

**PROCEEDINGS OF THE**

**ATLANTIC STATES MARINE FISHERIES COMMISSION**

**HORSESHOE CRAB MANAGEMENT BOARD**

**Crowne Plaza Hotel Old Town  
Alexandria, Virginia  
August 5, 2010**

Approved November 8, 2010

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## INDEX OF MOTIONS

1. **Approval of Agenda, by Consent** (Page 1).
2. **Approval of Proceedings of May 4, 2010** by Consent (Page 1).
3. **Move to select Option 2 for Addendum VI, to remain in place through April 30, 2013. At any time prior to that date the board may, through an addendum process, adopt the ARM framework and allocation methodology as the basis for the management of the Delaware Bay horseshoe crab population** (Page 7). Motion by Jack Travelstead; second by Craig Shirey. Motion carried (Page 9).
4. **Move to approve Addendum VI as modified today** (Page 9). Motion by Bill Adler; second by Pat Augustine. Motion carried by consent (Page 9).
5. **Move that the Horseshoe Crab Management Board recommend that the Policy Board authorize the executive director to send letters to the U.S. Fish and Wildlife Service, Division of Migratory Bird Management; NGOs that have an interest in shorebird issues; and biomedical companies to request funding to support the Horseshoe Crab Benthic Trawl Survey. Also, encourage the Delaware Bay states to submit a multi-state proposal to ACCSP to support the Benthic Trawl Survey** (Page 10). Motion by Jack Travelstead; second by Brian Culhane. Motion carried by consent (Page 11).
6. **Move to approve the nominations of Amanda Dey, Jeff Brust, Stew Michels, Kevin Kalasz, Steve Doctor, Eric Hallerman, Mike Millard and Greg Breese to the Delaware Bay Ecosystem Technical Committee** (Page 12). Motion by Peter Himchak; second by Jaime Geiger. Motion carried by consent (Page 12).
7. **Motion to approve the nomination of Larry Niles, Jeff Brust, Rich Wong, Steve Doctor, Kevin Kalasz, Michelle Klopfer, John Sweka, Conor McGowan, Dave Smith and Jim Lyons to the Adaptive Resource Management Subcommittee** (Page 12). Motion by Peter Himchak; second by Pat Augustine. Motion carried by consent (Page 13 ).
8. **Motion to approve the nomination of Jean Woods, Sarah Karpanthy and Chris Bennett to the Shorebird Advisory Panel** (Page 13). Motion by Peter Himchak; second by Pat Augustine. Motion carried by consent (Page 13).
9. **Motion to approve the nomination of Benjie Swan and Cynthia Sires to the Horseshoe Crab Advisory Panel** (Page 13). Motion by Peter Himchak; second by Pat Augustine. Motion carried by consent (Page 13).
10. **Motion to adjourn, by consent.** (Page 13).

## ATTENDANCE

### Board Members

Terry Stockwell, ME, proxy for G. Lapointe (AA)	Russell Dize, MD, proxy for Sen. Colburn (LA)
Douglas Grout, NH (AA)	Steve Bowman, VA (AA)
Paul Diodati, MA (AA)	Jack Travelstead, VA, Administrative Proxy
Bill Adler, MA (GA)	Catherine Davenport, VA (GA)
Robert Ballou, RI (AA)	Louis Daniel, NC (AA)
David Simpson, CT (AA)	Robert Boyles, SC (LA)
Rep. Craig Miner, CT (LA)	John Frampton, SC (AA)
Lance Stewart, CT (GA)	Malcolm Rhodes, SC (GA)
Pat Augustine, NY (GA)	Spud Woodward, GA (AA)
Brian Culhane, NY, proxy for Sen. Foley (LA)	John Duren, GA (GA)
Peter Himchak, NJ, proxy for D. Chanda (AA)	Jessica McCawley, FL (AA)
Tom Fote, NJ (GA)	William Orndorf, FL (GA)
Craig Shirey, DE, proxy for P. Emory (AA)	Sen. Thad Altman, FL (LA)
Bernie Pankowski, DE, proxy for Sen. Venables (LA)	Brian Hooker, NMFS
Tom O'Connell, MD (AA)	Jaime Geiger, USFWS
Bill Goldsborough, MD (GA)	

(AA = Administrative Appointee; GA = Governor Appointee; LA = Legislative Appointee)

### Ex-Officio Members

Larry DeLancey, Technical Committee Chair	Greg Breese, Shorebird Technical Committee Chair
John Sweka, Stock Assessment Subcommittee Chair	

### ASMFC Staff

Bob Beal	Brad Spear
Vince O'Shea	Chris Vonderweidt

### Guests

Dave Smith, USGS

The Horseshoe Crab Management Board of the Atlantic States Marine Fisheries Commission convened in the Presidential Ballroom of the Crowne Plaza Hotel Old Town, Alexandria, Virginia, August 5, 2010, and was called to order at 9:45 o'clock a.m. by Chairman Thomas O'Connell.

### **CALL TO ORDER**

CHAIRMAN THOMAS O'CONNELL: Good, everybody, and welcome to the Horseshoe Crab Management Board Meeting.

### **APPROVAL OF AGENDA**

CHAIRMAN THOMAS O'CONNELL: The agenda that is before everybody today is focused on actually an addendum that would establish provisions for the management of Delaware Bay Horseshoe Crabs. Currently the harvest restrictions for the Delaware Bay that were established through Addendum IV are set to expire after October 31, 2010.

We also have an agenda item that is focused on populating the memberships of some of our technical and advisory bodies. Is there any other item that the board would like to be considered for the agenda today? Seeing none, we'll consider the agenda approved.

### **APPROVAL OF PROCEEDINGS**

CHAIRMAN THOMAS O'CONNELL: The next item on the agenda is approval of our proceedings from the May 2010 meeting.

Are there any suggested edits to those proceedings? If not, with no objections, I would consider those proceedings approved.

### **PUBLIC COMMENT**

CHAIRMAN THOMAS O'CONNELL: The next agenda item is public comment. Is there anybody from the public that would like to comment on items that are not on the agenda at this time? I think as most of the public knows that if we have a motion on a management change we will hopefully have a little bit of time for public comment then. Moving on with the agenda item for Draft Addendum VI for final approval, I'll turn it over to Brad Spear to review the management options.

### **DRAFT ADDENDUM VI**

#### **REVIEW OF OPTIONS**

MR. BRADDOCK SPEAR: Okay, the Draft Addendum IV was included on the Briefing CD that

was sent out to you guys. I'll do a quick summary of the options. Option 1 was a no action option. Essentially if the board was to take no action today, the provisions for horseshoe crab management would revert back to Addendum I and III.

