

**PROCEEDINGS
OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
AMREICAN EEL MANAGEMENT BOARD**



**October 24, 2006
Sheraton Atlantic Beach
Atlantic Beach, North Carolina**

ATTENDANCE

Board Members

George Lapointe, Maine DMR	Bernie Pankowski, proxy for Sen. Venables (DE)
Terry Stockwell, Maine DMR	Russell Dize, proxy for Sen. Colburn (MD)
Rep. Dennis Abbott, New Hampshire	Howard King, Maryland DNR
John Nelson, New Hampshire Marine Fisheries	Bruno Vasta, Maryland
Ritchie White, New Hampshire	A.C. Carpenter, PRFC
Paul Diodati, Massachusetts DMF	Rob O'Reilly, proxy for S. Bowman (VA)
Mark Gibson, Rhode Island DFW	Kelly Place, proxy for Sen. Chirchester (VA)
Everett Petronio, Rhode Island	Jimmy Johnson, proxy for Rep. W. Wainright (NC)
Eric Smith, Connecticut DEP	Preston Pate, North Carolina DNR
Pat Augustine, New York	Robert Boyles, South Carolina DNR
Gordon Colvin, Chair , New York Sate DEC	Malcolm Rhodes, South Carolina
Brian Culhane, proxy for Sen. Johnson, NY	Rep. Bob Lane, Georgia
Erling Berg, New Jersey	Spud Woodward, proxy for S. Shipman (GA)
Tom McCloy, proxy for D. Chanda (NJ)	April Price, Florida
Frank Cozzo, proxy for C. Schroeder (PA)	Tom Meyer, NMFS
Eugene Kray, Pennsylvania	Bill Archambault, USFWS
Leroy Young, proxy for D. Austen (PA)	
Roy Miller, proxy for P. Emory (DE)	

Ex-Officio Members

Steve Gephard, TC Chair, CT DEP	Mitchell Feigenbaum, AP Chair
Matt Cieri, SASC Chair, Maine DMR	

ASMFC Staff

Vince O'Shea	Nichola Meserve
Robert Beal	
Erika Robbins	

There may have been others in attendance that did not sign the sign-in sheet.

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ATLANTIC STATES MARINE FISHERIES
COMMISSION

65TH ANNUAL MEETING

AMERICAN EEL MANAGEMENT BOARD

SHERATON ATLANTIC BEACH
ATLANTIC BEACH, NORTH CAROLINA

October 24, 2006

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The meeting of the American Eel Management Board of the Atlantic States Marine Fisheries Commission convened in the Fear/Outlook/Atlantic Room of the Sheraton Atlantic Beach, Atlantic Beach, North Carolina, on Tuesday, October 24, 2006, and was called to order at 4:15 o'clock, p.m., by Gordon C. Colvin.

CALL TO ORDER

CHAIRMAN GORDON C. COLVIN: Good morning. I would like to call to order the American Eel Management Board. My name is Gordon Colvin. I'm the chairman of the board. There is a draft agenda. It has been on the back table and in your briefing CD. Is there any requested additions or corrections, changes to the agenda?

I should indicate to you all that I have two short notes to take up under the topic of other business that Wilson Laney just made me aware of. They will be kind of brief FYIs. If there is nothing else, then we will proceed without objection under the agenda before you.

The next item on the agenda is public comment period. Is there any public comment at this time, recognizing that there will be opportunity for comment on individual agenda items as we take them? Thank you. Let's proceed with the

annual reports and introduce our new FMP coordinator, Erika Robbins, for presentation of the 2006 FMP review.

ANNUAL REPORTS

MS. ERIKA ROBBINS: Thank you, Gordon. Regarding the status of the stock for American eel Matt Cieri, the chair of the stock assessment subcommittee, will present an update of the American Eel Stock Assessment Report later in today's meeting.

And commercial fisheries for glass eel and elver exist in Maine, South Carolina and Florida, although no glass eel or elvers were harvested of Florida in 2005. Elver and silver eel fisheries exist in all states and jurisdictions except Pennsylvania and the District of Columbia.

In 2005 no elvers or yellow eels were harvested from New Hampshire, Rhode Island, South Carolina and Georgia. Landings of yellow and silver eel total over 867,000 pounds in 2005. This is lower than 2004 landings of over 921,000 pounds.

New Jersey, Delaware, Maryland and the Potomac River Fisheries Commission each reported landings over 100,000 pounds and together account for 73 percent of the coastwide commercial harvest. All landings data for 2005 comes from the 2006 compliance reports.

Recreational anglers directly target eel. According to MRFSS 2005 recreational total catch was 94,119 fish which represents a slight decrease in 2004's reported total catch of just 112,000 fish.

Florida and Georgia combined represent 53 percent of the recreational American eel catch. Florida, Georgia, Delaware, and Maryland combined represent 78 percent of the recreational catch in 2005. About 87 percent of the eel caught were released alive by anglers.

The technical committee reviewed the state proposals for implementation of Addendum I and they provided their comments to the states' proposals to the board in a memo on July 10th, 2006. Steve Gephard will provide the board with an update on the states implementation of Addendum I later in the meeting.

The PRT finds that all states are currently implementing the required provisions of the American Eel Fishing Fishery Management Plan. The qualification for *de minimis* in 2006 was determined from state-reported landings found in the compliance reports and the National Marine Fisheries Service Website for the years 2003 and 2004 as NMFS landings information was unavailable for 2005.

There were discrepancies between state-reported landings and NMFS landings. The NMFS landings were used to calculate *de minimis* unless NMFS reported no landings for a state that had reported its own landings in their compliance report.

The states of Massachusetts, Pennsylvania, Georgia, and Florida, and the District of Columbia request and qualify for *de minimis* status in 2006. The PRT has made the following recommendations. First, they request that state personnel highlight notable trends in their annual reports.

Secondly, the PRT continues to express concern over the lack of data available for states to report landings by life stage. Third, the PRT affirmed the value of the young-of-year surveys and is adamant that they need to be performed on an annual basis. The PRT strongly recommends that all states and jurisdictions continue to implement the young-of-year survey.

Lastly, the state compliance reports were prepared in a variety of formats. The PRT requests that the states and jurisdictions prepare their reports following the outline that will be

provided to them prior to the due date of the next annual compliance reports. Thank you.

CHAIRMAN COLVIN: Thank you, Erika. Are there any questions on the FMP review? There being no questions, it is an action item to approve the FMP review and the *de minimis* status of the states identified. Mr. Augustine.

MR. PATRICK AUGUSTINE: Thank you, Mr. Chairman. I so move and do you want to repeat all those things? The FMP review and what was the second one? The report on state compliance --

CHAIRMAN COLVIN: The motion I think we're looking for is to approve the 2006 FMP review and to approve de minimis status for the states of --

MR. AUGUSTINE: I second the motion.

