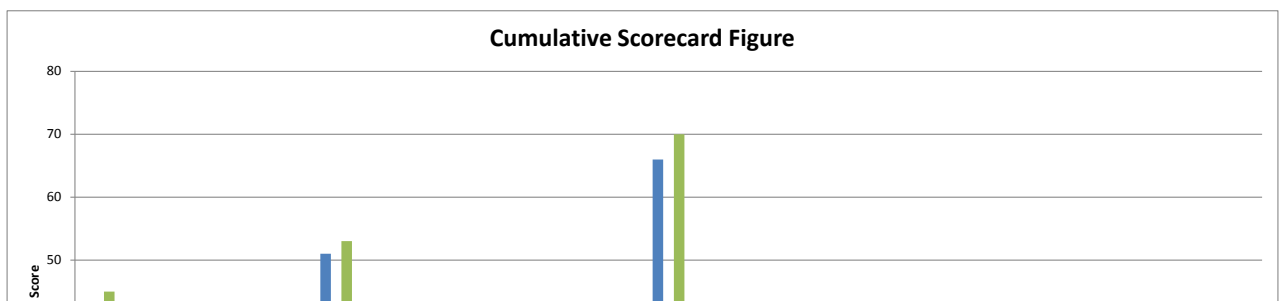
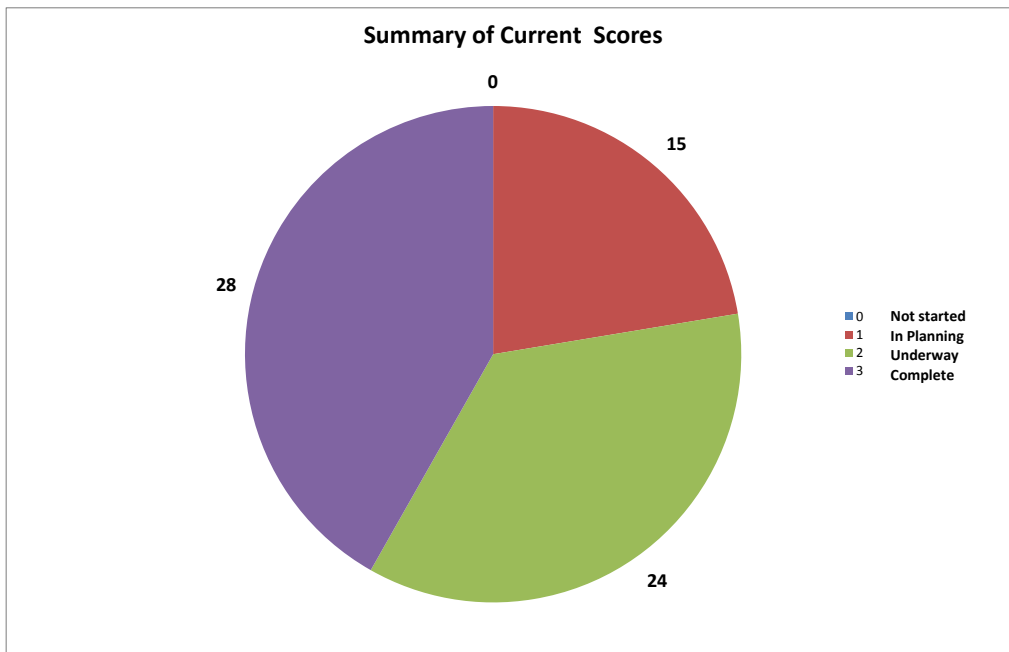
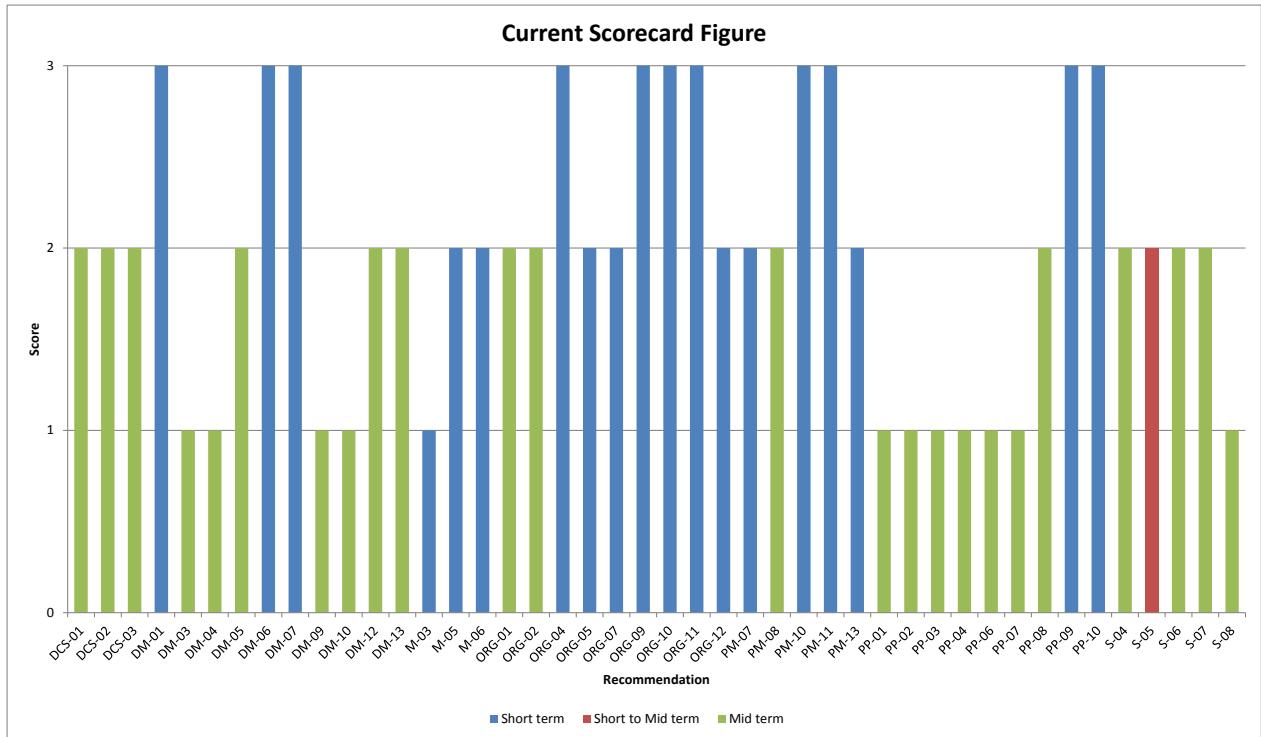
Currently serving as the Director of the Atlantic Coastal Cooperative Statistics Program (ACCSP)

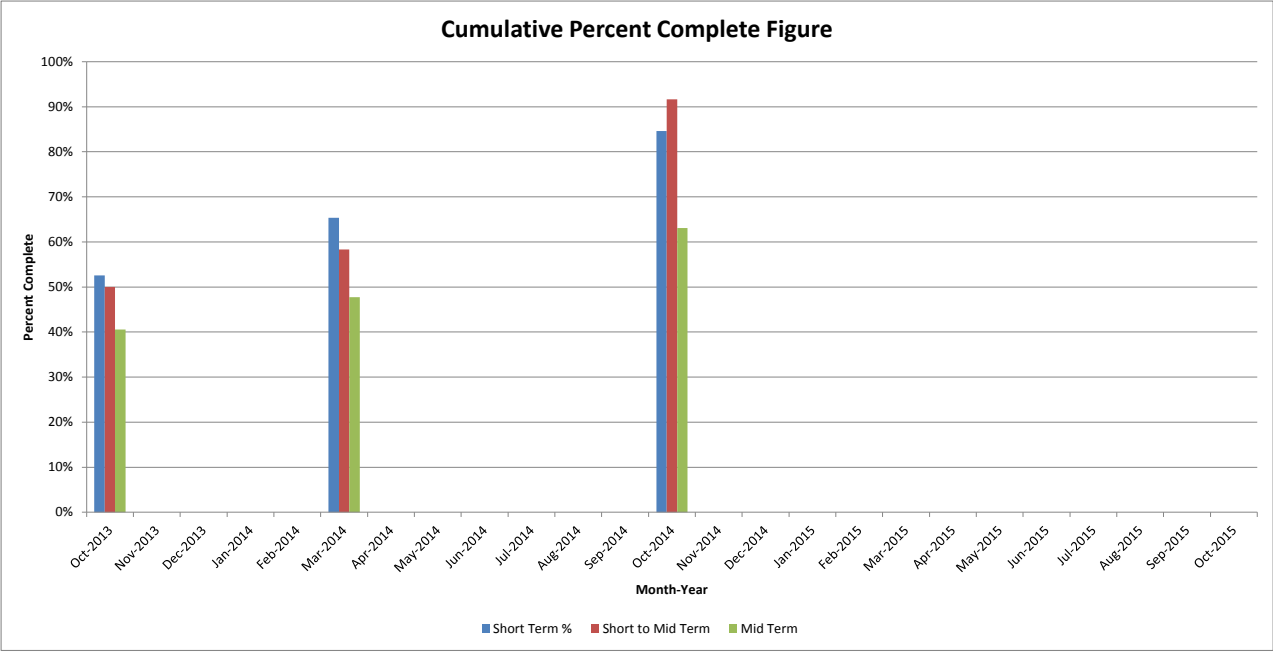
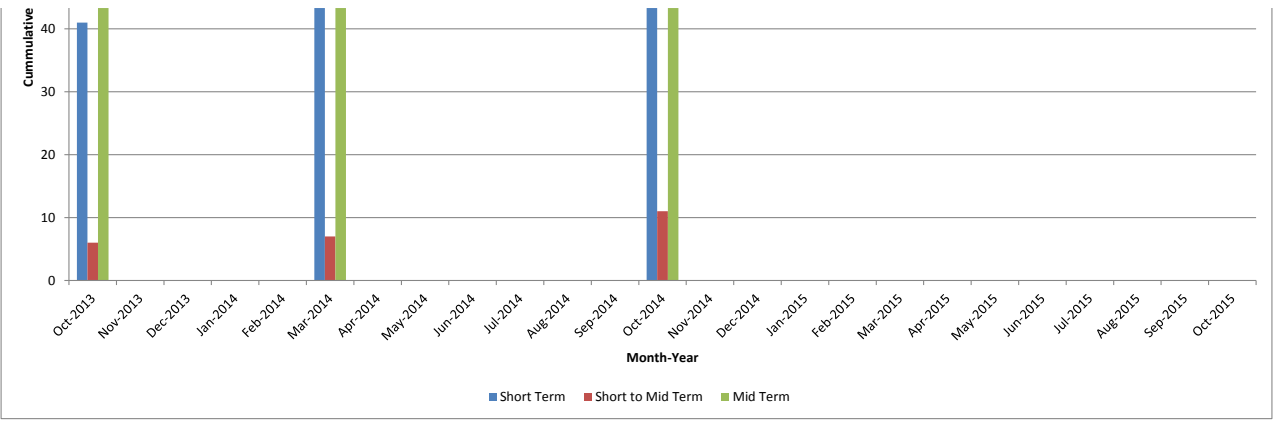
2/99 to 8/07