Those provisions would allow for a harvest of up to 150,000 crabs annually in New Jersey and Delaware, and that is male or female crabs; a harvest of over 170,000 crabs for Maryland, again, male or female; and 152,000-plus crabs in Virginia, male or female. Those provisions require a closed season from May 1<sup>st</sup> to June 7<sup>th</sup>.

Option 2 is status quo; a continuation of the regulations that are currently in place under Addendum V. Those include a closed season from January 1<sup>st</sup> through June 7<sup>th</sup> in New Jersey, Delaware, Maryland and Virginia's federal waters. It allows for a harvest of male-only crabs up to 100,000 annually in New Jersey and Delaware; and in Virginia no more than 40 percent of its harvest can come from east of the COLREGS Line.

Essentially that is out of Chesapeake Bay. Of that 40 percent, there must be at least a two-to-one male-to-female ratio. There are sub-options in Option Number 2, and that is to continue the status quo for a period of one year, three years, five years or until the addendum is replaced through another addendum.

Option Number 3 is management using the adaptive resource management tool. The way it is currently structured there are five quota alternatives included in the framework ranging from a full harvest moratorium up to a harvest of 420,000 males, 210,000 females. Those numbers are for the Delaware Bay region as a whole. Those aren't per state, so those numbers of crabs that are up on the screen now would have to be allocated among the four Delaware Bay states, New Jersey, Delaware, Maryland and Virginia.

This option, using the ARM framework, is broken down into two major phases. The iterative phase, which is essentially the implementation phase, where the technical committee compiles the most recent horseshoe crab and red knot data and submits that to the ARM Subcommittee, which plugs that information into the models and runs the optimization; and the results of that optimization produce an optimal harvest package, which then gets passed on to the board. The board then makes its decision on harvest limits and allocation for the Delaware Bay states.

There are options in the addendum for that implementation phase to occur on different time steps, whether it's an annual process or whether the board makes harvest decisions every two years or three years, and there is the qualification in there that the board can revisit harvest decisions at any time.

The other major phase in the ARM framework is the setup phase. That's essentially what the technical committees and stakeholders have been involved in for the past three years now. It involves input from stakeholders to help develop the objectives of the framework, the management alternatives that I mentioned earlier and just general input on the framework.

It also included technical committee review of the input from the stakeholders. The ARM Subcommittee looks at it from a technical point of view and would make adjustments to the models. Any changes to the ARM framework would be essentially recommendations to the board, and the board would have the final say on what the objectives are, what the harvest alternatives are and what the models look like.

At that point the board would select which components of the ARM they would like to see and send that back to the technical committees and then essentially go back to the iterative phase where they run the models and make a recommendation for a harvest decision. Right now in the draft document compliance is set up such that implementation programs would be required by September 1<sup>st</sup> of this year with implementation of those plans by November 1<sup>st</sup> to piggyback on the expiration of Addendum V on October 31<sup>st</sup>.

#### **PUBLIC COMMENT AND HEARING SUMMARY**

CHAIRMAN O'CONNELL: Thank you, Brad. Are there any questions for Brad? Okay, Brad, would you please summarize the public comments. There were four public hearings in each of the states that are affected by the Delaware Bay Region.

MR. SPEAR: Starting with those hearings, the first one was in New Jersey, and that had the highest attendance. There were nine members of the public that signed in. Of those nine, two supported Option Number 3, the ARM Option, whether it's on the two or three year time step. There were four members of the public that submitted another option that was included in the addendum, and that was for a full moratorium on the harvest of horseshoe crabs in the

Delaware Bay Region. There were also suggestions that federal observers should be put on horseshoe crab boats and that there should be a male-only harvest of biomedical crabs.

In Virginia there was one attendee. That individual supported Option 3, the ARM Option, with a two-year decision-making time step. That person also stressed the need to separate out the Delaware Bay Region quota with the non-Delaware Bay Region quota for Maryland and Virginia.

The third hearing was in Maryland. Three members of the public attended and all supported Option Number 2, essentially continuing status quo for a period of five years. The last one was last week in Dover, Delaware. There were five members of the public. None of them expressed support for the options in the addendum. Two supported a full moratorium on the harvest.

They said that if Option 3 was supported, then the number one harvest package, which is a full moratorium, should be passed. There was some support voiced for the – sorry, said the ARM was not ready, but they did like the harvest package number four that was included in the ARM option.

For the written and e-mail comment, we received a total of 16 e-mails, letters and faxes. There was only one individual that supported any of the options, and that person supported Option Number 2, to continue status quo. About 14 of the individuals supported a full moratorium on the harvest of Delaware Bay Region crabs.

There was sort of a general feeling that there were concerns with the ARM framework at this point and that further development of the ARM was warranted. Again, there was a comment about if the ARM was adopted there was the need to maintain in Maryland and Virginia the non-ARM quotas in those states. That's it.

CHAIRMAN O'CONNELL: Thank you, Brad, for a nice summary. Any questions or comments for Brad? All right, seeing none, we're going to move on with an update report from the Adaptive Research Management Subcommittee; Dave Smith.

#### **ADAPTIVE RESEARCH MANAGEMENT SUBCOMMITTEE REPORT**

DR. DAVID SMITH: We're going to move along with where we're at with the ARM framework, and

where we're at is the recommendation of harvest based on the most recent monitoring data. This would be a report to the Delaware Bay Ecosystem Technical Committee from the ARM Subcommittee. Currently the technical committee is informed that will be part of the business today, and then that would go to the management board if everything was put together organizationally.

The objective statement that we're trying to meet is to manage horseshoe crab harvest in Delaware Bay, to maximize that harvest but also to maintain ecosystem integrity and importantly provide adequate stopover habitat for migrating shorebirds, so that's the overarching objective. As Brad indicated, we've developed through a long process of input from stakeholders five harvest packages that represent a range of harvest level shown here.

The population models then linking horseshoe crabs and red knots are used to predict the consequences of each of those harvest packages. The uncertainty in the dependence between red knots and horseshoe crabs is represented by multiple models, and those models are given different weights depending on belief in those models, current belief.

Those weights then change as we implement this process, and we see how closely each of those models predicts the monitoring data that we collect. If they're the closest at prediction, then they will receive higher weight as we move forward. A process called dynamic programming is used to create a decision matrix that helps us identify what would be an optimal harvest package to do now given the most recent monitoring data.