MS. ROBBINS: Massachusetts, Pennsylvania, Georgia, Florida and the District of Columbia.

CHAIRMAN COLVIN: That was your motion, Mr. Augustine?

MR. AUGUSTINE: That was, Mr. Chairman, thank you.

CHAIRMAN COLVIN: Seconded by Mr. Diodati. Discussion on the motion. Is there objection to the motion? Without objection the motion carries. The next item is the state compliance report. Erika.

The state compliance report was in fact part of what Erika previously reported so we will also need a motion to take final action on the compliance report which I think Pat attempted to do and I wouldn't let him. So would you like to do it now, Mr. Augustine?

MR. AUGUSTINE: Yes, I second your motion.

CHAIRMAN COLVIN: I'll leave that to someone else. Do I have a motion? Thank you, Mr. Smith

MR. ERIC SMITH: **Motion to approve.**

CHAIRMAN COLVIN: Motion to approve the PRT report on state compliance; seconded by Mr. Augustine. Is there discussion on the motion? Is there objection to the motion? Without objection the motion carries.

We will now get a report on the stock assessment subcommittee's report and their follow-up actions on the peer review comments that will be presented by our technical committee chair Steve Gephard and Matt Cieri of our stock assessment subcommittee. Gentlemen.

REVIEW OF THE STOCK ASSESSMENT SUBCOMMITTEE'S UPDATE OF THE STOCK ASSESSMENT, 2006

DR. MATTHEW CIERI: I'll just wait a second for her to get it up. It's on this one. Okay, this is pretty much an update of the American Eel Stock Assessment Report for 2006 and the usual victims the right there, including the subcommittee and the technical committee.

Basically to summarize the peer review comments that came out of the external peer review that went through December 2005, they made a number of recommendations including updating the background literature in the stock assessment report, exploring datasets that were not available during the data workshop process, a list of these known datasets and why or why not they weren't used, the inclusion of the Beaufort and New Jersey glass eel abundance indices to report arithmetic means and geometric means as well as relative measures of error, analyze the data in the appendix, use a general linear model or GLM framework for analyzing both the fishery-independent and dependent

data, to explore ASPIC or other types of modeling, as well as to indicate some management reference point for you guys to consider.

Basically what the stock assessment subcommittee and the TC did was sort of split these into both long-term and short-term tasks.

The long-term tasks were to add relevant datasets that were not used in this particular assessment that was brought before the peer review, to do the literature review, to look at stock dynamics using some of the modeling techniques like ASPIC and other types of dynamic biomass modeling, and to further explore some of the reference points.

But what we can actually bring to you guys today is sort of our short-term tasks. And this includes updating the independent and dependent data, looking at the Beaufort and New Jersey glass eel recruitment indices, looking at the state young-of-the-year surveys and how they all fit together, listing the datasets that were available and the datasets that were not available during the stock assessment process, and suggest why those datasets were or were not used, doing the arithmetic means and the geometric means and errors, looking at the day in the appendix as well as, you know, using a general linearized model to look at both coastwide trends and local trends in abundance either through fishery-independent or dependent data, and to give you guys some sort of a direction in some of the management reference points and some ways of looking at reference points for this stock, as well as to give you an overall report on the stock status.

I know this slide is a little bit hard to read but what we did in Table 2.1.1 was to go through and with the help of a letter from EPRI was to go through and list all the known datasets that we have that were, you know somewhere in the literature or somewhere around during the data workshop process.

And what is highlighted in blue there are the ones that we included in our stock assessment report that went before the peer review. There are certainly other documents that are out there including the COSEWIC report and some of the ICES documents.

One thing to keep in mind and something that was stressed during the peer review was the fact that nobody, you know, either ICES or COSEWIC, is using a complete set of data when it comes to trying to get at how American eels are doing.

So that table is actually in the document for you guys to take a look at. And it also lists why we included them, whether they were available or if we decided that they weren't appropriate why we excluded them from the peer review.

This gives you an idea of some of the standardized young-of-the-year surveys from each one of your states. You will notice that they are fairly short time series; however, the peer review suggested that it might be worthwhile to take a look at the presence and absence of young-of-the-year glass eels in the young-of-the-year survey by states and by geographic ranges.

And we also to look at that glass eel recruitment indices for both from Rutgers and for Beaufort over the time series and included that in the document.

One thing that you will notice is that for the most part there is not much of a trend that is happening at all with either one of these recruitment indices. That is actually pretty important and we'll get to that later.

There is also a high degree of error or variability around either the geometric or the arithmetic means. We also went through an extensive list, and you guys can see it in the document, of different independent surveys that we used up and down the coast.

And these include datasets from both Canada and the U.S., everything from electrofishing to damn passage to weir survey indices. And surprisingly enough there is a lot of survey indices that we have at our disposal.

One of the most interesting things that happened you well maybe remember that the Delaware Trawl Survey was data that was sort of misplaced during the assessment process. It was available during the workshop but wasn't fully analyzed during the assessment workshop.

And interestingly enough it shows a very stark trend when compared to the VIMS trawl survey. You will notice up until about 1993 both the VIMS and the Delaware Trawl Survey were pretty much in line with each other.

However, since 1993 they have diverged. And in fact if you take a look at the survey correlation they are negatively correlated and negatively correlated significantly so. So both the Delaware and the VIMS trawl survey are going in completely opposite different directions.

And part of that is due to the differences in the types of eels that they actually collect. If you look at the length-frequency analysis -- and hopefully I'm not going to like blind somebody - - the VIMS trawl survey catches much smaller eels versus the Delaware Trawl Survey.

And this is partly a function where these trawl surveys occur. The VIMS trawl survey occurs predominantly in the main stem whereas the Delaware Trawl Survey -- I'm sorry, other way around. The VIMS trawl survey occurs in many of the tributaries up and down in the Chesapeake Bay whereas the Delaware tends to be a bit more slated towards the main stem of the Delaware system.

So we're going to run through some of these indices that you guys might hopefully be familiar with. This includes one of the most famous, the number of eels passing from '74 to

2005, the Moses-Saunders Dam which is at Lake Ontario as well as the catch per tow per nautical mile, basically, in the Bay of Quinte Trawl Survey which also is in Ontario and Lake Ontario. And not surprisingly enough these seem to be fairly correlated.

Also on the eastern base of Lake Ontario there is an electrofishing index and it again shows the same, exact trend, you know, a fairly steep and heavy decline since about 1986-1988, right down to the present day.

The other things at our disposal and that we've updated through 2005 as best we can is the arithmetic means and confidence limits for the rest, for the Restigouche, the Miramichi, and the Margaree electrofishing indices which occur in Canada.

And as you can see, some of them have some different types of trends. You will notice that the top one in the Restigouche, it actually increases over time whereas the other two seem to be either stable or slightly decreasing.

So one of the things that happened during the assessment is we used an average period. Basically we sort of standardized these indices and tried to combine them together as an average index. And that didn't go over so well with the peer review.