- Information Systems Manager
  - o Manage Information Systems for ACCSP
    - Manage budget, systems operations and system development
    - Manage in house and contract operations and development staff
    - Manage Development and Deployment of Fisheries Data Warehouse
      - Oracle for Solaris V 9.2, LINUX and NT (10.0.1)
      - Microsoft IIS 6.0
      - Business Objects Web Intelligence (OLAP)
      - Designed Data Warehouse for all Atlantic Fisheries Statistics
  - o Designed and Manage Development of Standard Atlantic Fisheries Information System
    - Multi-agency system includes all states on the Atlantic Coast and the NOAA/NMFS
    - Provides on-line data entry for commercial fisheries in the Mid-Atlantic and New England region
  - o Provide Technical Lead for Program
    - Serve as System Admin, Project Lead as required
  - o Assist State and Federal Agencies in advanced software implementations
  - o Consult with technical committees as required
  - o Coordinate between Program and State and Federal Agencies (NOAA/NMFS)

## Figures

(scroll down to see all four figures)





## Recommendation Details

Recommendation ID: DCS-01 *Click box and choose a recommendation from the list and all attributes will auto-populate.*  
 Recommendation: Periodically review the data standards to ensure they are still pertinent and address the needs of program partners and move the program towards full implementation (TOR 5).

Responding Group: Operations Committee  
 Timetable: Mid term  
 Vehicle: SOP  
 Action(s): The ACCSP data collection standards were just reviewed/updated/approved in 2012. However, the frequency of review needs to be defined. Additionally, those standards that are less well defined (e.g., socio-economic) need to be reviewed more frequently.

Expected Outcome: Documentation of the process and periodicity by which standards are reviewed (to be incorporated as a part of the Standard Operating Procedure).

### Current Score Card

Recommendation ID	Current Score	Responding Group	Notes	Product
DCS-01	Mid term	Operations Committee	Develop thresholds for standards revisions - develop Timeframe 1 yr for first version	SOP
DCS-02	Mid term	Operations Committee	Discussions Ongoing - part of basic ACCSP process	SOP
DCS-03	Mid term	Operations Committee	SOP Framework created, discussions with ASMFC ongoing	SOP
DM-01	Short term	Staff	Discussions Ongoing with Regions and HQ, Funding authorized for new query interface	SOP
DM-02	Mid term	Staff	Communications and Outreach plan completed, Funding authorized for new query interface. Stakeholder groups formed and requirements being solicited.	OP
DM-03	Mid term	Staff	Warehouse Outreach Group formed, Funding authorized for new query interface	SOP
DM-04	Mid term	Staff	interface - IS Committee will work on requirements	SOP
DM-05	Mid term	Staff	Data status provided through web site	SOP
DM-06	Short term	Staff	Public access now available	SOP
DM-07	Short term	Staff	Included in the approved SOP	SOP
DM-08	Mid term	Executive Committee	Routine discussions initialed and ongoing	OP
DM-09	Mid term	Staff	Discussions with Regions, Science Centers and HQ initiated	SOP
DM-10	Mid term	Operations Committee	Discussions with Regions, Science Centers and HQ initiated	SOP
DM-11	Mid term	Staff	Cost Prohibitive Closed by Staff, approved by Council	
DM-12	Mid term	Staff	Discussions with Regions, Science Centers and HQ initiated. Waiting for output from GARFO.	SOP
DM-13	Mid term	Staff	See DM-05, data are available, process formalized	SOP
M-01	Mid term	Operations Committee	Outreach Strategic Plan Completed and Approved	OP
M-02	Short term	Staff	Graphic created and on web page, routinely included in presentations	OP
M-03	Short term	Staff	Requirements in development by staff will be reviewed by IS Committee	SOP
M-04	Short term	Staff	Strategic Plan completed, adopted and approved	SP
M-05	Short term	Executive Committee	Provided for in funding decision process, working on white paper	SOP
M-06	Short term	Executive Committee	Staff Performed in accordance with ASMFC policy, Director in progress	SOP
M-07	Mid term	Operations Committee (jointly w/ Staff)	Continue with current outreach, needs communications and outreach strategic plans, achievements documented in Annual Reports, Newletters, Press Releases and Workshops. Outreach plan approved	OP
ORG-01	Mid term	Staff	Staff working on SOP format and contents. SOP have been approved by Ops	SOP
ORG-02	Mid term	Staff	Funding made available, training req in performance plans	SOP
ORG-03	Short term	Staff	Planning/Rewards in accordance with ASMFC Policy	
ORG-04	Short term	Executive Committee	Continued Coordination with ASMFC required	SOP
ORG-05	Short term	Executive Committee	Exec Comm meeting bi-monthly	SOP
ORG-06	Short term	Executive Committee	Membership reviewed and agreed upon	
ORG-07	Short term	Executive Committee	Chair and V Chair have monthly briefings decisions jointly made	SOP
ORG-08	Short term	Executive Committee	Terms of Reference Completed, Workgroup creation in progress	GR
ORG-09	Short term	Operations Committee	Face to face meetings dramatically reduced, parameters under development	SOP
ORG-10	Short term	Operations Committee	Likely to be completed through alternate, less expensive means - Addressed in SOP	SOP
ORG-11	Short term	Staff	Chair and V Chair have monthly briefings decisions jointly made	SOP
ORG-12	Short term	Executive Committee	Exec Comm meeting bi-monthly	SOP
PM-01	Short to Mid term	Staff	Specific outreach teams have met, first council site visits completed, communications plan in development	OP
PM-02	Mid term	Executive Committee	First Regional Workshop Completed (SAFMC)	SP
PM-03	Mid term	Executive Committee	work group in progress chaired by B. Beal	SP
PM-04	Mid term	Executive Committee	work group in progress chaired by B. Beal	OP
PM-05	Mid term	Executive Committee	First Regional Workshop Completed (SAFMC)	SP
PM-06	Short term	Executive Committee	ASMFC provided testimony, also dependent on PM-03	SP
PM-07	Short term	Executive Committee	Funding Decision Document amended	SOP
PM-08	Mid term	Operations Committee	Admin Grant review occurred during regular PI review	SOP
PM-09	Mid term	Operations Committee	Communications and Outreach plan in progress, related to Science Center and Regional Coordination	OP
PM-10	Short term	Operations Committee (jointly w/ Staff)	List developed	SOP
PM-11	Short term	Operations Committee (jointly w/ Staff)	Strategic Plan Completed and Approved	SOP
PM-12	Mid term	Staff	Communications and Outreach plan in progress	OP
PM-13	Short term	Executive Committee	Workshops in planning, coordination routine	SOP
PP-01	Mid term	Operations Committee	Funding Sub-committee formed; B. Beal chair; work in progress	SOP
PP-02	Mid term	Operations Committee	Funding Sub-committee formed; B. Beal chair; work in progress	SOP
PP-03	Mid term	Operations Committee	Funding Sub-committee formed; B. Beal chair; work in progress	SOP

Total	0
Total Possible	335
% complete	0.00%

0 – no progress

1 – in planning

2 – implemented but not finalized (not in an SOP or Plan etc)

3 – closed (either completed or not adopted)