So if we were going to try to maximize harvest over the long run while maintaining adequate stopover habitat, what is the best thing to do of those harvest packages, and that is what is provided by this decision matrix. The most recent monitoring data coming from the Virginia Tech Trawl Survey and a red knot assessment 2009 – that's the most recent we have – as shown here is 6.5 million males, a little over 3 million females, and 24,000 red knots.

The 24,000 in the handout that was a summary of this presentation is shown as 2.4 or 2,400; it's really 24,000, so if you could correct that on your handout. Putting all that together, the harvest recommendation that comes is Package 3; so given this decision matrix, given these models that were developed, the utilities that link the objectives to those models, this is the recommended harvest package for this year based on the most recent monitoring data.

Then recommendation would be presented to the technical committee and ultimately to the board. As Brad indicated, we just completed the setup phase, which is to build the framework, and this would be the first iteration or this iterative phase. The timeline would be to analyze the monitoring data. This would be conducted by the ARM Subcommittee.

Develop the recommendations based on that monitoring data and the decision matrix, that is a task for the technical committee and the ARM Subcommittee. Then those recommendations would be presented to the board for review and decision-making and then those regulations, if changes need to be made, would be a task of the state.

Now, ideally this timeline would be as short as possible so that we are using the monitoring data and we're not using predictions from the monitoring data, so we would like if possible the enacting of regulations and the monitoring data in time to be as close as possible. We propose to present recommendations to the board in February or the earliest meeting in the calendar year and then regulations enacted as soon as possible.

This framework is driven by monitoring data so the regulations are responsive to monitoring data. The ARM framework requires estimates of red knot abundance and horseshoe crab abundance. The Virginia Tech Trawl Survey is the source of the horseshoe crab abundance estimate, and it is currently funded for this year but not beyond this year. I would say that's a big problem that needs somewhat immediate attention.

The next step after a recommendation is allocation of the harvest. The harvest recommendation is for horseshoe crabs of Delaware Bay origin or horseshoe crabs that would spawn in Delaware Bay. A couple of the states, Maryland and Virginia, harvest those animals and also animals from other populations. The next step is to allocate among the Delaware Bay Region states. We have drafted a process for allocation for review by the technical committees, and that allocation process will be presented by John Sweka after I take any questions.

CHAIRMAN O'CONNELL: Thanks, Dave. Any questions or comments for David? Peter.

MR. PETER HIMCHAK: Just so I understand the process, what the ARM is essentially saying at this point in time is that the recommendation is for 500,000 males from the Delaware Bay population

that can be harvested in 2011 pending technical committee review and allocation to states?

DR. SMITH: Right, 500,000.

MR. JACK TRAVELSTEAD: Dave, you mentioned the loss of funding for the Virginia Tech Trawl Survey, and that seems to be a major problem. The trawl survey is basically the backbone of the ARM, correct, and –

DR. SMITH: That's correct.

MR. TRAVELSTEAD: – without that, are there ways around that; are there other things we can use?

DR. SMITH: We have no immediate substitute for the estimates from the trawl survey.

MR. TRAVELSTEAD: So we're basically dead in the water unless that thing is funded?

DR. SMITH: That's correct.

CHAIRMAN O'CONNELL: Just on that note, I think that as we go through the next couple of reports and we get into the discussion on how we go forward, that is one item that we should have some discussion on. Any other questions for Dave? Thanks, Dave, very nice summary and continue the great work. The next report is from the stock assessment subcommittee and I would like to welcome John Sweka with the Fish and Wildlife Service who is replacing Mike Mallard.

#### **STOCK ASSESSMENT SUBCOMMITTEE REPORT**

DR. JOHN SWEKA: Okay, I would like to emphasize, as Dave said, the next step is to come up with an allocation process. I want to really emphasize that this is a draft method to allocate harvest of Delaware Bay horseshoe crabs. This methodology hasn't been reviewed the technical committees yet.

Eventually it will go to the Delaware Bay Ecosystem Technical Committee for review. We want to show you our plans for the process as to how we might go about allocating the Delaware Bay harvest. Okay, Dr. Smith said, recommendations for harvest of horseshoe crabs come from the ARM model. The next step then is to allocate the harvest among the states of New Jersey, Delaware, Maryland and Virginia.

A method has been drafted but it still needs to be reviewed. And here, like I said, we will just present an outline of the allocation method. The first step in the allocation method is to identify areas within each state that include horseshoe crabs of Delaware Bay origin. For Delaware and New Jersey this includes all state waters and ocean waters east of the state boundaries. For Maryland and Virginia, this is all state and ocean waters east of the COLREGS Line.

The next step is to specify the percent of horseshoe crabs harvested in the Delaware Bay Region that are actually of Delaware Bay origin. We are defining Delaware Bay origin as horseshoe crabs that may spawn at least once within the Delaware Bay. For Delaware and New Jersey we assume that this proportion, which we will call Lambda, is equal to a hundred percent.

For Maryland and Virginia, we could take the option of also assuming that it is a hundred percent, but what is more desirable is to assume that Lambda or the percent harvested of Delaware Bay origin is something less than a hundred percent. This we can estimate from tagging data within the U.S. Fish and Wildlife Service Tagging Data Base.

The third step is to determine the allocation from historic landings. For the purposes here we have defined the historic landings since the time of the last addendum and looked at those historic landings from 2005 through the present. For Maryland and Virginia this includes just the landings that occurred east of the COLREGS Line, and these landings get multiplied by the value of Lambda and are used to determine the state's allocation.

I want to emphasize that this is allocation is Delaware Bay origin crabs alone at this point. The final step is then to compute the state-specific quotas. Here we take the Delaware Bay origin quota. This comes from the ARM recommendation multiplied by each state's Lambda or proportion of Delaware Bay origin crabs that are harvested.

It is the ARM recommendation multiplied then by the state allocation. The total quota for each state then equals the Delaware Bay origin quota divided by that Lambda or the proportion of harvest that is of Delaware Bay origin. One thing that we need to note, though, is that the total quota for each state should be capped at historic landings at this point in time unless there is a separate assessment that supports an increase in harvest.

One of the big questions in this allocation methodology is what is the percent of Delaware Bay origin horseshoe crabs that are harvested in Maryland and Virginia. The estimation method that we used was based upon some literature – a methodology by Schwarz and Arnison, 1990, and it uses tagging data from the U.S. Fish and Wildlife Service Horseshoe Crab Tagging Data Base and also the Virginia Tech Trawl Survey population estimates.

These were combined and our estimates of Lambda for Maryland were 13 percent and that for Virginia is 9 percent. This says that of the horseshoe crabs harvested east of the COLREGS Line in Maryland and Virginia, 13 percent in Maryland are of Delaware Bay origin and 9 percent in Virginia are of Delaware Bay origin.