The decided that probably using something like a generalized linear model might be a better idea and sort of giving you guys a coastwide index for which you could maybe base some of your management actions on.

And this includes basically a statistical model or method to explore and accounts for things like differences among surveys and gear, catchability, taking into account where these surveys occur, in either drainages or in regions, and also timing of the surveys throughout the year. And this allows us to combine all these statistically together so we are not basically averaging apples and oranges, literally.

We did a lot of stuff in the GOM and that included things like removing some of the weir and ladder data because we had some serious doubts about its effectiveness in giving, you know, basically a good picture of abundance. You're basically measuring the eels that felt like going across that dam that particular day or that particular year.

We used a different type of model called the separate slopes model where we take a look at, you know, the indices and say, you know, this is significantly increasing, this is significantly decreasing, and this is stable. And we tried to combine these altogether. Next slide.

So you're probably wondering at this point what the heck does all that mean. So basically we put all this stuff into a, you know, a number-cruncher in SAS and came out with these crazy numbers. When we did all this stuff what we came out with is that we used 15 different indices.

In fact we ended up using all the different indices that we have at our disposal. Four of those indices had these positive trends that weren't really significant, so we have a hard time saying that they're actually positive trends. But they seem like they're going up.

Eight indices had negative non-significant slopes, basically meaning we think they're going down but we're not quite sure. That's not statistically significant. Three of the indices out of the 15 showed a significant negative decrease over the time series and that included the Lake Ontario electrofishing, the Margaree River electrofishing survey, and the VIMS trawl survey.

When you take a look at all these and pop it into what we call an "inverse slope model," "an inverse weighted slope," basically we take the surveys and weigh it pretty much by its variance or by one over its variance, and we find the

slope of these particular trends ends up being a negative 12.75 as an instantaneous rate.

What that really means is that these survey indices that are significantly going down and in fact when you combine them altogether the indices that were highly negative ended up bringing down the entire time series by about a decline of about 12 percent per year since 1972, which when you go through the mathematics comes out to be somewhere around about a 98 percent decline in your abundance indices since about 1972.

And one of the things we did do was to combine all this stuff together and combine all these indices together and take a good, hard look at what the trend is over time. And the dashed lines here are the 75th and the 25th percentiles.

So basically it's the 50th percentile is your median. So this gives you an idea of just sort of your benchmarks and your fishery-independent data when you combine them all together. One thing I'm going to draw your attention to is that final terminal year, 2005, which seems to be up in about it's 75th percentile.

Unfortunately, that doesn't include all of the indices that we had available for the rest of the time series and so that number needs to be taken with a grain of salt because we're missing many of the indices. We simply could not get updates from some of our Canadian indices at this time.

So we did and went through in the document all types of different landings, including crazy landings from like the Caribbean and South America for eels. But what I want to draw your attention to is the landings of eel from both the Canadian, in the gray, and the U.S. over the time series.

Starting at about '74 we have a sort of a change - - and we're not quite sure how important that really is -- in the landings that have since gone down over time. And the major players have changed.

One of the things that we can take a look at is standardized catch per unit effort. And in some stock assessments these are used as a way of measuring abundance in any given drainage but we'll sort of get at that in a minute.

What you will notice is that the standardized pot CPUE or commercial catch per unit effort seems to be increasing since about 1998, so you've got an increase in catch per unit effort.

But part of that problem is because the effort has gone down. Landings have gone down but actually effort has gone down faster than landings have actually gone down. And we can see a marked decrease in the effort, basically pots fished per day over the time series.

The other thing that you can take a look at is number of active licenses. And when you do so you notice that not only are they fishing less pots and fishing less days but they are less of them fishing. That's not too surprising, either. So the number of licenses seem to be trending downward.

When you do the same thing and you run through the coastwide CPUE index using a generalized linear model, just as we did for the fishery-independent indices, what you end up doing is you end up looking at the time series since about 1993.

And there seems to be a generalized increase in the catch per unit effort over the entire time series from about 1997. And again the red dashed line, the top is the 75th percentile and the bottom is the 25th percentile. So you can see where you are catch per unit effort suggests you know where you are relative to your percentiles.

One of the things that is very interesting is while CPUE seems to be up the number of licenses and the number of pots fished seems to be going down, price per pound seems to be going up in general. And part of that is probably inflation.

But part of it is also, you know, probably because of market conditions.

Okay, so when you throw this whole mess of landings and catch per unit effort into a generalized linear model when you end up backing out of is the fact that there has been an actual decrease in the Virginia catch per unit effort in the Chesapeake Bay since 1993, basically about a 5 percent decline per year.

This seems to be stable without any trends in PRFC, and then in all other states it seems to be going upwards. There is an increase in catch per unit effort, particularly in Maryland, Delaware and in Maine.

So it is sort of a very interesting sort of an event. There is a gradient it looks like in the Chesapeake Bay where CPUE seems to be increasing in the north, stable in the middle, and decreasing in the south. I'm sorry. Opposite way around. That slide is wrong. It is actually - is it? Yes, okay.

But as we outlined in our stock assessment report and as we brought forward for, to peer review, we're not quite sure given the changes in effort and probably the changing catchability that catch-per-unit effort is a real good measure of abundance anywhere.

When we start talking about reference points, which Steve is probably going to get into in more excruciating detail during the latter half of this talk, you need to remember a few things about the biology.

And one is that, you know, we're talking about a single spawning population, not just in the United States but also in Canada. They only spawn in one place in the Sargasso Sea. That all the mortality that happens to eels is pre-spawning, whether it's a glass eel, whether it's a yellow eel or a silver eel migrating downstream. They only spawn once and die. They don't make the trip to Bermuda twice.

And there might be this compensatory relationship basically where recruitment can increase even though the stock size is actually decreasing because of environmental variability and you don't know about it until you actually start going through recruitment failure. And this has happened with the European eel.

There is also a lot of undocumented losses due to turbine mortality or we assume that there is. But there is also other sources of undocumented mortality and those include things such as habitat loss which has been significant for the species, as well as pollution and parasites.

However, one thing to really keep in mind is that most fishing and turbine mortality seems to be focused on your largest individuals -- and those are always your largest, most fecund females of the population -- and that there has been recruitment declines and failures and declines in yellow eels and abundance in areas that usually end up producing the most fecund females, the largest of your individuals. And so the problems of recruitment tend to be seen much further north which tends to produce more females in general.

I'm going to briefly go over the ICES working group and what they talked about in their report because we were supposed to summarize that and give you some sort of an idea of what they were talking about.

They basically went through and did a lot of different measures and different possible management advice throughout the entire document. But one thing they did was really focus in on measures to limit the exploitation.

I mean and it's as easy as everything from a prohibition on fishing to doing things such as catch quotas by either coastwide or by area, size limits, slot limits. I mean you guys know the whole, you know, kit and caboodle when it comes to managing and regulating a species.