PP-04	Mid term	Operations Committee	Funding Sub-committee formed; B. Beal chair; work in progress	SOP
PP-05	Short term	Executive Committee	Council Rejected - item closed	
PP-06	Mid term	Operations Committee	Funding Sub-committee formed; B. Beal chair; work in progress	SOP
PP-07	Mid term	Operations Committee	Task assigned to IS Committee	SOP
PP-08	Mid term	Operations Committee	ACCSP grant document to be modified annually	SOP
PP-09	Short term	Staff	Working on tracking system - IS Committee will establish requirements; List created	SOP
PP-10	Short term	Operations Committee (jointly w/ Staff)	HMS agreed to fund work, funding received - funding threshold to be established by Ops	SOP
S-01	Short to Mid term	Staff	SAFIS Outreach group created	OP
S-02	Mid term	Operations Committee	Communications and Outreach plans approved	OP
S-03	Mid term	Staff	Communications and Outreach plans approved	OP
S-04	Mid term	Staff	New software released to Trips, Dealer Reporting mods completed. Change management process will influence as well	SOP
S-05	Short to Mid term	Staff	New software released to Trips, Dealer Reporting mods completed. Change management process will influence as well	SOP
S-06	Mid term	Staff	Need to integrated into SOP and Communications and Outreach Plan	SOP
S-07	Mid term	Staff	PC based tools exist and are in use. New tools in development	SOP
S-08	Mid term	Staff	New software released to Trips, Dealer Reporting mods ongoing, committee formed	SOP
S-09	Short to Mid term	Operations Committee (jointly w/ Staff)	SAFIS Outreach group created	OP

- 0 – no progress
- 1 – in planning
- 2 – implemented but not finalized (not in an SOP or Plan etc)
- 3 – closed (either completed or not adopted)

*Scores in this table reflect the most recent score, found in the Scorecard All sheet. All cells autopopulate with changes in DATA ENTRY - Running Scorecard sheet.*

Score	Count
0	0
1	15
2	24
3	28

Recommendation ID	Responding Group	Recommendation	Notes	Product	Timeline	Score	Short term	Short to M Mid term
DCS-01	Operations Committee	Periodically review the data standards to ensure they are still pertinent and address the needs of program partners and move the program towards full implementation (TOR 5).	Develop thresholds for standards revisions - develop Timeframe 1 yr for first version	SOP	Mid term	2		2
DCS-02	Operations Committee	Continue to facilitate discussion through the Program's committee process to assess, capture, and adjust to the frequently evolving requirements of fisheries data collection coast-wide implementation (TOR 5).	Discussions Ongoing - part of basic ACCSP process	SOP	Mid term	2		2
DCS-03	Operations Committee	Examine the costs, benefits, opportunities, and threats inherent in establishing the data standards as compliance requirements in fishery management plans (TOR 5).	SOP Framework created, discussions with ASMFC ongoing	SOP	Mid term	2		2
DM-01	Staff	Consider utilizing the data warehouse as an online portal to other pre-existing and alternatively hosted datasets (TOR 4, 5).	Discussions Ongoing with Regions and HQ, Funding authorized for new query interface	SOP	Short term	3	3	
DM-03	Staff	Focus resources on improving the user interface of the data warehouse through user feedback and user-centered design. (TOR 4, 5)	Warehouse Outreach Group formed, Funding authorized for new query interface	SOP	Mid term	1		1
DM-04	Staff	Enhance the query capabilities of the data warehouse to be more accessible to non-technical users. (TOR 4, 5)	Warehouse Outreach Group formed, Funding authorized for new query interface - IS Committee will work on requirements	SOP	Mid term	1		1
DM-05	Staff	Provide clear guidance on when and how all datasets are updated with new data in the data warehouse. (TOR 4, 5)	Data status provided through web site	SOP	Mid term	2		2
DM-06	Staff	Consider relaxing the log-on credentialing requirement for those requesting access to non-confidential data. (TOR 4, 5)	Public access now available	SOP	Short term	3	3	
DM-07	Staff	Develop a more timely process for granting access (e.g. institute maximum time period of one week) to information for confidential data users. (TOR 4, 5)	Included in the approved SOP	SOP	Short term	3	3	
DM-09	Staff	Define clear data management roles between ACCSP and the NOAA Fisheries Science Centers and communicate those roles to program partners and customers. (TOR 4, 5)	Discussions with Regions, Science Centers and HQ initiated	SOP	Mid term	1		1
DM-10	Operations Committee	Develop a clear 'future-state' vision for the data warehouse system architecture in relation to other East Coast fishery data repositories to avoid redundancy and ensure that resources among organizations are allocated wisely (TOR 1).	Discussions with Regions, Science Centers and HQ initiated	SOP	Mid term	1		1
DM-12	Staff	Develop process for synchronization of data between ACCSP and the Northeast and Southeast Regions. An emphasis needs to be placed in the Southeast Region since more work needs to be accomplished in that region (TOR 5).	Discussions with Regions, Science Centers and HQ initiated. Waiting for output from GARFO.	SOP	Mid term	2		2
DM-13	Staff	Provide clear guidance on when and how all datasets are updated with new data in the data warehouse. (TOR 4, 5)	See DM-05, data are available, process formalized	SOP	Mid term	2		2
M-03	Staff	Adopt an improved "trouble" ticket and enhancement request management system, specifically including response from staff on expected timeline until completion. This should not be a list available on only one staff member's computer, but a more transparent living document. (TOR 4)	Requirements in development by staff will be reviewed by IS Committee	SOP	Short term	1	1	
M-05	Executive Committee	Develop a well-defined and strategic process to address budget shortfalls, both anticipated (congressional budgets) and unanticipated (within fiscal year rescissions). (TOR 2, 4)	Provided for in funding decision process, working on white paper	SOP	Short term	2	2	
M-06	Executive Committee	Develop and maintain a transparent and comprehensive system of annual performance plans and evaluations for the Executive Director and staff, with methods to acknowledge and reward success and achievements. (TOR 2)	Staff Performed in accordance with ASMFC policy, Director in progress	SOP	Short term	2	2	
ORG-01	Staff	The Program should employ methods and best practices to ensure continuity of institutional knowledge in the case of staff turnover. (TOR 2, 8)	Staff working on SOP format and contents. SOP have been approved by Ops	SOP	Mid term	2		2
ORG-02	Staff	The Program should continue to build project and database management expertise among ACCSP staff. (TOR 2, 4, 8, 9)	Funding made available, training req in performance plans	SOP	Mid term	2		2
ORG-04	Executive Committee	Revisit the timing and frequency of ACCSP Coordinating Council meetings to improve attendance and focus. (TOR 5c) (Avoid scheduling the meeting on the final day of ASMFC meetings, Conduct annual in-person meetings with quarterly webinars)	Continued Coordination with ASMFC required	SOP	Short term	3	3	
ORG-05	Executive Committee	The Coordinating Council should be strengthened through re-energized Executive and Legislative Committees. The partner Memorandum of Agreement should be reviewed to clarify the composition of the Executive Committee. (TOR 5c)	Exec Comm meeting bi-monthly	SOP	Short term	2	2	



ORG-07	Executive Committee	Strategies to improve continuity of program oversight should be implemented, including a review of the leadership term on the Coordinating Council. (TOR 5c)	Chair and V Chair have monthly briefings decisions jointly made	SOP	Short term	2	2
ORG-09	Operations Committee	Given the potential for resource shortages and increased workload in the future, streamline the number of technical committees and leverage virtual meetings to reduce the burden on partner staff members, while at the same time optimizing partners' engagement. (TOR 2, 4)	Face to face meetings dramatically reduced, parameters under development	SOP	Short term	3	3
ORG-10	Operations Committee	Consider an ACCSP hosted annual or bi-annual conference where key issues are discussed, keynote speakers are invited, and all those interested in fisheries data can network and share ideas. (TOR 4, 5b, 5c, 5f)	Likely to be completed through alternate, less expensive means - Addressed in SOP	SOP	Short term	3	3
ORG-11	Staff	Regular communication should be enhanced between ACCSP staff and the Coordinating Council and its leadership. (TOR 2)	Chair and V Chair have monthly briefings decisions jointly made	SOP	Short term	3	3
ORG-12	Executive Committee	The Coordinating Council should consider utilizing the executive committee or forming an administrative oversight committee (a subset of the Coordinating Council) to more frequently track the performance of ACCSP and its staff. (TOR 2, 5c)	Exec Comm meeting bi-monthly	SOP	Short term	2	2
PM-07	Executive Committee	ACCSP should develop a well-defined and strategic process to address budget shortfalls, both anticipated (congressional budgets) and unanticipated (within fiscal year rescissions). (TOR 2)	Funding Decision Document amended	SOP	Short term	2	2
PM-08	Operations Committee	An annual review of ACCSP's budget, objectives, and milestones should be conducted to evaluate planned vs. actual accomplishments in relation to costs (earned value management). (TOR 2, 7)	Admin Grant review occurred during regular PI review	SOP	Mid term	2	2
PM-10	Operations Committee (jointly w/ Staff)	ACCSP should focus resources on critical business functions and priorities that demonstrate return on investment. (TOR 7)	List developed	SOP	Short term	3	3
PM-11	Operations Committee (jointly w/ Staff)	As part of an ongoing strategic planning process, the original ACCSP objectives and priorities should be examined to determine if they are equally valid now and address the most pressing needs of fishery managers, scientists, and fishermen today. (TOR 5, 6)	Strategic Plan Completed and Approved	SOP	Short term	3	3
PM-13	Executive Committee	ACCSP should strengthen its relationship with the ASMF to leverage their fisheries specific subject matter expertise co-housed with ACCSP. (TOR 5b, 6)	Workshops in planning, coordination routine	SOP	Short term	2	2
PP-01	Operations Committee	ACCSP partners should come to agreement on a new and more rigorous threshold for allocating maintenance funding in order to better balance innovation and maintenance. (TOR 2, 7)	Funding Sub-committee formed; B. Beal chair; work in progress	SOP	Mid term	1	1
PP-02	Operations Committee	The partner project process should be reviewed in light of anticipated budget climate and a strategic process developed to respond to potential shortfalls, including reviewing funding formula and ability to fund base-level programs to help prevent degradation of time series data (i.e., backsliding). (TOR 2)	Funding Sub-committee formed; B. Beal chair; work in progress	SOP	Mid term	1	1
PP-03	Operations Committee	Consider methods to incentivize and leverage additional state or private funding for partner projects (e.g., matching grant program). (TOR 2)	Funding Sub-committee formed; B. Beal chair; work in progress	SOP	Mid term	1	1
PP-04	Operations Committee	Subject states who return for maintenance funding year after year to a higher degree of review to ensure that the project provides an adequate return on investment. (TOR 2)	Funding Sub-committee formed; B. Beal chair; work in progress	SOP	Mid term	1	1
PP-06	Operations Committee	If a data collection need is driven by federal fishery management regulations, states should seek funding directly from NOAA Fisheries to meet those needs. (TOR 2)	Funding Sub-committee formed; B. Beal chair; work in progress	SOP	Mid term	1	1
PP-07	Operations Committee	Ensure that ACCSP data management practices and funding processes adhere to NOAA Fisheries procedural directives and Information Quality Act requirements to provide metadata and data management plans. (TOR 8)	Task assigned to IS Committee	SOP	Mid term	1	1
PP-08	Operations Committee	Develop Service Level Agreements (SLAs) between ACCSP and each partner with set expectations, minimum requirements, and process for how to address when unmet expectations, and maintain annual reviews. (TOR 3, 7)	ACCSP grant document to be modified annually	SOP	Mid term	2	2
PP-09	Staff	ACCSP should account for the true costs of partner specific projects, e.g. FUS, FIS/FOSS, HMS, MRIP and lobster database, that ACCSP has taken responsibility for outside of the partner project funding process. This will further define those tasks that ACCSP does accomplish on behalf of specific partners using internal funding from the Administrative Budget. (TOR 2)	Working on tracking system - IS Committee will establish requirements; List created	SOP	Short term	3	3
PP-10	Operations Committee (jointly w/ Staff)	Partner projects that are directly supported by ACCSP staff, should provide initial and maintenance resources to support those projects. (TOR 2)	HMS agreed to fund work, funding received - SOP funding threshold to be established by Ops	SOP	Short term	3	3