Next I would like to move into a few examples of state quotas under the different harvest packages. For these, again, we used historic landings and these were the average of 2005-2008. This includes zero landings' data as well. For states such as Delaware and New Jersey, for the past few years there has been – well, New Jersey has had a total moratorium and Delaware has only had a male-only harvest. The historic landings include these zeros. Also, the values of Lambda that we used for Delaware and New Jersey, it is a hundred percent and we assumed that all horseshoe crabs harvested are of Delaware Bay origin; and from our tagging data, 13 percent for Maryland and 9 percent for Virginia.

Another issue that arises in this allocation methodology is Maryland and Virginia quotas under any sort of zero harvest ARM package, so this could be a total moratorium or zero harvest of females only. We have two possible ways that we could deal with this. Option A here is no male and/or female harvest in Maryland and Virginia. This is a very strict option.

The assumption here is the ARM model recommends a zero harvest of males and/or females, then the only way to ensure that the other states do not harvest any males or females is to also have a zero harvest quota for those states as well. This is because they are mixed stock fisheries. The second option, Option B, we recently came up with is a de minimis option.

Under the option Maryland and Virginia quota would be such that no more than the de minimis level of landings of Delaware Bay origin crabs occurs in Maryland and Virginia. The de minimis status would be less than or equal to 1 percent of the coast-wide landings. Also, the final constraint in the example

quotas here is that Maryland and Virginia total quota should be less than or equal to historic landings, and that would be unless we have other evidence to suggest – other stock assessment evidence to suggest a higher quota for those states.

The state-specific allocation, the first couple of columns illustrate the historic landings by sex for each state. This was 2005-2008. This was just the average landings over that time – average annual landings over that time. We then multiply those historic landings by our estimates of Lambda for each state, and then we have the total Delaware Bay original landings.

We just proportion that out as a proportional allocation, what percentage of the total harvest of Delaware Bay origin crabs comes from each state. Okay, getting into what the quotas would look like from the various ARM packages, Package 1 was zero male and zero female harvest. These figures shown in this table are calculated using the de minimis option that I just mentioned a little bit ago.

For Package 1 for the states of – you know, with zero male and zero female harvest – for Delaware and New Jersey no crabs would be harvested of either sex. For Maryland and Virginia this would significantly reduce their annual quota east of the COLREGS Line, and this would be the de minimis number or under the de minimis option.

Now, the numbers you see in this table are greater than de minimis for coast-wide landings, but by lowering this number it ensures that for Maryland and Virginia, their take of Delaware Bay origin crabs would equal de minimis status. Under Package 2 we have 250,000 males and zero females. For the males this increases the allowable quota in Delaware and New Jersey; and for Maryland and Virginia this quota ends up being equal to the historic quota. For females under Package 2 Maryland and Virginia would have the de minimis option.

Package 3 is 500,000 males and zero females. For Delaware and New Jersey again this would allow the greatest harvest of male horseshoe crabs and again no harvest of female horseshoe crabs. For Maryland and Virginia Package 3 is essentially the same as Package 2. The male horseshoe crab harvest caps off at the historic landings, and the female horseshoe crab harvest is equal to de minimis numbers.

Package 4 was 280,000 males and 140,000 females. Under this option we cap Maryland and Virginia at the historic landings for both males and females, and

Delaware and New Jersey both have increased landings. Package 5, which would be the most liberal package becoming available to be recommended by the ARM model, is 420,000 males and 210,000 females. This allows for the greatest harvest by Delaware and New Jersey; and Maryland and Virginia, the harvest of males and females would then equal the historic landings for those states.

As I said in the beginning, this is a draft methodology for allocation among the states subject to review by the technical committees. The state quota under each ARM harvest package is very sensitive to what we use as the historic landings going into this allocation methodology, and it is also very sensitive to the Lambda values or the proportion of landings that are of Delaware Bay origin in each state.

The values for Lambda have been estimated rather coarsely from the U.S. Fish and Wildlife Service tagging data. We have plans to do a much more sophisticated analysis of the tagging data to improve our estimates of Lambda for each state. As I said, the allocation method is a draft and will be reviewed hopefully soon by the Delaware Bay Ecosystem Technical Committee once its membership is populated.

CHAIRMAN O'CONNELL: Thanks, John; some great initial work on this. Jack.

MR. TRAVELSTEAD: Just a question to make sure I understand the practical aspects of this; when this method assigns a quota to Virginia for Delaware Bay origin crabs, that would be crabs that are harvested east of the COLREGS Line; is that correct?

DR. SWEKA: Yes, that would be crabs east of the COLREGS Line.

MR. TRAVELSTEAD: So are you simply drawing lines at the state boundaries straight out into the EEZ? In other words, if a boat leaves Virginia and harvest crabs somewhere east of COLREGS off Maryland and brings them back to Virginia; does that count against our quota or Maryland's quota?

DR. SWEKA: At this point in time it would count against your quota because they're landed. If we had more information as to exactly where those animals were harvested, we could move to designate where they're harvested as opposed to landed.

MR. TRAVELSTEAD: Yes, it seems to me you're going to have to have good information about where they're taken; because if a Virginia boat goes up off

Delaware, then you can be assured I guess that a hundred percent of those crabs are of Delaware Bay origin, right, as opposed to fishing off Virginia only 9 percent of them?

DR. SWEKA: Yes, that's true.

MR. TRAVELSTEAD: It seems to be a point we need to work out. I appreciate the work that the committee has done on this, and I know it has to go through additional technical review. I think it also is going to have to go through some substantial review by the board and the public. Quite frankly, I think we're going to need another addendum process at some point to finalize these results. I'm not sure they can be worked out without going through that kind of public process.

CHAIRMAN O'CONNELL: Jack, I think those are some very good points. Peter.

MR. HIMCHAK: Mr. Chairman, I'm very happy that we're not deciding the allocation portion today, but again there would be a strong argument from at least one state that your landings' bases should go back to the reference period landings at the time of the implementation of the plan before all the restrictions were put on state fisheries to get a fair allocation of the resource that a state may or may not want to harvest.

I'm just putting up for now to make you aware of the fact that – you know, I know this is going to get a lot more discussion at the technical committee, but there is a strong opinion at least in New Jersey that – and the motivation, of course, is they want more crabs to put in the bank. That's what it would come down to, so just be aware that reference period landings – and in our case we took 600,000 horseshoe crabs and we take none, so we would expect our allocation to be decided appropriately.