But what I want to bring across is the difference between management and biological reference points. When we did the assessment we suggested that we could not come up with biological reference points.

And biological reference points are basically based on intrinsic values of the stock, that some level of harvest has a predictable outcome. You know, you increase your harvest by 25 percent you know your stock is going to do X.

Unfortunately, we don't have that ability in the case of eels. We can't say that if you increase or decrease harvest you will have this effect or that effect on the population. So instead what we have to do is move to management reference points or you guys might be more familiar with index-based reference points.

And these are the ones that you would normally find in things such as scup, and I believe black sea bass as well as monkfish and other types of species in which you are basing your management around some sort of fishery-independent or dependent index.

In this case predictions are impossible. You know, if you want to know how to raise your population to X level and you ask, you know, for a percentage reduction or a percentage increase in harvest, you can't analyze it. It's just impossible.

So the stock assessment and TC sat down and thought about ways we could go about doing some possible approaches for reference points. One of them is to do the entire coastwide approach. I mean, you're talking about a panmixic species.

That would be, you know, one easy way of doing it. And you could base it on either the fishery-independent surveys, the dependent surveys or some of the recruitment indices or a combination of all of them.

The other way would be to take a regional approach, to breakup the areas by region -- and Steve will get into this in a little bit more detail - - and manage each one of those areas separately. Or you could do a mixed approach in which you sort of manage everything, you sort of record everything or measure everything on a regionalized basis but then you take management action coastwide.

But there is some problems and even some benefits from doing each one of these. The coastwide approach seems to be the most appropriate. You're looking at a panmixic species, you're looking at one single spawning stock population so your reference points are based entirely around your unit stock which is always a lovely thing.

However, one thing to keep in mind is that it requires reliance on a lot of data from Canada. And while that might seem like not such a big deal, as we've seen trying to do this update, trying to get relevant information on a yearly basis can sometimes be challenging.

The other problem that we've seen with some other species is this thing of localized or regionalized depletion. If you're managing everything on a stock complex level or a stock level you could simply hammer, you know, this particular stock in one small area and never even know it and not able to detect it.

The regional approach might be a little bit better because it might prevent this sort of region-wide or localized depletion but if you don't have a good index or a good measure in this particular region you have no idea what is going on there either.

The other problem is that you're not really sort of managing towards recruitment because recruitment to an area has absolutely nothing to do with the stock in that area. What it has to do with is a number of individuals going to the Sargasso Sea.

And the mixed approach might fix some of these problems but it's also sort of the worst of both worlds in which case you're still relying on data from Canada but, and you might have all the problems of some localized depletion issues, and the other problem is implementing it.

I mean you're talking about the fact that at some point your regional index in the Chesapeake Bay goes down and so that means you turn around to, you know, a Maine fisherman and say, well, you've got to cut back. And that could be a bitter pill to swallow.

One of the consensus statements that came out of the document and something that I think the TC, you know, and stock assessment subcommittee feels pretty strongly about is that maybe you guys really should take a look and confer with other people outside of just ASMFC.

And these include the Great Lakes Fishery folks, the Gulf states as well as your Canadian counterparts in basically how to do management for the species as well as, you know, trying to do some research in doing assessment work.

So to sort of wrap up fairly quickly here, to give you an idea of stock status, our previous comments said pretty much things look pretty grim, that the stock is in, you know, in trouble and may be experiencing recruitment failure.

The review panel, after looking at and after giving both criticism as well as comments, suggested that they felt the same way, that there is or does seem to be a decline in abundance to near historical levels.

So when we did the assessment this time and when we went through and took a look at all the data and did the GLM, it seems to be fairly clear that recruitment failure does not appear to have occurred in the central part of the range.

The New Jersey and the Beaufort index seem to be fairly stable and have been since about mid '80s. However, the northern part of the range

may be experiencing recruitment failure. And there is a need probably to monitor Virginia because there seems to be a decline in the number of small eels there as well.

Most of our fishery-independent indices show a decline but some do not. And some of our indices don't show a significant decline. But absolutely none of the indices of the 15 that we used show a significant positive increase or statistical increase anywhere that we've seen.

The combined index when you go through it and do a lot of transformation is again declining at 12 percent or 12.5 percent per year and has done so since about 1972 and that translates into a 98 percent decline in the abundance indices since 1972.

Most of our fishery-independent indices coastwide show an increase in catch per unit effort but some of the areas are also experiencing a decline and in particular the VIMS trawl survey and the catch per unit effort in Virginia seem to be on the decline.

However, we have some serious reservations, as did the peer review panel, of using a catch per unit effort based on commercial harvest as an abundance index.

So with that the American Eel Technical Committee is concerned that further declines in reductions in yellow eel abundance combined with some lower escapement could result in some serious reductions in your spawning stock biomass and potentially recruitment failure for this stock up and down the East Coast and that basically managers should utilize a precautionary approach in selecting input and output controls and in setting reference points. And that's about it.

CHAIRMAN COLVIN: Thank you, Matt. I want to just say at the outset here that I really appreciate the hard work that the stock assessment subcommittee put into this follow up.

You know they sort of kind of thought they were done when they completed the stock assessment itself and were at least mentally moving on to other assignments, many of which came from this commission.

And the group pulled back together at our request and did a heck of a job in pulling this response document together to the peer review report. We really do appreciate your work. Before we entertain questions, though, I think I want to turn it over to Steve to give us the report of the technical committee and then we'll look to questions on the entire report. Steve.

REVIEW OF TECHNICAL COMMITTEE REPORT

MR. STEVE GEPHARD: Well, I will be brief because Matt really covered a lot of what I intend to cover. But I may highlight a few points and also the purpose of my comments is to solicit guidance from the management board on next steps for the technical committee.

So, as Matt indicated that the reference points are usually linked to the biology of the species, how old they are, when the first spawn, how many juveniles are required to get one marketable adult, and other stock recruitment relationships.

With American eel we don't have those data so we need to look elsewhere other than biological reference points. Our objectives for managing American eel, the technical committee would suggest two things, one is to protect and maximize the number of silver eels departing for the Sargasso Sea to spawn, and another is to enhance the biomass of the yellow eel population.

If we're successful with these things, then there should be measurable increases in juvenile recruitment along the Atlantic Coast of glass eels and there will be increases in yellow eel

abundance and therefore renewed harvest opportunities.

These lists of considerations are really the same as what Matt put on the board. I will just highlight a couple of them. The third bullet probably isn't as precise as it should be. It says, "undocumented losses."

Well, in fact, turbine mortality has been documented. What it hasn't been in many cases, in most cases, is it hasn't been quantified. So we know that there is some mortality out there, non-harvest mortality, such as turbine mortality, we just have not quantified it.

But clearly there is much to learn about American eel. There is a lot of researchers who are currently doing work on American eel and as those data are made available we may need to change not only the approach we take to management but even our objectives.