S-04	Staff	Focus resources on improving the user interface of all SAFIS products through user feedback and user-centered design, incorporating new or technology improvements, as needed. (TOR 3, 4)	New software released to Trips, Dealer Reporting mods completed. Change management process will influence as well	SOP	Mid term	2	2
S-05	Staff	Improve the response time of the SAFIS web applications. (TOR 4)	New software released to Trips, Dealer Reporting mods completed. Change management process will influence as well	SOP	Short to Mid term	2	2
S-06	Staff	Provide advisory services and best-practices to state and other customers on custom scripting for exporting SAFIS data in near real time. (TOR 4)	Need to integrated into SOP and Communications and Outreach Plan	SOP	Mid term	2	2
S-07	Staff	Consider building a local SAFIS software client for customer workstations to complement the existing web applications. (TOR 4)	PC based tools exist and are in use. New tools in development	SOP	Mid term	2	2
S-08	Staff	SAFIS be made more user friendly, both from a data entry and data query perspective as implied by these recommendations from the Interview/Survey Report. (TOR 4, 5)	New software released to Trips, Dealer Reporting mods ongoing, committee formed	SOP	Mid term	1	1

---



Recommendation_ID	Recommendation	Responding Group	Timetable	Vehicle	Action(s)	Expected Outcome	Theme	Initial Status 08/07/2013	Current Status (DATE)	Current Status (DATE)
DCS-01	Periodically review the data standards to ensure they are still pertinent and address the needs of program partners and move the program towards full implementation (TOR 5). Continue to facilitate discussion through the Program's committee process to assess, capture, and adjust to the frequently evolving requirements of fisheries data collection coast-wide implementation (TOR 5).	Operations Committee	Mid term	SOP	The ACCSP data collection standards were just reviewed/updated/approved in 2012. However, the frequency of review needs to be defined. Additionally, those standards that are less well defined (e.g., socio-economic) need to be reviewed more frequently.	Documentation of the pr	Program Management	Recommended	In progress	
DCS-02	Examine the costs, benefits, opportunities, and threats inherent in establishing the data standards as compliance requirements in fishery management plans (TOR 5).	Operations Committee	Mid term	SOP	Initiate a review of those partners that are not already meeting the standards of the program. Regional management committees/councils (e.g., ASMFC, NEFMC, MAFMC, SAFMC) can review FMPs and provide information as to where information is lacking or which partners are falling short.	Continue to utilize the AC	Program Management	Recommended		
DCS-03	Consider utilizing the data warehouse as an online portal to other pre-existing and alternatively hosted datasets (TOR 4, 5). Determine the core data stakeholders based on the Program's mission and prioritize the focus on them by addressing their data needs. This will allow for a more focused approach to ensure success of the program. (TOR 4, 5)	Operations Committee	Mid term	SOP	Initiate a review of those partners that are not already meeting the standards of the program. Regional management committees/councils (e.g., ASMFC, NEFMC, MAFMC, SAFMC) can review FMPs and provide information as to where information is lacking or which partners are falling short.  Opportunities exist for ACCSP to integrate results from various sources to show a combined response (such as recreational and commercial results, summarizing various trip reporting results, or biological data compilations). Upon this recommendation, this task will undergo several levels of implementation requiring different resources to develop and maintain.  a) Within one year, the Data Team will be able to improve the links and descriptions on the ACCSP website to other data sets available through partner websites and data access programs.  b) Longer term strategic planning could determine if new technologies (oracle portal) should be implemented to present other data sets within the umbrella of ACCSP website queries or redirect requests to partner systems (To be discussed with data managers under item DM-9).	Produce a report develop	Program Management	Recommended		
DM-01	As links or portals to other data sets are created, ACCSP will make clear that these data systems may have different results/information than presented by ACCSP due to policies on confidential data and/or presentation needs.	Staff	Short term	SOP	Through expanded outreach efforts, staff will continue to identify and work with core stakeholders. Part of this process will include ongoing discussion of data needs or products. Where necessary, products maybe developed or customized to better meet customer needs.	Links to appropriate exter	Data Warehouse & SAFIS	Recommended		
DM-02		Staff	Mid term	Outreach plan		Core data stakeholders at	Outreach & Communicati	Recommended	In progress	

					<p>The ACCSP practice is to conduct data request surveys annually to gauge customer satisfaction. Users also have the opportunity to share feedback with an exit survey linked to the Data Warehouse. Staff also has presented several Data Warehouse webinars which solicited feedback from participants. ACCSP and ASMFC Technical Committees will also have the opportunity to review the discoverer interface and where possible, suggestions have been implemented.</p> <p>Staff has recently upgraded the Oracle data access tools to improve security and functionality with current web browsers and has deployed an online custom data request form to guide users in clarifying their needs. Staff recognizes the need for more routine maintenance and revisions to the discoverer queries including workbook names and improved guidance to end users on what data is available in each workbook.</p> <p>Unfortunately, detailed feedback has been difficult to obtain. Mid- to long-term improvements should be guided by focus groups. ACCSP will conduct a focus group with the Data Warehouse Outreach Group to gather feedback on how to improve the interface of the Data Warehouse.</p>	
DM-03	Focus resources on improving the user interface of the data warehouse through user feedback and user-centered design. (TOR 4, 5)	Staff	Mid term	SOP/Outreach plan	<p>An improved user interface for Data Warehouse &amp; SAFIS Recommended/In progress</p> <p>Staff recognizes that Data Warehouse queries and recommended usage with regards to non-technical users are in need of functionality updates, graphics, and explanations.</p>	
DM-04	Enhance the query capabilities of the data warehouse to be more accessible to non-technical users. (TOR 4, 5)	Staff	Mid term	SOP	<p>With guidance from the Data Warehouse Outreach Group, Commercial Technical Committee, Information Systems Committee, and the Recreational Technical Committees, staff will develop a simpler query interface in a different tool similar to SAFIS online reports (i.e., Apex) for non-technical users.</p> <p>Staff is in the process of providing tools to show the status or available data. This includes recent data loads or updates and includes tables showing both overview and detailed information.</p> <p>In the longer term, staff will develop the data pedigree and partner validation for information in the Data Warehouse.</p>	An improved user interface for Data Warehouse & SAFIS Recommended
DM-05	Provide clear guidance on when and how all datasets are updated with new data in the data warehouse. (TOR 4, 5)	Staff	Mid term	SOP/Outreach plan	<p>Staff has developed and deployed updated graphics and text to explain the data consolidation process of the commercial catch and effort data load. This was included in the 2012 annual report and the website. In addition, near real time data status will be provided through the website.</p> <p>New software has been deployed that allows for non-confidential access to the data query tool without a user identification or password.</p> <p>It should be noted that named user logins were first implemented to as a way to track metrics, however alternative measures are available such as total number of queries run by the public access account. There will be a loss of contact information for non-confidential accounts, reducing the ability of staff to contact/survey users on their satisfaction with the Data Warehouse tools and ACCSP information products. Metrics on number of queries by types of individuals (agency staff, academics, public) will need to be adjusted.</p>	Easily accessible information for Data Warehouse & SAFIS Recommended/In progress
DM-06	Consider relaxing the log-on credentialing requirement for those requesting access to non-confidential data. (TOR 4, 5)	Staff	Short term	SOP	<p>Open access to the data for Data Warehouse &amp; SAFIS Recommended/Completed</p>	