CHAIRMAN O'CONNELL: Thanks, Peter; any other questions for John at this time. We have one more report and then we'll have time for more discussion. All right, seeing none, thanks a lot, John. Our last report before we get into the discussion on management options is an advisory panel report. Brad Spear is going to give a summary for Jim Cooper, who couldn't be here today.

#### **ADVISORY PANEL REPORT**

MR. SPEAR: This report is from a series of e-mails that I received from a few advisory panel members. There wasn't a formal meeting or conference call

held since the last board meeting. The advisory panel had a chance to look over the addendum, look over the harvest allocation methodology and also the harvest package that was recommended through the ARM optimization.

Four members of the advisory panel sent me replies and essentially all supported the same thing, and that was Option Number 2 in the addendum, continuing status quo. There was the sentiment that the ARM can benefit from further development. There were a couple of issues raised with the objective functions in the framework with regard to the male-to-female sex ratio of horseshoe crabs and the female crab threshold used in the objective function. There were also comments to the effect that the allocation method is flawed currently and that it will benefit again from further development and discussion. That's it.

#### **CONSIDERATION OF FINAL APPROVAL OF ADDENDUM VI**

CHAIRMAN O'CONNELL: Thanks, Brad; any questions on the advisory panel report? All right, seeing none, the next item is to discuss how we go forward in regards to harvest restrictions for the Delaware Bay horseshoe crab population. Just trying to sort through some of this in my mind, it seemed like there is no desire from the public at least and probably from this board to go back to Addendum IV, which would actually allow harvest to increase.

I think the question is whether or not we're ready to go forward with the ARM model, which would require some state allocation decisions; and also recognizing that there is no funding for the Virginia Tech Survey that is critical to the ARM model. And then just looking at whether or not we should stay status quo, just looking at how status quo would compare to what the ARM model predicted, which was 500,000 male crabs, if New Jersey maintained a moratorium and Delaware maintained 100,000 crabs; and if we assume the tagging data is right that 13 percent and 9 percent of the crabs harvested in Maryland and Virginia are Delaware Bay origin, we're looking at 127,000 male harvest, which is much lower than what the ARM model is predicting.

Even if New Jersey opened up their male-only fishery, that would still be at 227,000. And then recognizing that Maryland and Virginia both have a two-to-one male-to-female sex ratio limit, you're looking at a maximum female harvest of about 8,700 females. Unless I have some miscalculation or I'm not following that correctly, I just want to offer that

for consideration as we look at the options that are before us. With that, I'll open it up for discussion. Jack.

MR. TRAVELSTEAD: Mr. Chairman, I think you have laid all of Virginia's concerns in your remarks. I think we're all supportive of the ARM framework. I think it ultimately is the way to go. It has been supported by I think most of the board throughout its development. Unfortunately, I don't think it's ready for prime time. I think it still needs some work.

I think I would be reluctant to go forward with it until we work out the allocation issues that I just discussed a little bit ago. I think that needs to go through some type of public review process before I would feel comfortable with it. Then ultimately this problem with the lack of funding for the Virginia Tech Trawl Survey is at this point insurmountable.

I don't want to lock us into a framework for which we don't have future funding for. I think we really don't have any choice but to stick with status quo, and I would offer a motion to that effect. I think if staff can put my motion up on the screen, if you're ready for a motion, Mr. Chairman, to initiate discussion.

CHAIRMAN O'CONNELL: Yes, I think that is fine. Let's get the motion on the screen and read it into the record.

MR. TRAVELSTEAD: **I would move to select Option 2 for Addendum VI, to remain in place through April 30, 2013. At any time prior to that date, the board may, through an addendum process, adopt the ARM framework and allocation methodology as the basis for the management of the Delaware Bay horseshoe crab population.** This will provide time for the technical committee and the advisory panels to continue development of the ARM approach.

CHAIRMAN O'CONNELL: Thank you, Jack; do we have second? Craig Shirey seconds. Okay, let's have some discussion on it. Jaime.

DR. JAIME GEIGER: Mr. Chairman, can we have some sense of a timeline from maybe John and Dave when we would have the ARM model more perfected and as Jack would say more ready for prime time?

DR. SMITH: Well, I'm going to separate the allocation and the pieces that lead to the harvest recommendation. The pieces that lead to the harvest recommendation, I don't sense large debates in the

wings that would lead to substantial changes to what we have in place. There is already built into the framework a periodic review of those pieces, and so that will occur in regular order.

The allocation issue is something we've foreseen we would eventually have to deal with, but we kind of kicked that can down the road and now we have to deal with it. It is very much in draft form and needs to go through review and ordinary processes. I would like just to separate those two out. The ARM framework recommendation, I think it is largely what will remain. I don't see big changes there. The allocation is a work in progress.

DR. GEIGER: And a followup for the board's information; do we currently have funding available to do the necessary trawl survey for this year, this coming year, or are we basically at a loss to fund or see the Virginia Tech Survey funded?

CHAIRMAN O'CONNELL: My understanding is that there is funding to continue the survey through 2010 and then the funding dries up.

DR. GEIGER: So, Mr. Chairman, as I understand it, in order to continue the ARM process and to continue to have the sound data that is going to be necessary to implement the ARM model, we have to basically secure funding for a Virginia Tech Survey or a like survey starting in FY-11, okay, and then also have the ARM model perfected and whatever else needs to be done by that similar time to make a future discussion, if this motion is accepted, to accept the ARM framework.

CHAIRMAN O'CONNELL: Yes, I think that is correct. Any other questions? Craig.

MR. CRAIG SHIREY: Mr. Chairman, we're very much in support of the continued development of the ARM framework. There has been a lot of effort put into it, and we're seeing some of the benefits of the management strategy. Male crabs are definitely increasing in abundance. It's perhaps a little bit too early to see some of the signs for females recruiting, but we'd very like to see this move forward.

MR. BRIAN HOOKER: It seems to me do we need to specify 2A, 2B, 2C or 2D in the motion?

CHAIRMAN O'CONNELL: I think the inclusion of the date certain of April 30, 2013, covers the timeline. Peter.

MR. HIMCHAK: I just want to state our position. We support what would have been Option 3, but recognizing the allocation issue wisdom dictates that this is the right approach to take.

CHAIRMAN O'CONNELL: Any other comments or questions? Jaime.

DR. GEIGER: Mr. Chairman, I would certainly like to have some discussion about – again, I get the sense that the board is comfortable with the ARM model and certainly supportive of further perfecting it. I certainly am aware that I think the board shares the concern that we need the sound science that is underpinning the ARM model.