So, therefore, the technical committee believes that a precautionary, adaptive management approach is the way to proceed with American eel. The Canadians have identified three basic approaches that might be used for American eel.

The biomass approach, however, requires an estimate of the spawning stock size. Nobody knows how many silver eels gather annually at the Sargasso Sea and we certainly don't have any ideas how to get those the data so this seems to be infeasible at this time.

The second approach, the fishing mortality approach, requires better harvest and natural mortality data than is currently available. And there is concerns that this approach may not help stocks that are already depleted.

The life table approach would have us sort of fill in the blanks on a life table in which we talk about we're able to provide survival rates from one life phase to another. And that would require data from exploited as well as

unexploited areas of habitat. And those data are currently not available.

But with further research those data could become available and we think that this could become a fruitful approach for, at least to start off down this line of management. But it's not currently available so we'll keep our eyes on that and hope that research will step up.

But this is a list of possible management activities that could be considered. It's the same list that Matt showed moments ago and I won't go through them again. They're pretty familiar to you folks.

Below the line are fisheries-independent, shall we say or not related to fisheries management, activities that could be taken, undertaken. We could increase the access to freshwater habitat by building more eel passes at barrier dams.

We could increase the access to marine habitat by building downstream bypasses around turbines and other barriers for silver eels. And we could also increase upstream production by stocking glass eels or perhaps elvers to inaccessible upstream habitat.

Such an approach has been taken at least in Ireland and perhaps other places in Europe. The items below the line, the habitat initiative, can be done at the same time that management activities above the line were undertaken.

So how do we measure success in the management of American eel? You've seen this graph before. This is the GLM that the stock assessment subcommittee had generated. And if we don't have biological reference points to fall back on then do we take a look at history?

Do we take a look at time, go backwards and say, well, there was a time in which we were comfortable about the status of American eels? Perhaps we look at, you know, 1986 through 1992 and say American eels seemed to be in good shape at that time, the indices were up and

maybe we want to sort of recreate those conditions.

So a management reference point, not based on any kind of biological value, could be that we look at our time period and our CPUE index and say this area in the green is where we want the species index to be annually and so that's our management goal.

Conversely, we could then say, of course, well, this is our danger zone; we don't ever want the index to fall into the red zone. I'm not sure in my very simplistic example where that leaves the middle zone. I guess that's the DMZ or something.

But, anyway, I'm using this just for demonstration purposes only. I'm not suggesting that we adopt this 75th percentile as a goal. But it's this kind of management reference point and approach that could be taken.

So if we decide that, yes, we did want to go back to 1986 to 1991 when things were better for American eels we could consider capping effort at comparable levels, we could cap harvest at comparable levels.

The problem with that is that the harvest and effort at those times may have contributed to subsequent declines, realizing that there is a lag time between actions and results.

So what we would have to do is we would have to try to figure out what effort and harvest levels produced, and would have been previous to that time, produced those conditions. That becomes will little artsier.

The third bullet suggests that there might be a mixture of restrictions on harvest and gear and fisheries as well as the habitat initiatives that I talked about earlier. That could be implemented. We see how the population responds based on the index that we adopt and we adjust as appropriate. Clearly, this is an example of adaptive management.

The last bullet just reminds all of us that with such a long-lived animal there is going to be a considerable lag-time between the time when actions are implemented and we see results in terms of recruitment of glass eels to along our coastline.

So, the geographic approach, this is what Matt talked about in his presentation and I'll go over this quickly but I'm going to show it graphically here. The coastwide approach we consider the American eel population throughout the coast and we develop a group of coastwide indices.

They may be maybe fisheries-dependent or independent and they may include recruitment indices such as the state young-of-the-year survey. If all or some of the indices fall below a pre-agreed-upon level, whatever that may be, whatever we may decide on, and it could be some percentile of that GLM that we put on the board, the screen earlier, then coastwide action is taken.

And that action could be either a total closure of fisheries or a partial closure or reductions, however. I mean that we still would need to decide on what tools are available in the toolbox.

But in any case you monitor coastally and you take action coastally. As Matt said, the strength of this approach is that it recognizes the panmixic nature of the American eel population.

The weakness is that it can hide localized depletion so that if you've got in this red circle that I've drawn on the screen if there is one area that is having a significant reduction of population it can be sort of hidden or masked, if you will, by fairly strong indices elsewhere in the area. And it may be allowed to persist. You also under this coastwide approach would really need to consider Canadian data.

Here is the regional approach. And I've just arbitrarily divided this into three regions. Doesn't matter, I've done this just for

demonstration purposes. But you develop a group of regional indices for each one of these regions.

And, again, they can be dependent, fisheries-dependent, fisheries-independent, could include the state young-of-the-year surveys and they're monitored on a regional basis. And if all or some of the indices within a region fall below a predetermined, pre-agreed-upon level then action within that region is taken.

The strength, of course, is it's easier to monitor and manage at a smaller unit of space. And it allows response to the regional depletion that I referred to in the coastwide approach.

The weakness is that it threatens to ignore the panmixic nature of American eel that we see that there is decrease in yellow eel numbers in one region and so we shut down the yellow eel fishery in the region but it's not going to have any real impact on or perhaps measurable impact on increased recruitment to that area because the recruitment is coming from the entire coastwide population.

And, finally, the mixed model approach in which we maintain the regions, as I've indicated in this graphic, but we still are considering them in a coastwide perspective. That is to say, we develop the group of regional indices, the same fisheries-dependent and independent, the same young-of-the-year surveys, and we monitor them at a regional basis, from a regional basis.

And if all or some of those indices fall below a pre-agreed-upon level action is taken but action is taken on a coastwide basis and not on a regional basis.

The strength of this approach is that it still uses the easily, more easily implemented regional approach for monitoring and setting reference points but the actions address the panmixic nature of the eel population.

The weakness, as Matt indicated is that it could be one of perception, that harvesters in one region may perceive that their population is in good shape and if there is the collapse somewhere else in the coastline they're being made to suffer along with that area and failing to recognize the we're all in this together. With this approach we would still need to gain access to Canadian data.

So, in summary, there is a lot of work to be done. The technical committee does not have all the answers. What we shared with you today is just some ideas that we scratched the surface.

We're bringing this up not because the management board has pushed us in this direction but because the peer review panel strongly recommended that we undertake this effort to develop management reference points.

And so we are looking to the management board for guidance on how it would like to proceed. And I will note my third comment on the screen to support what Matt has already said is the technical committee sees it essential that we engage in a dialogue with the Great Lakes Fisheries Commission and the Canadians if we are to effectively manage this coastwide population. Thank you.

CHAIRMAN COLVIN: Thank you, Steve, two very thorough and well-done presentations, very responsive, and we appreciate that, to the request the board has made of both the technical committee and the stock assessment subcommittee. Are there questions for Steven and Matt? Blew you all away, huh? Seeing none -- Dennis.