DM-07	Develop a more timely process for granting access (e.g. institute maximum time period of one week) to information for confidential data users. (TOR 4, 5)	Staff	Short term	SOP	In 2011, an automated web-based system was deployed that meets program partner legal requirements. The system currently sends emails to the security contacts of program partners within one hour of request submission. ACCSP staff is copied on the email but user access depends on partner security review to be returned to ACCSP. Upon receipt of partner response user accounts are typically updated within one business day and the user is automatically emailed of the status change. While most user requests are handled quickly (within 2 weeks), some have a more significant user wait time. The longest delays exist at the partner review stage. Staff will create weekly automated email reminders to security contacts and is will work through the Commercial Technical Committee and/or Operations Committee on ways to improve the process. Improved speed and tran	Program Management	Recommended/In progress
DM-08	Increase collaboration among the ACCSP, NOAA Fisheries Science Centers, and other federal partners, especially at the leadership level (TOR 5).	Executive Committee	Mid term	SOP/Outreach plan	meeting between appropriate ACCSP and Partner staff. This would primarily focus on NOAA Fisheries personnel (e.g., Science Center or Regional Directors and NOAA Fisheries Headquarters Directors) with a goal of creating a better understanding of the role of each partner in the data collection and dissemination process. These meetings would be specific to the region and to the leadership level with a formulated agenda planned in conjunction with federal partner staff. For instance, if staff is new more time would be taken to bring leadership up-to-speed on ACCSP. The objectives of these meetings would be to have NOAA Fisheries staff, as well as ACCSP staff, leave with an understanding of 1) how ACCSP designs, collects, and disseminates marine fisheries statistics, 2) how the Science Centers specifically utilize ACCSP data, 3) if they currently do not, why the Science Centers do not incorporate ACCSP data, and 4) a discussion of how ACCSP might better collaborate with the NOAA Fisheries entity involved. Then establish a routine coordination/collaboration mechanism that keeps leadership informed and involved in making decisions to improve collaboration and reduce redundancies.	Program Management/O	Recommended
DM-09	Define clear data management roles between ACCSP and the NOAA Fisheries Science Centers and communicate those roles to program partners and customers. (TOR 4, 5)	Staff	Mid term	SOP	Staff will work with partner data managers to document currently understood data collection, consolidation, and dissemination roles and responsibilities. This will include a discussion of data access and usage. Roles such as end user support, revisions to supporting data codes, software maintenance, data quality and revisions, and infrastructure support shall be clearly defined. Once drafted, the document will be available to partners and customers.		Clear documentation of t! Data Warehouse & SAFIS Recommended
DM-10	Develop a clear 'future-state' vision for the data warehouse system architecture in relation to other East Coast fishery data repositories to avoid redundancy and ensure that resources among organizations are allocated wisely (TOR 1). Examine potential cost efficiencies in cloud hosting and virtualization of the data (TOR 4).	Operations Committee	Mid term	SOP	Need to start by addressing the recommendation in DM-09 to define clear data management roles between ACCSP and NOAA Fisheries Science Center and communicate those roles to program partners and customers. Once this is addressed, then DM-10 can follow.		Clear documentation of t! Data Warehouse & SAFIS Recommended
DM-11	Develop process for synchronization of data between ACCSP and the Northeast and Southeast Regions. An emphasis needs to be placed in the Southeast Region since more work needs to be accomplished in that region (TOR 5).	Staff	Mid term	SOP	Cloud hosting is prohibitively expensive and many solutions have inherent security and confidentiality risks which preclude deploying confidential fisheries data.	Program Management	Status quo Recommended
DM-12		Staff	Mid term	SOP	A full analysis of policies, data availability, and alignment of data compilation/presentation rules amongst the Program and Regions is required to ensure that datasets are synchronized in space and time in the distributed, regional, systems. In addition, staff recognizes that data gaps exist in all regions (eel and shad in the northeast and golden crab, logbooks, and ITQ data in the southeast). Coordinated partner evaluation of data flow and sharing of datasets will be accomplished in order to move forward (see DM-9).		A commonly understood Data Warehouse & SAFIS Recommended

				<p>staff is in the process of providing tools to show the status or available data. This includes recent data loads or updates and includes tables showing both overview and detailed information.</p> <p>In the longer term, staff will develop the data pedigree and partner validation for information in the Data Warehouse.</p> <p>Staff has developed and deployed updated graphics and text to explain the data consolidation process of the commercial catch and effort data load. This was included in the 2012 annual report and the website. In addition, near real time data status will be provided through the web site.</p>		
DM-13	Provide clear guidance on when and how all datasets are updated with new data in the data warehouse. (TOR 4, 5)	Staff	Mid term	SOP	Easily accessible informat <i>Data Warehouse &amp; SAFIS</i> Recommended/In progress	
M-01	Develop overall communication plan that encompasses strategic viewpoints and priority needs of the program, defines stakeholders, and includes updated outreach plan.	Operations Committee	Mid term	Outreach plan	<p>A new outreach plan will be developed for 2014-2018. However, an overall communication plan may differ, such that it is more holistic and incorporates more input from the Operations Committee in terms of Program priorities and targeted messages to, and input from, defined stakeholders. Need to identify the differences, what additional components are needed, and incorporate that into the new outreach plan. Staff is in the process of providing tools to show the status of available data. This includes recent data loads or updates and includes tables showing both overview and detailed information.</p> <p>In the longer term, staff will develop the data pedigree and partner validation for information in the Data Warehouse.</p> <p>Staff has developed and deployed updated graphics and text to explain the data consolidation process of the commercial catch and effort data load. This was included in the 2012 annual report and the website. In addition, near real time data status will be provided through the website.</p>	A new Outreach Plan for <i>Outreach &amp; Communication</i>
M-02	More clearly communicate data consolidation process to users. (TOR 4)	Staff	Short term	Outreach plan	<p>Adopt an improved "trouble" ticket and enhancement request management system, specifically including response from staff on expected timeline until completion. This should not be a list available on only one staff member's computer, but a more transparent living document. (TOR 4)</p> <p>This recommendation will be referred to the Information Systems Committee. That committee may be able to wade through the complex nature of implementing an automated trouble ticket/process management software solution, which can also be time consuming and expensive.</p> <p>The Information Systems Committee will provide a report after their evaluation of the complex nature of implementing trouble ticket/process management software solutions. The Program will then take action based on the recommendation.</p>	Easily accessible informat <i>Outreach &amp; Communication</i>
M-03	Adopt an improved strategic planning and execution process, using quality program, project and business management best practices. This is not data quality assurance and quality control (QA/QC) which, of course, remains of critical importance, but is about getting more focused on your mission and business layer, not just the IT layer, including, for example, change management processes and data management plans inclusive of disaster planning. (TOR 4)	Staff	Short term	SOP	<p>The ACCSP practice has been to comply with current Strategic Plans. Part of the strategic planning process was to conduct this review.</p> <p>The ACCSP will develop a new and updated Strategic Plan for 2014-2018 using this review, best practices and other documents as a guide. The strategic plan will then serve as a guide for annual implementation plans.</p>	A deployed automated tr <i>Data Warehouse &amp; SAFIS</i>
M-04		Staff	Short term	Strategic plan	<p>Note that change management is addressed in a previous recommendation (see M-3).</p>	An adopted Strategic Plan <i>Program Management</i>

M-05	Develop a well-defined and strategic process to address budget shortfalls, both anticipated (congressional budgets) and unanticipated (within fiscal year rescissions). (TOR 2, 4)	Executive Committee	Short term	Long term funding strateg	<p>In response to the 2013 sequestration, a process was developed to review severe budget shortfalls and make appropriate decisions in cases that go beyond the currently defined Funding Decision Process.</p> <p>Staff have completed a catalog of work tasks, assigned priorities and estimated hours per task.</p> <p>The Funding Decision Process should be amended to include specific guidance and incorporated into Bylaws or Standard Operating Procedure documents (see ORG-05).</p>	Integrated into a Standan	<i>Funding</i>
M-06	Develop and maintain a transparent and comprehensive system of annual performance plans and evaluations for the Executive Director and staff, with methods to acknowledge and reward success and achievements. (TOR 2)	Executive Committee	Short term	SOP	<p>A standardized, objective mechanism for staff performance planning, appraisal, and reward is already in place, based on the processes established by the previous director. It utilizes an objective, point based system with specific goals and objectives similar to that currently used in NOAA. The process invites feedback from staff when revising yearly goals and has written feedback and evaluations from the Director. Staff then review feedback and sign for the coming year. The end result is both a review of the previous year and a new performance plan for the following year. Work is under way to implement the process for the Executive Director as outlined in the MOU. Most recent appraisal period ended June 31, 2013. Appraisals have been completed and Performance Plan revisions are under way.</p> <p>This process differs somewhat from the current ASMFC practice, but has been in use by ACCSP since the previous Director. ASMFC Executive Director Beal has been briefed on the process and is comfortable with the approach. Copies of the Plans and Reviews are kept on file in the ASMFC Human Resources office.</p>	Status quo	<i>Program Management</i>
M-07	Develop and monitor Program level performance measures and communicate to stakeholders. (TOR 2, 4, 5, 6, 7, 8, 9) The Program should employ methods and best practices to ensure continuity of institutional knowledge in the case of staff turnover. (TOR 2, 8)	Operations Committee (ic	Mid term	Outreach plan	<p>Some of this information is already available in the annual report, newsletters and on the website. However, it needs to be better defined, easily accessible, and differentiated by partner. In conjunction with staff, and in particular as part of developing the new Outreach Plan for 2014-2018, issues related to better communicating partner program level performance measures will be reviewed.</p>	A new Outreach Plan for :	<i>Outreach &amp; Communication</i>
ORG-01		Staff	Mid term	SOP	<p>A documentation library that identifies software, hardware, and Program processes has been established and is in the process of being enhanced. This library will be used to provide continuity for the future, as well as day-to-day guidance. Staff will be encouraged to take appropriate training classes within the limits of the training budget by incorporating training requirements into annual performance plans. Team leads and the Program Manager will be encouraged to take at least one project management class. Also, currently two staff are trained as database managers, with a third likely to begin training in 2013. Oracle database administration is a highly technical and very expensive skill to obtain. Training must remain within limited budgetary constraints. The ACCSP practice is to use a merit based rewards system based on the review process used at NOAA Fisheries. In addition, staff are often rewarded with bonuses when unusual or extraordinary tasks are accomplished. The website now boasts more detailed information on staff responsibilities. This information was also included in the ASMFC Commissioner's manual. Newsletters will also highlight staff specifically, as opposed to highlighting "staff", "Data Team", or "Software Team".</p>	A Standard Operating Pro	<i>Program Management</i> In progress
ORG-02	The Program should continue to build project and database management expertise among ACCSP staff. (TOR 2, 4, 8, 9) Program managers should develop methods to positively reward staff and recognize accomplishments, including staff behind the scenes as well as those who are the public face of the Program. (TOR 2)	Staff	Mid term	SOP		Program management cla	<i>Program Management</i> In progress
ORG-03		Staff	Short term	SOP		Newsletters highlight indi	<i>Program Management</i> Recommended/In progress