I would to at least have some discussion about what has been done or what is currently done to possibly secure funding to continue the Virginia Tech Trawl Survey or some scientifically robust trawl survey that's going to satisfy the needs for the ARM model.

CHAIRMAN O'CONNELL: Yes, thanks, I'll make sure we have that discussion. It seems like we have kind of gone through the board discussion and let's open it up. Anybody from the public that would like to present a comment? Rick.

MR. RICK ROBINS: Rick Robins, member of the advisory panel. I'm pleased to speak in support of the motion, but I would like to just take a quick step back and say that the board and the ARM working group and the technical committees have made incredible progress I think in the development of this model. I've been somewhat outspoken in my support of this approach.

I think it's an excellent way forward and I think excellent progress has been made. I think however with respect to the allocation side of this the draft paper that was submitted and the comments that came back through the AP suggests that there are significant issues that do still need to be addressed here at the board level.

I think that decision should be informed by the tagging analysis that was done and that technical input is a very important one, but I think ultimately there needs to be substantial discussion between the affected states; and if proposals are going to go forward to the technical committee for further review, I would suggest that the states be able to develop some alternatives.

I think by putting that off into a separate action would allow for more thorough development of that

type of discussion. I think the point that Pete Himchak raises is an important one for consideration. Some states would like to bank the quota. There are a number of different ways to implement this ARM.

The ARM output right now, perhaps not surprisingly, I think is a very strong affirmation of what this board has already done to develop Addendum IV and Addendum V and essentially have a male-biased fishery in the Delaware Bay Region. I think it provides a strong technical underpinning for that approach that you already have in place, and the population is responding very favorably to that.

I would submit that the allocation could be done in a number of different ways, and I would encourage the board to pursue an allocation methodology that is essentially not disruptive and mitigates the greatest degree practicable any disruptive impacts of the allocation. Right now we have existing status quo fisheries that reflect Addendum IV and Addendum V.

I would suggest that as much of the allocation as possible be used to cover those existing fisheries. It seems unrealistic that any of these four states are going to rush to increase their quotas. I would think that changes in quota would want to be done incrementally over time, and so I think phasing in the implementation of this ARM model to inform management at first, before it's used to actually govern state-by-state quotas, makes the most sense. I would suggest that the board consider this so that they would go through a more deliberate process related to allocation and again look at a way to incrementally increase quotas if they're to be increased. Thank you.

MR. HIMCHAK: Mr. Chairman, this brings up the very important question of how the four states would deal with an allocation issue. Considering what we went through with spiny dogfish earlier this week, I don't think that it serves the board best that we conduct that business as a full Horseshoe Crab Management Board. I guess my question is what is the proper vehicle for the four states to come to some agreement in the development or approval of what is presented in the allocation scheme? Is it a separate addendum? I mean, the public would certainly want to weigh in on this as well.

CHAIRMAN O'CONNELL: My thought, Peter, is that it would require an addendum to the plan. What I was going to suggest, from what I'm hearing today, is if this is passed, that we continue to support the stock assessment subcommittee, to continue working with the technical committee to further refine options

for a state allocation amongst the Delaware Bay origin jurisdictions, and come back to the board as necessary to get updates and where guidance is needed to make some refinements.

As we hopefully will pursue funding for the Virginia Tech Survey and get the allocation defined, hopefully we'll be a point in the near future to move forward if the board feels comfortable with that. Any other comments from the board? Let's take just a brief caucus and then we'll take a vote on the motion.

(Whereupon, a caucus was held.)

CHAIRMAN O'CONNELL: All right, we'll take a vote. Those in favor please raise your hand; those in opposition please raise your hand; any abstentions; null votes. **The motion carries.** I just want to make it clear of the timeline that is reflected in the addendum. There is a September 1<sup>st</sup> timeline for state plans with a November 1<sup>st</sup> implementation.

We also need a motion to approve the addendum. Bill Adler; Pat Augustine seconds. Any board discussion? Any opposition to approving the addendum? **All right, seeing none, the addendum is approved. The motion was to move to approve Addendum VI as modified today. Motion by Mr. Adler; second by Mr. Augustine.** The motion carries by consent.

## OVERVIEW AND DISCUSSION OF FUNDING OF VIRGINIA TECH TRAWL SURVEY

CHAIRMAN O'CONNELL: I'm going to ask Brad to give a brief overview on the efforts to date on securing additional funding for the Virginia Tech Survey and also ask him to just clarify how much funding is needed.

MR. SPEAR: The estimate that Virginia Tech puts out for administering the survey is around 200 or \$250,000. At this point ASMFC's technical committees have been working with Virginia Tech to help them put together proposals to find funding. I know they have applied for at least one grant through NOAA to fund the survey for 2011.

Also, the biomedical community has started an initiative to find funding for this 2011 survey led by the Maryland company, Cambric's. They have gotten some commitments for funding, but not enough for the full survey but certainly it is a start. We have been working on this, but it is clear that nothing is secure and certainly more can be done.

DR. GEIGER: Mr. Chairman, I'm encourage by what you said, Brad, and again I'm especially encouraged that the industry is starting to step up. I would think that we would strongly encourage that. Certainly, they're using the resource, and I do think it's appropriate for them to try to get more engaged in helping fund the sound science that is driving the model that is going to benefit everybody.

Secondly, I guess I would also ask that I think some of the conservation groups that have been very active in this group, such as the National Audubon Society – I think we should contact them and solicit their support as well, because they also have been very active and very supportive in this process. I think they should be allowed to hopefully contribute to some of the sound science that is conserving both horseshoe crabs as well as migratory shorebirds.

I would ask the board also that – and, again, possibly with a multi-state ACCSP project dedicated to this be reasonable and appropriate. Certainly, I would think that the ACCSP getting sound science to manage the resources under the auspices of the commission, I would think that would be an appropriate vehicle if one or more states would come together with a proposal to fund this; I think that would be another option.

Certainly, I think options to look at other funding mechanisms, the international, some of these other groups may be also of value. Certainly, I know that the U.S. Fish and Wildlife Service and the NOAA Fisheries are in the process of putting together FY-12 budgets as we speak; though I am concerned that all the indications we have, the FY-12 budget cycle may be very austere, and certainly we're getting strong signals that the Administration is going to pursue a very lean-and-mean FY-12 budget submission.

Again, I do think a multi-approach to this, trying to get as many partners to sort of challenge to fund this survey is the best approach. I think it is sort of benefit to have many there. I also think that I think the commission, if the commission has some seed funds or source funds that can also sort of serve as sort as a – sort of call it a funding challenge; that would help as well. Mr. Chairman, I think there is a lot of variety and opportunities to get this done if we have the collective will and the desire, the commitment and the follow through to make it happen. Thank you.