REPRESENTATIVE DENNIS ABBOTT: Thank you, Mr. Chairman for lack of someone else having something to say I will. Yes, politician, I guess. I really appreciate the information given and it was really informative though obviously it leads us to probably all kinds of questions and whatever.

I think you said you used 15 datasets. And I'm struck by the fact that we have 15 datasets and we look at a map that shows 2,000 miles of coastline and thousands and thousands of miles of rivers and bays etcetera, and etcetera, and remembering when we started this that we admitted to a complete lack of data.

And I know you used the data that you had and some of it did little things. Some of it had bumps and grinds. And a lot of them were flat and whatever. I guess my question is how do you feel about the reliability of the data that you used? What's your confidence level in the minimal amount data that you used to formulate your limited conclusions?

DR. CIERI: I think the fact that when you run through the GLM exercise -- I mean that's what it's designed to do is to take a look at trends in all these different indices -- when you see that your numbers come back and you find that three of your trends, separated by many, many miles all up and down the coast, the VIMS, the Margaree and the Ontario trawl, are showing such negative declines and statistically significant declines, that when you add in the other indices it still brings the entire model time series down that much suggests that there are some concerns and that the data are fairly, are pretty good.

I think that it shows that, you know, having 15 indices up and down, you know, the East Coast and in Canada is actually quite a lot when compared to some other species.

I think the technical committee and the stock assessment subcommittee were surprised at both the number of datasets that were available -- because we didn't even, as I showed earlier, didn't even tap all of them because some weren't available -- and that the data are pretty valid in giving us a coastwide picture of the American eel abundance.

CHAIRMAN COLVIN: Rob.

MR. ROB O'REILLY: I saw the item on ASPIC and it said something to the effect that it will be a careful approach that ASPIC. I'm not sure what that meant but I think that's a good idea. I think one piece of advice would be that ASPIC could be used in a way to get some first-order information on some biological reference points.

The question I would have on that would be, and I don't know how far back some of the stronger indices go in time because when I look at the, you have a figure in here on the landings and clearly if the strong indices only go back into the early '80s, late '70s, and you want to match that up with landings you might not get as much contrast with an ASPIC run as you would want. So, you know, that intrigued me, the careful part. I wonder what's going on there.

CHAIRMAN COLVIN: Matt.

DR. CIERI: We did actually, we did many ASPIC runs and brought them to the peer review and asked, well, okay, the model was blowing up, to be quite frank, because your CPUE index is going in a different direction than independent index and your landings are going down.

So we were having problems with some of the model diagnostics. So we had asked them in an appendix, okay, what's the best way of approaching this. And that's the reason why the careful exploration of ASPIC or some other type of modeling.

You know, I'll mind you that, you know, striped bass also only goes back to like 1982. And many other species only go back and have one-way trips. And that's something you can deal with in a modeling framework.

At that time when we were doing the runs we didn't really have a lot of ability to go through and do a lot of ASPIC run and so I think that's something that we should explore in the next assessment along with a careful consideration of the datasets that we've used and datasets that are available that we did not.

CHAIRMAN COLVIN: A.C.

MR. A.C. CARPENTER: Thank you. You both commented that the regional approach to the management technique would, has a negative aspect of not recognizing the panmix part of the equation.

But it seems to me that that's a better idea than using the converse where you do have the total regional approach to the thing and the mixed one where you had the regional, the last slide there where you had the regional areas but coastwide management action seemed to me to have some more negative drawbacks from an acceptance and a practical dealing with fishermen.

If the southern region's yellow eel population is down and you say, okay, we've got to close that down and they say, well, we're not going to get anything from it but in ultimately you would hope that it would add to the spawning stock over time and that we would all benefit from that as opposed it asking Maine to close down just because the southern region is down. From a sociological standpoint I think the regional one has a better shot of some kind of success from our standpoint.

MR. GEPHARD: Thank you. It may take both of us to address this question but I will lead off. I'll try to use some examples but I'll start off by saying that one of the challenges with American eel of course is they're so much different than other species that we manage that it does require us to take a little bit different mind-set.

It is not business as usual when dealing with this species and that's going to be a challenge for managers and harvesters alike.

I think one of our concerns would be if you had a scenario in which the coastwide population of eels was fairly healthy but you had a localized decrease in yellow eels and it was due to a fishery, let's say, you know, there is this what bay, this one sound that was really getting over-

harvested severely by potters, then in that situation if you took a localized response and said, all right, we're going to restrict that fishery, then the yellow eel, that localized yellow eel population would be expected to rebound. You've addressed the problem. More silver eels from that region go out to sea and it has coastwide benefit.

But in fact with what we're looking at now, what we fear is that the coastwide population of eels is not helping, that in fact any kind of decrease in the spawning escapement of silver eels to the Sargasso Sea is up and down the coast and the reproductive output of the Sargasso Sea, the leptocephali, are shared by everybody.

So, therefore, if in fact you're back in that one sound or that one bay and there is a little bit of decline in the yellow eel population and you say, gee, we ought to fix it, it may not be because your fishery is hammering them.

It may be because you are suffering from recruitment either failure or at least a marked decrease in recruitment from the Sargasso Sea. And implementing strict controls on your fishery is not going to address that problem at all.

You're still going to have reduced spawning escapement up and down the coast to the Sargasso Sea. And you could completely close that localized fishery and you're not going to get any more glass eels probably significantly to that coast. So it doesn't address the problem.

So we are very much concerned that that kind of approach would make the public feel better in a sociological-political framework but not address the problem biologically whatsoever.

CHAIRMAN COLVIN: I'm looking for questions from the board. I see a couple of members of the public's hands up and if you have a question to ask these two gentlemen for clarification of that report I'd invite you to ask it.

I'm not looking for public comment at this time. We're just trying to get a report and recommendations from our technical advisers to the board. We will be discussing this later on the agenda.

So with that in mind, do you have a question you'd like to ask? Please come up to the microphone at the end, turn it on and identify yourself for the record.

MR. MARTY BELL: Yes, my name is Marty Bell. I live down here an hour away. Oh, about 80 percent of the eels in the southern area, below New Jersey down to Florida, the whole system of closing it down as regarding to get a stock assessment going better, I don't believe that works because Florida the last seven years they've hardly caught nothing in Florida and up to now they still don't catch nothing in Florida.

So you would have thought after eight years you would have had an increase in population in the eels but it is not. And for all of you, to give you an idea, at the moment the fishery, the fishermen, themselves, is 70 percent less than last year in catch and effort.

The catch have gone up about 30 percent than last year so that means the effort has gone down 70 percent. The catch has gone up 30 percent more than last year. So the stock assessment that for this year up to now is excellent.

And that's mainly Delaware, Maryland, Chesapeake Bay, and Virginia. Virginia has caught a lot more. Virginia's caught 45 percent more eels than they did last year up to now and the year is not over yet.