ORG-04	<p>Revisit the timing and frequency of ACCSP Coordinating Council meetings to improve attendance and focus. (TOR 5c) (Avoid scheduling the meeting on the final day of ASMFC meetings, Conduct annual in-person meetings with quarterly webinars)</p> <p>The Coordinating Council should be strengthened through re-energized Executive and Legislative Committees. The partner Memorandum of Agreement should be reviewed to clarify the composition of the Executive Committee. (TOR 5c)</p>	Executive Committee	Short term	SOP	<p>In an effort to improve attendance and focus during Coordinating Council meetings, the ACCSP Director has maintained a dialogue with ASMFC during the meeting planning phase, which has resulted in changes in the scheduling during Council meetings, making them easier for members to attend. While not always possible, an ongoing attempt will be made to ensure that meetings are no longer held at the end of the Commission meeting weeks, but rather try to schedule them in the earlier part of the meeting week. The Executive Committee has been meeting regularly. The partner MOU may be amended to better codify the membership of the Executive Committee and create a Long Term Funding Strategies Committee (as noted in PM-4) if the need to do so is identified during strategic planning or a potential governance review. A less complicated approach might be to create Program Bylaws or Standard Operating Procedures that outline the composition and functions of committees and documents processes and procedures that are specific to the Program not directly specified in the MOU (see ORG-12).</p>	Improved attendance and	Program Management	Recommended/In progress
ORG-05		Executive Committee	Short term	Long term funding strateg		Routine meetings of the E	Program Management	Recommended/In progress
ORG-06	<p>Given its financial stake in the Program, NOAA Fisheries must be an active participant on the Coordinating Council's Executive Committee. (TOR 5)</p>	Executive Committee	Short term	SOP	<p>The Director of NOAA Fisheries' Office of Science and Technology is now a member of the Executive Committee. However, a review of the Council minutes shows that NOAA Fisheries was always intended to be a member of the Executive Committee. It appears that through a series of changes in leadership that a discontinuity in participation occurred. This points to a lack of continuity in processes and suggests that development of a set of Standard Operating Procedures or ByLaws that articulate specific processes and policies not directly outlined in the MOU as suggested in ORG-05. The responsibilities of the Council Chair and vice-chair will be clearly articulated and a transition process defined that is designed to ensure continuity. The Vice-chair will be directly involved in the decision and consultative processes which will help in preparation for the following Chair position. This process should be documented in some kind of Program Bylaws or Standard Operating Procedures that outline the composition and functions of committees and documents processes and procedures that are specific to the Program, but not directly specified in the MOU (see ORG-05).</p>	NOAA Fisheries is a mem	Program Management	Recommended/Completed
ORG-07	<p>Strategies to improve continuity of program oversight should be implemented, including a review of the leadership term on the Coordinating Council. (TOR 5c)</p> <p>The Program should undergo a governance review. The Panel realizes that the situation today is very different than 1995, when the ACCSP was created. ACCSP needs a better relationship and interface with ASMFC, and linkages established and strengthened. Consideration should be given to placing ACCSP as a program under ASMFC, which could possibly re-engage the state directors. There are issues of economy of scale and potential improvements to efficiency that could be gained, working relationships strengthened, resources leveraged, etc. (TOR 2, 4)</p>	Executive Committee	Short term	SOP		Improved continuity of o	Program Management	
ORG-08		Executive Committee	Short term	Governance review	<p>This points to a lack of continuity in processes and suggests that development of a set of Standard Operating Procedures or ByLaws that articulate specific processes and policies not directly outlined in the MOU as suggested in ORG-05.</p>	Recommendation(s) to m	Program Management	Recommended

ORG-09	Given the potential for resource shortages and increased workload in the future, streamline the number of technical committees and leverage virtual meetings to reduce the burden on partner staff members, while at the same time optimizing partners' engagement. (TOR 2, 4)	Operations Committee	Short term	SOP	Have already started doing this by significantly decreasing the number of in-person meetings and increasing the use of conference calls/webinars. However, there is a limit since some issues/committees still need in-person meetings. Webinars, while low cost and convenient, can create the reverse effect by creating less productive meetings (e.g., limited attendance, increased distractions in office environment). The alternative would be to partially adjust the budget back to in-person meetings for those issues/committees that request them in place of support to projects.	A balanced approach that <i>Program Management</i>	Recommended/In progress
ORG-10	Consider an ACCSP hosted annual or bi-annual conference where key issues are discussed, keynote speakers are invited, and all those interested in fisheries data can network and share ideas. (TOR 4, 5b, 5c, 5f)	Operations Committee	Short term	SOP	Has already been considered and not done mainly due to lack of resources (cost). The following are additional alternatives that will be considered: combine with existing meetings (e.g., Operations Committee meetings); utilize existing outreach opportunities to network and share ideas; look for external funding (e.g., NFWF Fisheries Innovation Fund); or consider other less costly ways to do this. Current ACCSP practice is to communicate when specific business is required. Monthly conference calls between the Coordinating Council Chair, Vice-chair and the Director will be made. The Executive Committee has been more active and is meeting via teleconference regularly and meeting prior to all Coordinating Council meetings.	A balanced approach that <i>Outreach &amp; Communicati</i>	Recommended/In progress
ORG-11	Regular communication should be enhanced between ACCSP staff and the Coordinating Council and its leadership. (TOR 2)	Staff	Short term	SOP	Since the beginning of 2012, the Executive Committee has been meeting routinely and been taking on this function. Executive Committee meetings or conference calls will be made at least bi-monthly, more often when needed as determined by the Council Chair. In addition, monthly conference calls between the Director, Coordinating Council Chair, and Vice-Chair have occurred and will continue. These briefings greatly improve oversight and allow for a routine flow of information and feedback to occur between the parties. This process should be documented in some kind of Program Bylaws or Standard Operating Procedures that outline the composition and functions of committees and documents processes and procedures that are specific to the Program, but not directly specified in the MOU (see ORG-05).	Improved communication <i>Program Management</i>	Recommended/In progress
ORG-12	The Coordinating Council should consider utilizing the executive committee or forming an administrative oversight committee (a subset of the Coordinating Council) to more frequently track the performance of ACCSP and its staff. (TOR 2, 5c)	Executive Committee	Short term	SOP	The value of ACCSP lies in the cooperative nature of the program and the approach in which ACCSP staff and committees took in developing the standards. Outreach and communications must therefore be more strategic and use this same approach. Staff will encourage program partners to be more forthcoming in sharing that value via outreach and communication tools. For instance, there should be more specific outreach teams (SAFIS and Data Warehouse), program partners, and committee chairs could contribute more to newsletters, there could be an annual award to the partner that best embodies the ACCSP value/mission, also within 3 years staff should visit every partner for training and/or site visits.	Improved monitoring of <i>Program Management</i>	Recommended/Completed
PM-01	ACCSP must clearly define its value and continue strategic outreach and communications that articulate that value. (TOR 4, 5e)	Staff	Short to Mid term	Outreach plan	ACCSP staff (with cooperation from regional fishery management councils) will reengage with regional and state staff through regional workshops, in part designed to provide participants with specific information detailing the benefits of the Program within their state or region. Partners will be encouraged to share this information with congressional delegations. Currently, ASMFC is representing ACCSP interests in Congress. The ACCSP Director participated directly in the preparation of ASMFC testimony during the MSFCMA re-	ACCSP partners will have <i>Outreach &amp; Communicati</i>	Recommended
PM-02	State partners should communicate ACCSP's value to their congressional delegations in order to effectively advocate for future funding. (TOR 5e)	Executive Committee	Mid term	Long term funding strategy	authorization process. This will continue in the future. A Long Term Funding Strategies Committee will be formed (a sub-committee of the Coordinating Council) to monitor and encourage activities. This new committee will be tasked with developing a strategy on how ACCSP can effectively enhance and make use of ASMFC and state partner congressional efforts. This Committee shall report activities to the Coordinating Council annually. Planning for the Long Term Funding Strategies Committee (or analogous process) will be included in the strategic planning. (see PM-04)	Accurate and complete in <i>Funding</i>	Recommended
PM-03	The Coordinating Council should aggressively pursue funding, including non-appropriated funds and non-traditional funding sources. (TOR 2)	Executive Committee	Mid term	Long term funding strategy		A funding strategy document <i>Funding</i>	Recommended