CHAIRMAN O'CONNELL: Thanks, Jaime; I those are great points. How would the board like to proceed? Jack.

MR. TRAVELSTEAD: I would like to make a motion to do what Jaime said, and we just happen to have one on the board that I think gets at some of what Jaime was talking about. Our executive director has been pretty creative and capable in this area, so I think it would be appropriate that we engage him to at least start this process by sending letters to Fish and Wildlife and various NGOs, including the biomedical companies that you mentioned.

**The motion then would be to move that the Horseshoe Crab Management Board recommend that the Policy Board authorize the executive director to send letters to the U.S. Fish and Wildlife Service, Division of Migratory Bird Management; NGOs that have an interest in shorebird issues; and biomedical companies to request funding for the Horseshoe Crab Benthic Trawl Survey.** I would certainly welcome other amendments to this motion along the lines of what Jaime had said.

CHAIRMAN O'CONNELL: Thanks, Jack; do we have a second for this motion? Second by Brian Culhane. Board discussion. Jaime.

DR. GEIGER: Mr. Chairman, I know funding is always tight and I know that there is great competition, appropriately so, for quality projects funded under the ACCSP Program, but I do think that is an appropriate and valuable vehicle given that we have multiple states engaged in this effort and the concern and the visibility, and obviously the resource impacts – I would suggest that included in this motion we make a commitment to possibly put together a multi-state ACCSP Proposal if indeed it is deemed appropriate for possible funding in FY-11 and beyond.

CHAIRMAN O'CONNELL: Jaime, is that a suggestion to amend the motion to include that language?

DR. GEIGER: Yes, Mr. Chairman.

MR. TRAVELSTEAD: I have no objection to that amendment.

CHAIRMAN O'CONNELL: Can we get some draft language up there that would encourage the Delaware Bay Region states to work towards a multi-agency submittal to ACCSP. Peter.

MR. HIMCHAK: Before you amend the motion, the ACCSP does not fund fishery-independent surveys,

and we've already missed the window of opportunity for 2011 funding. That was early July of 2010. I'm so embedded in this process, but I don't think horseshoe crabs rated very highly on the biological matrix and it wouldn't score well. The basic problem is that it is a fishery-independent survey and I think that would disqualify it right out of the box even though sounds like a good idea of a multi-state proposal.

CHAIRMAN O'CONNELL: I'm just looking at Bob; would it be inappropriate to make that request to ACCSP?

MR. ROBERT E. BEAL: Well, if they have a blanket policy that they don't fund fishery-independent surveys, it might be, but if the language is in there we can explore this with the ACCSP staff and see if there are any opportunities available.

CHAIRMAN O'CONNELL: I think regarding the deadline is past for 2011, it still can be discussed amongst the states. Just to give people a sense of the deadline as to when this funding would be needed to continue the next year's survey ideally would be early March 2011, so we've got some time but not a lot. Any other comments on the motion? Is there anybody from the public that would like to provide a comment?

The motion is move the Horseshoe Crab Management Board recommend that the Policy Board authorize the executive director to send letters to the U.S. Fish and Wildlife Service, Division of Migratory Bird Management; NGOs that have an interest in shorebird issues; and biomedical companies to request funding to support the Horseshoe Crab Benthic Trawl Survey. Also, encourage the Delaware Bay states to submit a multi-state proposal to ACCSP to support the Benthic Trawl Survey. Motion by Mr. Travelstead; second by Mr. Culhane. Is there any objection for moving forward with this motion? All right, none, **the motion carries by consent.** Robert.

MR. ROBERT H. BOYLES, JR.: Mr. Chairman, I noted that the motion was to move to recommend the Policy Board authorize the director to write a letter. As you all know, we had a policy board meeting scheduled for today. We completed all of our business. My sense of things is it is not a good use of your time to convene the policy board to discuss writing this letter.

Given that time is of the essence and that this is a state-wide board, I would just suggest that perhaps

we go ahead and authorize the director – that's my judgment – and not take this to the policy board. As you all know, it has been our practice and policy to take requests for letters – to hold that at the policy board, but I think in this case, with the timing being so critical, I think we just go ahead and move it. That would be my suggestion and my call, I suppose, as chair of the policy board.

## REVIEW AND NOMINATION OF COMMITTEE MEMBERSHIPS

CHAIRMAN O'CONNELL: Thanks, Robert; I think that's a good suggestion. Anybody have any concerns with that? All right, then let's proceed in that manner. All right, the next item on the agenda is to review and populate the various committee memberships. You may recall at the May board meeting the board established a new committee structure for advising the board on horseshoe crab management decisions. Nomination requests were sent out. Brad is going to going to review the nominations that have been received. I think we still need to seek additional nominations, but hopefully today will be a good start forward.

MR. SPEAR: Just to remind everyone of the committee structure that was adopted at the last board meeting, here is a schematic of the committees. Essentially the letters that went out after the May meeting looking for nominations were for the right-hand portion of this graph. I will go through the series of nominations for each group. In addition there were two nominations for the Horseshoe Crab Advisory Panel, which I'll include.

For the Delaware Bay Ecosystem Technical Committee we received nominations from New Jersey for Amanda Dey and Jeff Brust. Amanda works in their Endangered and Non-Game Species Program; essentially the bird portion. Jeff Brust many of you know and has been on the Horseshoe Crab Committee a little while.

From Delaware we got nominations for Stew Michels and Kevin Kalasz. Stew is on the horseshoe crab side of things and Kevin works mostly on shorebird issues. For Maryland Steve Doctor was nominated. He is a horseshoe crab biologist. For Virginia Eric Hallerman was nominated. He is the director of the Horseshoe Crab Research Center at Virginia Tech; again which his department oversees the development of the Virginia Tech Survey.

For the ARM Subcommittee we received nominations from New Jersey for Larry Niles. He

works for a group called the Conserve Wildlife Foundation in New Jersey, a shorebird biologist – again for Jeff Brust. In Delaware we received nominations for Rich Wong. He is a technical statistician with a horseshoe crab background; Kevin Kalasz again, shorebird biologist. For Virginia we received a nomination for Michelle Klopfer. She is a staff of Eric Hallerman’s at Virginia Tech and has been involved with the subcommittee. Also, there was a nomination for again Steve Doctor from Maryland.

For the Shorebird Advisory Panel we received nominations from Delaware for Jean Woods and Chris Bennett. The nomination application was included in the packet to the board; if you would like more details about those individuals, it is included on the CD.