CHAIRMAN COLVIN: Thanks. I was looking for a question but I appreciate your information and input. Are there any other questions for the technical representatives? Thank you. Let's move on then to the next agenda item which is an update on the federal status review. I think Bill Archambault is going to present that for the service. Thank you, Bill.

UPDATE ON THE FEDERAL STATUS REVIEW AND ESA PETITION

MR. BILL ARCHAMBAULT: Thank you, Mr. Chairman. I'm going to give you a brief overview of where we are right now in the federal status review and I'll take any questions but I really can't answer to many questions at this time.

Basically the regional office of the Fish and Wildlife Service had prepared a draft package with the draft finding. Last month in September that package was submitted to our Washington office. We did receive substantial comments on that package.

We received them back two weeks ago. Our biologists currently think they can address those questions within the next two or three weeks. We hope to have that package resubmitted to the Washington office sometime in November.

At that time it will go to review at both the Fish and Wildlife Service and it will go to the Department of Interior. We're currently hoping in this timeframe to have a final package that will be for publication sometime prior to the end of the calendar year.

Once we have something signed off from the Department we certainly will give the commission advance notice prior to any publication of a final rule. And our hope at this point in time is that it would be sometime in December.

Concurrently with that a motion was filed by the Watts brothers, the original petitioners on the timeliness of the petition. That motion has not been before a judge yet. That may or may not have some determination on our final deadline. But at this point in time that is sitting in court and they have not acted upon it.

And, again, certainly once we have something signed off we will contact the commission and give advance notice before we publish that in the federal register. So I wish we had more to say at this point in time but that's where we are right now. Thank you, Mr. Chairman.

CHAIRMAN COLVIN: Thanks, Bill. Are there any questions for Bill? I know that the board had hoped we would be a little further along and in fact we would be able to hear a presentation today and have a discussion on the status review findings, conclusions, and the direction we might be headed in, and that that would be of assistance to us as we look ahead and particularly as a take up the next agenda item.

Unfortunately, we're not there. We are communicating to the service our very strong desire to have that information for that purpose. And a letter has been sent I think to the director, Vince?

EXECUTIVE DIRECTOR JOHN V. O'SHEA: Yes. It will be sent.

CHAIRMAN COLVIN: It will be sent. It is in the process of being developed to be sent to the director of the service to emphasize the importance of concluding the status review and the work that Bill outlined needed to be done to do so in a timely way.

Our board is likely to meet next at the ASMFC meeting week that spans the last week in January and the first week in February and, Bill, we certainly hope the service will have that status review so that we can have that information available to us at that time, even before that time, and I'll talk a little bit more about that in a minute. Anything further on the status review, itself? Mitchell.

MR. MITCHELL FEIGENBAUM: Yes, I have the quick question for you, Bill. The stock assessment that you saw today, the revised stock assessment, I'm wondering is that now, has that

been made a part of the record that the Fish and Wildlife Service is considering in response to the petition and the work that is being done?

MR. ARCHAMBAULT: Bits and pieces of the assessment today. There was a bunch of folks that actually were called together on the scientific working group we pulled together. And some of that information was incorporated in the draft status review. Obviously, the information presented today is most likely not all incorporated in the status review but much of that is.

Once we do get the final document and status review out much of that information would be very helpful to the technical committee and that will be forwarded to the commission's technical committee. That will be very useful for future management decisions so some of that has been taken into account. Thank you.

DISCUSSION OF THE FUTURE MANAGEMENT OF AMERICAN EEL

CHAIRMAN COLVIN: Thanks, Bill. That brings us then to the next agenda item which is a discussion of the future management of American eel. I'm going to offer a suggestion for folks to think about because, frankly, we've been presented with a great deal of information to digest today by both Matt and Steve.

And it's going to be difficult to surround it. And, unfortunately, we haven't been presented yet with information on the outcome of the federal status review.

It is in my general impression over our last couple of meetings that the board would like to not invest a great deal of time and difficulty in crafting changes in our management program pending the status review because that might well influence our decisions and take us in directions contrary to where we may have started.

Mindful of that, the thought I had and I'd invite this discussion to respond to this thought, is that prior to our next board meeting and hopefully subsequent to the release of the federal status review that our plan development team in consultation with our technical committee could meet, digest the information that has been presented to all of us on the status of the stock along with the findings and conclusions of the federal status review, and begin to develop for the board's consideration some proposals for how we might move forward in various management responses for preliminary discussion and for some action by the board in terms of beginning to refine approaches and set policy direction at that meeting.

So with that thought let me just throw that out there, suggest it and open the floor to board discussion on this question of the future management of American eel. Eric Smith.

MR. SMITH: I think that's a sound approach given the uncertainty of the information about the ESA petition; however, the one thing I don't know and I think it's a lot to ask of a plan development team or a plan review team is as they start to develop approaches to eel management they're going to need a sense of what our goals are and I don't know if I'm competent to come up with one today.

I mean, what I saw in the stock assessment and the peer review suggests to me that immediate action of some nature is warranted. I'm not sure what that is and not sure you know how far to go.

I saw a lot about the kinds of information we need to lead ourselves into some form of effective management but you know most species we get a sense of, well, you either need to cut mortality by some percentage or you need to rebuild biomass by some amount.

And we don't have the tools to be able to do that. So, I don't disagree with that approach but I don't know whether they are going to be

standing there with an empty pair of hands saying, what do I put in this as goals so how do I know what to develop towards?

CHAIRMAN COLVIN: Matt, you have a thought?

DR. CIERI: And part of the difficulty is you know when you start trying to bring together some of these straw man ideas we don't even know even the basics of where you guys want to go. I mean are you looking at regional? Are you looking at coastwide? Are you looking at, you know.

I mean just a simple question of if we do a coastwide, you know, reference point system I mean can we incorporate Canadian data? I mean is that something that is routinely used in doing your annual specifications?

And what happens if we don't get that data, you know? Because that data is not really under your control. I mean it's different if it's a member state that you can sort of, you know, put out the thumbscrews. But I mean this is another country.

CHAIRMAN COLVIN: And it has provinces like we have states. And that reminds me that I neglected to mention something that I think folks should be aware of and that is that we have been contacted by the Great Lakes Fisheries Commission on behalf of a bi-national eel-related effort that is under way involving folks in the Canadian Fisheries Service, the Canadian Provincial Authorities, and the United States through the Great Lakes Fisheries Commission.

And I think that we need -- we have not yet had a real opportunity to follow up on that. I think we've had some preliminary staff contact and Erika has spoken to people and I've been contacted kind of in a very preliminary way through the Great Lakes Fisheries Commission because it happens that Jerry Bernhardt who has addressed this board in the past from New York

remains a member of the commission and because of their strong interest in eels.

There may in fact be an opportunity and that opportunity needs to be evaluated and assessed for us to work in a more cooperative and structured way through that, with that by-national initiative involving the Saint Lawrence and the other Canadian watersheds.