PM-04	The ACCSP Coordinating Council should revitalize and task a Legislative Committee with responsibility of seeking funding, including through non-traditional funding sources (e.g., NGO's). (TOR 2, 5e)	Executive Committee	Mid term	Long term funding strategy	A Long Term Funding Strategies Committee will be formed (a sub-committee of the Coordinating Council) to monitor and encourage activities. This new committee will be tasked with developing a strategy on how ACCSP can effectively enhance and make use of ASMFC and state partner congressional efforts. This Committee shall report activities to the Coordinating Council annually. Planning for the Long Term Funding Strategy Committee (or analogous process) will be included in the strategic planning. (See PM-03)	A funding strategy document	Funding	Recommended	
PM-05	State partners should communicate ACCSP's value to their Executive Branches and Legislatures in order to secure state funding for maintenance level data collection. (TOR 2, 5e)	Executive Committee	Mid term	Long term funding strategy	ACCSP staff (with cooperation from regional fishery management councils) will reengage with regional and state staff through regional workshops, in part designed to provide participants with specific information detailing the benefits of the Program within their state or region. Partners will be encouraged to share this information with state and congressional delegations and state Executives (commissioners, directors, senior leadership, etc).	State partners are less rel	Funding	Recommended	
PM-06	Constituent partners who do not have federal lobbying prohibitions should participate in the next MSFCMA reauthorization and be supportive of ACCSP funding. (TOR 2, 5e)	Executive Committee	Short term	Long term funding strategy	ACCSP should develop a well-defined and strategic process to address budget shortfalls, both anticipated (congressional budgets) and unanticipated (within fiscal year rescissions). (TOR 2)	Currently, ASMFC is representing ACCSP interests in Congress. The ACCSP Director participated directly in the preparation of ASMFC testimony during the MSFCMA re-authorization process. This will continue in the future.	Increased funding for the	Funding	Recommended/In progress
PM-07	ACCSP should develop an annual review of ACCSP's budget, objectives, and milestones should be conducted to evaluate planned vs. actual accomplishments in relation to costs (earned value management). (TOR 2, 7)	Executive Committee	Short term	SOP	In response to the 2013 sequestration, a process was developed to review severe budget shortfalls and make appropriate decisions in cases that go beyond the currently defined Funding Decision Process. Staff has completed a catalog of work tasks, assigned priorities and estimated hours per task. The Funding Decision Process should be amended to include specific guidance and incorporated into Bylaws or Standard Operating Procedure documents (see DRG-12).	The Funding Decision Doc	Funding	Recommended	
PM-08		Operations Committee	Mid term	SOP	Reinvigorate the Operations Committee's responsibility for oversight of the Administrative grant, possibly through an annual action plan of sorts. Review could be incorporated into the current process of presentations from the PIs on other maintenance and new grants.	A review of the planned v	Program Management	Recommended	
PM-09	The Program should more clearly communicate ACCSP's mission and goals, and partner responsibilities, to better align each and to align with the Program's technical capabilities and resource capacity. (TOR 1, 5e, 6)	Operations Committee	Mid term	Outreach plan	This recommendation is perhaps related to the perception of overlap between the missions of the NOAA Fisheries Science Centers and ACCSP. ACCSP does not adequately articulate its value nor clearly distinguish its efforts from those of the Science Centers. Those redundancies need to be articulated, and discussed with reference to whether any changes are needed.	The Operation Committee	Outreach & Communicati	Recommended	
PM-10	ACCSP should focus resources on critical business functions and priorities that demonstrate return on investment. (TOR 7)	Operations Committee (jc	Short term	SOP	Develop two lists a) critical functions from the MOU and original Program Design that have shown returns, and b) non-critical initiatives. Set aside the non-critical and redirect resources to critical outstanding priorities. These two lists would provide more clear guidance to staff and committees as to whether new and existing tasks/partner requests are within the Program's core mission.	A prioritized list of critical	Program Management	Recommended	
PM-11	As part of an ongoing strategic planning process, the original ACCSP objectives and priorities should be examined to determine if they are equally valid now and address the most pressing needs of fishery managers, scientists, and fishermen today. (TOR 5, 6)	Operations Committee (jc	Short term	SOP	Develop two lists a) critical functions from the MOU and original Program Design that have shown returns and b) non-critical initiatives. Set aside the non-critical and redirect resources to critical outstanding priorities. These two lists would provide clear guidance to staff and committees as to whether new and existing tasks/partner requests are within the Program's core mission.	A prioritized list of critical	Program Management	Recommended	

PM-12	ACCSP should continue to collect and incorporate stakeholder input on what products and services are most valuable to ACCSP customers and how existing products and services can be improved. (TOR 1, 3, 5d, 5e)	Staff	Mid term	SOP/Outreach plan	<p>Staff will work more closely together to share when upgrades are made to SAFIS and/or the Data Warehouse. For instance, a summary on how it affects the efficiency of the data systems and/or the user should be provided each time there is an upgrade. Also, staff can improve upon the collection of stakeholder data. As of right now the Data Warehouse confidential and non-confidential account holders, as well as those that seek custom data requests are surveyed annually. For users that use the Data Warehouse, surveying once a year is most likely enough. Reviewing the feedback and sharing that information more often with staff, the Operations Committee, and the Data Warehouse Outreach Group would be useful. However, in the past those that respond to the survey have always sent mostly positive remarks and those that are unfavorable are discussed and work continues based on that feedback (i.e., non-account holder access, Data Warehouse manual updates, etc). We also seek feedback from webinars and have received completely positive marks all around. SAFIS is monitored, however the feedback is not transparent and the follow-up is not shared.</p> <p>The most important aspect of an ASMF and ACCSP collaboration is a promotion of understanding with relation to data. ACCSP staff must understand the data needs of the ASMF and ASMF staff must understand the capabilities of ACCSP and be active participants in the process to identify data needs and work with ACCSP to improve their capabilities to meet them. Co-location of staff has already resulted in much improved communications through informal discussions and direct interactions. Discussions are under way between the staffs with regards to data needs for the various fisheries management plans and ASMF staff now routinely work with ACCSP on data related issues when needed. As a consequence many ASMF FMPs now include references to ACCSP standards and use data obtained from ACCSP. ASMF is a partner and actively participates in many of the technical and policy committees of the ACCSP providing a coast-wide perspective for their constituents. ACCSP will work with ASMF in stock assessment planning and execution to optimize data products and better acquaint ASMF with data that are available through the Data Warehouse. Planning is ongoing for a series of small, short briefings and workshops to be held at ASMF. Presenters will alternate between ACCSP and ASMF. ASMF staff will provide updates on various management and data related activities conducted by it. ACCSP staff will explain and demonstrate the capabilities of the various systems in its portfolio and provide updates as the Program moves forward towards full implementation. This ongoing dialog should be implemented as part of the strategic plan and be integrated in the annual implementation plans.</p>	The follow-up and feedback: <i>Data Warehouse &amp; SAFIS</i> ; Recommended
PM-13	ACCSP should strengthen its relationship with the ASMF to leverage their fisheries specific subject matter expertise co-housed with ACCSP. (TOR 5b, 6)	Executive Committee	Short term	SOP	<p>ACCSP partners should come to agreement on a new and more rigorous threshold for allocating maintenance funding in order to better balance innovation and maintenance. (TOR 2, 7)</p> <p>This issue has been discussed many times and a subcommittee between the Operations and Coordinating Council was formed, with the current funding process as the result. However, given the prominence of this issue by both partners and staff during the IPR surveys and resulting recommendation from the reviewers, this could again be referred to the sub-committee</p>	Improved collaboration b <i>Program Management</i> Recommended/In progress
PP-01	ACCSP partners should come to agreement on a new and more rigorous threshold for allocating maintenance funding in order to better balance innovation and maintenance. (TOR 2, 7)	Operations Committee	Mid term	Long term funding strateg	<p>one partner project process should be reviewed in light of anticipated budget climate and a strategic process developed to respond to potential shortfalls, including reviewing funding formula and ability to fund base-level programs to help prevent degradation of time series data (i.e., backsliding). (TOR 2)</p> <p>as was done in 2009).</p>	Determination by the Coc <i>Funding</i> Recommended
PP-02	ACCSP partners should come to agreement on a new and more rigorous threshold for allocating maintenance funding in order to better balance innovation and maintenance. (TOR 2)	Operations Committee	Mid term	Long term funding strateg	<p>one partner project process should be reviewed in light of anticipated budget climate and a strategic process developed to respond to potential shortfalls, including reviewing funding formula and ability to fund base-level programs to help prevent degradation of time series data (i.e., backsliding). (TOR 2)</p> <p>This issue has been discussed many times and a subcommittee between the Operations and Coordinating Council was formed, with the current funding process as the result. However, given the prominence of this issue by both partners and staff during the IPR surveys and resulting recommendation from the reviewers, this could again be referred to the sub-committee</p>	Determination by the Coc <i>Funding</i> Recommended