For the Horseshoe Crab Advisory Panel we received nominations from New Jersey for Benjie Swan. She works for Limulus Labs. It is a horseshoe crab bleeding facility in New Jersey. For South Carolina; Cathy Sires, who is a horseshoe crab harvester.

CHAIRMAN O’CONNELL: As you can see, this is a good first start, but we need to fill in the blanks here and there. Are there any other nominations that the board wants to make at this time? Jaime.

DR. GEIGER: Mr. Chairman, certainly, I would think that Mike Millard and Greg Breese on the Delaware Bay Ecosystem Technical Committee would be good, sound additions. Again, I think John Sweka on the ARM Group would be also an excellent addition to the group as well to continue this good work. I would at least nominate those to represent the Fish and Wildlife Service.

CHAIRMAN O’CONNELL: I think we’re looking for a motion, Brad, to approve these nominations to these technical committee and advisory panel structures. Thanks, Peter.

MR. HIMCHAK: Well, to get this started, move to accept the nominations that were presented by Brad Spear on behalf of the basin state – well, as presented by Brad Spear, recommended by the states and by the Fish and Wildlife Service. I guess we should list all the individual committees.

CHAIRMAN O’CONNELL: Peter, maybe we can just get a second and staff will get a motion up there.

MR. JOHN DUREN: Mr. Chairman, while we wait for the motion to be drafted, in the documents on the

CD, the materials that were submitted for these applications, some of them weren’t signed by the commissioners from their respective states, so I would just like to verify that the commissioners of the states where these folks reside are supportive. I guess by silence that would be a good enough verification.

CHAIRMAN O’CONNELL: Thank you; that’s my sense as well. Pete, was your motion specific to the Delaware Bay Ecosystem Technical Committee or all the nominations today?

MR. HIMCHAK: My motion was for all of the above, but this is a much neater way of doing it, to specify the committee and the names.

CHAIRMAN O’CONNELL: All right, do you want to read the motion, Peter?

#### **DELAWARE BAY ECOSYSTEM TECHNICAL COMMITTEE**

MR. HIMCHAK: **Move to approve the nominations of Amanda Dey, Jeff Brust, Stew Michels, Kevin Kalasz, Steve Doctor, Eric Hallerman, Mike Millard and Greg Breese to the Delaware Bay Ecosystem Technical Committee.**

CHAIRMAN O’CONNELL: Do we have a second? Second by Jaime. Any discussion by the board? Anybody from the public that would want to comment? All right, is there any objection by the board to move forward with this motion? Seeing none, **the motion is approved by consent.** Do we have a motion for the nominations of the ARM Subcommittee? Peter.

#### **ADAPTIVE RESOURCE MANAGEMENT SUBCOMMITTEE**

MR. HIMCHAK: **Move to approve the nominations of Larry Niles, Jeff Brust, Rich Wong, Kevin Kalasz, Michelle Klopfer, John Sweka to the Adaptive Resource Management Subcommittee. I think Steve Doctor belongs up there.**

CHAIRMAN O’CONNELL: Yes, that is correct. We got a second from Pat Augustine. Any board discussion? Anyone from the public that would like to comment? Rick.

MR. ROBINS: Mr. Chairman, just one concern and that is there are significant federal expertise currently on this committee; that is, on the ARM Technical

Group. That would include Jim Lyons, Dave Smith and Conor McGowan. It seems to me that they have been so intimately involved in the development of the model that it would be beneficial for them to continue in the development of the model. I note that USGS is not in a position here to nominate so I just bring that to the board's attention. I noticed that they have not been nominated yet but I just raise that issue. Thank you.

CHAIRMAN O'CONNELL: Thanks, Rick; good suggestion. Jaime.

DR. GEIGER: Mr. Chairman, I think that's an excellent suggestion and though I'm somewhat reluctant to commit my USGS colleagues, I know they would be more willing and able to continue in this endeavor and I would highly recommend they be added as well.

CHAIRMAN O'CONNELL: Peter and Pat, are you guys comfortable with that addition?

MR. PATRICK AUGUSTINE: That's fine.

CHAIRMAN O'CONNELL: Move to approve the nomination of Larry Niles, Jeff Brust, Rich Wong, Steve Doctor, Kevin Kalasz, Michelle Klopfer, John Sweka, Conor McGowan, Dave Smith and Jim Lyons to the Adaptive Resource Management Subcommittee. Motion by Peter Himchak; second by Mr. Augustine. Any board discussion? All right, any objection to moving forward with this motion? **Seeing none, the motion carries.** Next is the Shorebird Advisory Panel, do we have motion to move that forward?

MR. HIMCHAK: Move to approve the nomination of Jean Woods and Chris Bennett to the Shorebird Advisory Panel.

CHAIRMAN O'CONNELL: Pat seconded. Any board discussion? Jack.

MR. TRAVELSTEAD: Mr. Chairman, I have spoken to Sarah Karpanthy, who is at Virginia Tech, and she has expressed an interest in serving on this panel. I was hoping that we would have had her nomination form here today, but unfortunately she has not been able to get it to me. If we add her name to the list today, I would appreciate that; Sarah Karpanthy.

CHAIRMAN O'CONNELL: Thanks, Jack. Peter and Pat, you guys okay?

MR. AUGUSTINE: Well, if the protocol is okay, sure, why not. If it's just a formality of submitting and you are going to approve it, sure, absolutely.

CHAIRMAN O'CONNELL: Peter, do you want to read the motion again?

#### SHOREBIRD ADVISORY PANEL

MR. HIMCHAK: **Okay, move to approve the nomination of Jean Woods, Sarah Karpanthy and Chris Bennett to the Shorebird Advisory Panel.**

CHAIRMAN O'CONNELL: Any board discussion? Anyone from the public that would like to comment? All right, any objection. **The motion carries by consent.** One more; we have a nomination for the Horseshoe Crab Advisory Panel. Peter.

#### HORSESHOE CRAB ADVISORY PANEL

MR. HIMCHAK: **Move to approve the nomination of Benjie Swan and Cynthia Sires to the Horseshoe Crab Advisory Panel.**

CHAIRMAN O'CONNELL: We've got a second from Pat. Any board discussion? Anyone from the public? Any objection by the board to move this forward? **Seeing none, the motion carries.** All right, that completes our agenda.

#### ADJOURNMENT

CHAIRMAN O'CONNELL: Is there any other business? Seeing none, do we have a motion to adjourn? Thanks, Pat. Thanks for everybody's help and great work by staff and the technical committee and advisory panel members for bringing this forward today.

(Whereupon, the meeting was adjourned at 11:05 a.m., August 5, 2010.)