PP-03	Consider methods to incentivize and leverage additional state or private funding for partner projects (e.g., matching grant program). (TOR 2) Subject states who return for maintenance funding year after year to a higher degree of review to ensure that the project provides an adequate return on investment. (TOR 2) Take steps to ensure that politics do not exert undue influence in funding decisions at the Coordinating Council. (TOR 2, 6) If a data collection need is driven by federal fishery management regulations, states should seek funding directly from NOAA Fisheries to meet those needs. (TOR 2)	Operations Committee	Mid term	Long term funding strategy	This issue has been discussed many times and a subcommittee between the Operations and Coordinating Council was formed, with the current funding process as the result. However, given the prominence of this issue by both partners and staff during the IPR surveys and resulting recommendation from the reviewers, this could again be referred to the sub-committee (as was done in 2009).	Determination by the CoC	Funding	Recommended
PP-04		Operations Committee	Mid term	Long term funding strategy	This issue has been discussed many times and a subcommittee between the Operations and Coordinating Council was formed, with the current funding process as the result. However, given the prominence of this issue by both partners and staff during the IPR surveys and resulting recommendation from the reviewers, this could again be referred to the sub-committee (as was done in 2009).	Determination by the CoC	Funding	Recommended
PP-05		Executive Committee	Short term		It is part of the responsibility of the Council to weigh "political" issues when making decisions. For this reason, it is the recommendation of the Executive Committee that this recommendation not be considered.	Status quo	Funding	Not recommended
PP-06		Operations Committee	Mid term	Long term funding strategy	This issue has been discussed many times and a subcommittee between the Operations and Coordinating Council was formed, with the current funding process as the result. However, given the prominence of this issue by both partners and staff during the IPR surveys and resulting recommendation from the reviewers, this could again be referred to the sub-committee (as was done in 2009). In consultation with NOAA staff and the IPR members, ACCSP staff will compile the applicable NOAA Fisheries procedural directives and Information Quality Act requirements. The compilation will identify those items that are requirements that ACCSP must comply with and those which are requirements for NOAA's data collection programs that may be potentially applicable to ACCSP, but are not compulsory for grantees. Those that relate to data collection and dissemination will be forwarded to the Information Systems Committee, which will prepare implementation plans for compulsory requirements and will also evaluate and recommend implementation of non-compulsory items that the Committee finds would be practical to implement and beneficial to ACCSP and its customers. Those that relate to funding process and financial management will be reviewed by the Executive Committee Funding Subcommittee as part of its review of potential alternative funding processes, and addressed in the Subcommittee's recommendations.	Determination by the CoC	Funding	Recommended
PP-07	Ensure that ACCSP data management practices and funding processes adhere to NOAA Fisheries procedural directives and Information Quality Act requirements to provide metadata and data management plans. (TOR 8) Develop Service Level Agreements (SLAs) between ACCSP and each partner with set expectations, minimum requirements, and process for how to address when unmet expectations, and maintain annual reviews. (TOR 3, 7)	Operations Committee	Mid term	SOP	Developing SLAs for each partner may not be the most practical solution for ACCSP. We can determine the general components of an SLA, clarify what the reviewers felt needed to be added to the process, and adapt ACCSP's funding and grant review process accordingly.	The newly developed State	Program Management	Refer to appropriate committee
PP-08		Operations Committee	Mid term	SOP		Expectations, requirements	Program Management	Recommended in part
PP-09	ACCSP should account for the true costs of partner specific projects, e.g. FUS, FIS/FOSS, HMS, MRIP and lobster database, that ACCSP has taken responsibility for outside of the partner project funding process. This will further define those tasks that ACCSP does accomplish on behalf of specific partners using internal funding from the Administrative Budget. (TOR 2)	Staff	Short term	SOP	In many cases, the Program has received funding to accomplish specific tasks (e.g., MRIP PSE project). For those that the Program has taken on without additional funding it will be necessary to better track the actual hours individual staff members spend on specific projects and work areas. In preparation for this increased accountability, staff now supplies the Director with weekly work summaries that identify which tasks were performed.  In the longer term, the Program will deploy software that can track individual projects and tasks and the estimated hours dedicated to each. Once deployed, this system will allow the Director to better account for true project costs.	Detailed time tracking through	Program Management	Recommended

PP-10	Partner projects that are directly supported by ACCSP staff, should provide initial and maintenance resources to support those projects. (TOR 2)	Operations Committee (jc Short term		SOP	Guidelines for making the distinction between what might be considered routine Partner support vs. effort that requires additional resources will be drafted and included in the SOP. Partners who request this additional support will be expected to provide appropriate resources. There will be a conference call in the summer of 2013 dedicated to SAFIS outreach. The goal of this call is to create a network of those that work with dealers and harvesters to share training strategies (e.g., video tutorials), as well as success stories which can be used to better promote the program.	Partners who require add <i>Program Management</i>	Recommended
S-01	SACCSP needs to better identify the services SAFIS provides to partners for collection [web form] and consolidation [database] of data. (TOR 4, 5) That status of partners achievement of the full standards needs to be better identified and ACCSP needs to work with partners as a resource to foster their full achievement (TOR 4, 5).	Staff	Short to Mid term	Outreach plan	Individuals from all partners using SAFIS have been identified for the SAFIS Outreach Group. Planning for a call at the end of August is underway and an agenda has been made. This recommendation is part of the long term goals of the group.	Better information on the <i>Outreach &amp; Communication</i>	
S-02		Operations Committee	Mid term	Outreach plan	Raise awareness through improved outreach (e.g., don't just focus on the "hole" in the data, but also the successful cooperative relationships among ACCSP partners that are currently providing more comprehensive data). Improve communication specifically on the program website.	The Operations Committe <i>Outreach &amp; Communication</i>	
S-03	ACCSP needs to better promote their accomplishments and remaining work in SAFIS targeted to those that may influence funding decisions. (TOR 4, 5) Focus resources on improving the user interface of all SAFIS products through user feedback and user-centered design, incorporating new or technology improvements, as needed. (TOR 3, 4)	Staff	Mid term	Outreach plan	Staff will work with the Executive Committee and other executive level constituents to determine who these individuals are and a strategy that would best be used to influence funding decisions.  Individuals from all partners using SAFIS have been identified for the SAFIS Outreach Group. Planning for a call at the end of August is underway and an agenda has been made. This recommendation is a part of the long term goals of the group.	Individuals identified to h <i>Outreach &amp; Communication</i>	
S-04		Staff	Mid term	SOP/Outreach plan	Also, ACCSP will work with the Executive Committee on what information they would like included in the 2014-2018 Outreach Strategic Plan.  The Software Team is in the process of upgrading SAFIS applications. One of the goals of this upgrade is to improve system performance. This will be achieved through improvements in the Apex tool and tuning software and database structures. Mid- to long-term improvements should be guided by focus groups. ACCSP will conduct a focus group with the SAFIS Outreach Group to gather feedback on how to improve the interface of SAFIS. Also, annual feedback will begin to be employed just as it is with the customer satisfaction surveys for the Data Warehouse.	An improved user interfa <i>Data Warehouse &amp; SAFIS/Outreach &amp; Communication</i>	
S-05	Improve the response time of the SAFIS web applications. (TOR 4)	Staff	Short to Mid term	SOP	The Software Team is in the process of upgrading SAFIS applications. One of the goals of this upgrade is to improve system performance. This will be achieved through improvements in the Apex tool and tuning software and database structures.	Improved SAFIS response <i>Data Warehouse &amp; SAFIS</i>	
S-06	Provide advisory services and best-practices to state and other customers on custom scripting for exporting SAFIS data in near real-time. (TOR 4) Consider building a local SAFIS software client for customer workstations to complement the existing web applications. (TOR 4)	Staff	Mid term	SOP/Outreach plan	Staff will work to determine how/if data are being retrieved from SAFIS. Currently, all SAFIS interactive reports have the capability of downloading into CSV format. Staff will work with various partners to advise on the most appropriate mechanism for data retrieval and provide support for that process once implemented. After a review, ACCSP will develop a document applicable to all partners outlining how data are being retrieved into reports from SAFIS.	Partners have ready acce: <i>Data Warehouse &amp; SAFIS/Outreach &amp; Communication</i>	
S-07		Staff	Mid term	SOP	Some PC based tools already exist developed by third party vendors and contractors. However they are not designed for bulk data entry, but are targeted at commercial dealers and fishermen. Resources will be either identified in house or contracted to develop a tool designed for bulk entry of commercial dealer and trip data.	A PC based data entry sys <i>Data Warehouse &amp; SAFIS</i>	

S-08	<p>SAFIS be made more user friendly, both from a data entry and data query perspective as implied by these recommendations from the Interview/Survey Report. (TOR 4, 5)</p>	Staff	Mid term	SOP/Outreach plan	<p>The Software Team is in the midst of an upgrade intended to address many of these issues. The upgrade will utilize advances in software and should provide some ease for users. It is expected that program partners will provide feedback on new techniques and additional improvements.</p>	Improved customer satisf <i>Data Warehouse &amp; SAFIS</i>
S-09	<p>ACCSP should consider changing the partnership working mode to one that has a more direct role in assisting partners in the short term to realize the full SAFIS standards. (TOR 4, 5)</p>	Operations Committee (jc Short to Mid term		Outreach plan	<p>Partial implementation of SAFIS as the reporting mechanism by partners is likely a combination of both funding limitations and concerns as outlined in the Panel Report. For the latter, staff's implementation of recommendations S4-S7 (e.g., improving the SAFIS user interface, improving the web application response time) would likely promote increased utilization by partners. In terms of changing the partnership working mode, including assessing the point in implementation each partner has attained, this recommendation will directly benefit from an initiative recently created through the Outreach Committee. They have formed an "issue specific" SAFIS outreach group in which a representative from each Partner relative to SAFIS will be identified. The goals include improving training materials, increasing communication between partners both familiar with and new to SAFIS, and providing a central clearinghouse for partner-specific SAFIS issues.</p>	The Operations Committe <i>Outreach &amp; Communication</i>