So I think that also needs, this board clearly needs more information on how that process might work and an opportunity to evaluate it as well. And you know I can speak for myself. It would be very difficult for me with the information I have today to even begin to sort out those three major geographic based approaches to management.

I think we need some time to digest that information, including not just the kind of the biological or the resource management implications but the geo-political implications too because they are important. How do we move ahead? And I think that's another issue that we ought to look at.

Now, another point I'd make, Eric, too, and, again, I'm just speaking for myself but I thought that the figure that Steve showed us with the red, the green and the yellow held, perhaps holds some promise for evaluation for us to consider in terms of how we might articulate at least one goal from management.

And it was pretty clear to me from the presentation we heard today that whatever process we use to go forward will have to be adaptive. We'll have to talk in terms of where we want to be in broad-brush areas and then take action and then monitor and respond.

And maybe if it is that we want to go to the green from the yellow and not go to the red, maybe that's the beginnings of a goal statements. I don't know. But I would certainly hope and expect the team of people that I described earlier would look at that among other things.

DR. CIERI: But getting at Eric's point, there is a little bit of a sense of urgency. You're talking about a decline of about 12.5 percent per year so that's not something that's very trivial.

CHAIRMAN COLVIN: And that suggests another goal statement. Eric.

MR. SMITH: Yes, Matt captured a couple of points that lead me into two more questions or one anyway because I agree with that conclusion. The other one, though, is does the technical committee and the stock assessment subcommittee, have they come to a conclusion on of the three geographic approaches which one is recommended for management because it's either a better approach or because the data supports it, understanding there is a data weakness in all of it?

MR. GEPHARD: I would have to say no. We have had a lot of conversation. We haven't thoroughly discussed it. I think that it's safe to say that there remains strong skepticism of the appropriateness of the regional approach.

Whether or not I think that a lot of people are leaning toward the mixed model approach but I think those, the conversation is not complete yet.

MR. SMITH: Okay, thanks.

CHAIRMAN COLVIN: Any other board comments or ideas? Rob.

MR. O'REILLY: Well, the period of nostalgia that was pointed out, 1986 to 1993, and working along that scenario you know I agree that there probably are some qualitative approaches that you could take to monitoring.

In other words, it's going to be a lot easier to tell us where the stock is in any of those bands no matter how narrow or wide they become. I think the challenge is what types of measures will move us out of an undesirable area towards a more positive area.

And that's fairly vague but I think if you can think in terms of, you know, what harvest reductions would do, what seasonal restrictions might do, you know it's going to be some pretty basic information that we look at with a lot of plans.

And it's going to have to be some qualitative information from the technical committee as to what the reaction for the stock should be. But I think that's at least, you know, the way it was outlined that's the way to start.

CHAIRMAN COLVIN: Thanks, Rob. Mitchell.

MR. FEIGENBAUM: Yes, I did have one question and then I did have a few comments on some of the topics that have been brought up. The question I guess is addressed to you, Matt. Matt, can you please identify, point out for me which one of the indices in the stock assessment report is it that's reflecting the 98 percent decline, the 12.5 percent a year.

DR. CIERI: That is actually laid out in the fishery-independent GLM section.

MR. FEIGENBAUM: Okay, is that not graphed?

DR. CIERI: The actual log normal transformation, no, that is not graphed. However, what you will find is if you go through and take a look at the slope on one of the tables dealing with the covariance model you will find that it has 12, basically an instantaneous rate of negative 0.175 which translates into a, basically that's an instantaneous rate.

What that translates into is about a 12.5 percent decline per year. Now, if you go through the mathematical exercise of, okay, what's a 12.5 percent decline per year since 1972, you come out with about a 98 percent decline in the abundance indices.

MR. FEIGENBAUM: Well, I'm sure you figured that I wouldn't be able to follow the technical details of what you just mentioned. I guess my follow up question would be is it possible that that could be graphed?

DR. CIERI: Yes, we can do that.

MR. FEIGENBAUM: As far as my comments go, I'd like to point out and I'm sorry to be a stick in the mud but --

CHAIRMAN COLVIN: Mitch, before you comment --

MR. FEIGENBAUM: Yes.

CHAIRMAN COLVIN: I want it on the record who you are commenting for.

MR. FEIGENBAUM: Yes, I would like to point out that I am the chairman of the public advisory group. In that role I understand that any recommendations made by the plan review team, you know any future PIDs will be reviewed by our group and we've already in fact engaged in a review of the comments to the previous PID, the very essence of which was that although we had I believe some highly constructive things to say about, to recommend about management initiatives, that like the technical committee we shared the view that we wanted to see a strong and complete stock assessment before formalizing any recommendations.

That being said, as the chair of the public advisory group it's clear that at some point we're going to be called upon again or it's not clear but it seems most likely that we will be called upon again to comment on proposed management changes in which case it's inevitable that the first and foremost question that will be put to us is what the data says and what is our confidence, the public will want to, what is the public's confidence and what is our group's confidence in the stock assessment. Along those lines I'd like to point out a few things. First of foremost. --

CHAIRMAN COLVIN: And now who are you speaking for?

MR. FEIGENBAUM: I am the chair of the public advisory group. I was elected by that group.

CHAIRMAN COLVIN: Right. And the advisory group has discussed what you're about to say?

MR. FEIGENBAUM: Well, we had a very lengthy discussion about the concerns regarding the stock assessment report. And they've, by electing me their representative and giving me the, you know, their vote to speak for the group it is in that capacity that I'm speaking today.

I don't understand. Like I know in the past some members of this commission have asked me questions and you, Gordon, wanted to make sure that in answering them they were technical questions about harvest and things in which case my answers were you felt compelled to point out that I was speaking in my capacity as an eel buyer.

But I come here before -- I can't split my body in two and say that, you know, one part of me speaks one way and one part speaks the other.

CHAIRMAN COLVIN: No, but when you offer information or you offer opinions on the record of this board, as you have been told before, you can make it clear whether you're speaking for yourself and your business or whether you are representing the information and communication that you have shared and has been shared with you by our advisory panel.

Now, the advisory panel has not met for in time and all I want to know for the record is whether the information you are about to present to the board is gleaned from your communication with the advisory panel and offered on their behalf or it is not. And we've had this conversation before. And it is fairly simple and

straightforward. And I don't understand why you and I are discussing it. Please make it clear.

MR. FEIGENBAUM: Yes, well, I will do my best but, and I certainly don't want to burden the group with any kind of disagreement so suffice it to say I have not had a meeting since our last meeting with the public advisory group.

So that being said, if the Commission wishes to take my comments and feel that my comments should be limited in interpretation as the comments of me as an individual and as a business owner, then so be it.

But I assure the commission that I am speaking with one voice as a person of concern and that my views would be the same whether I was the chair of the public advisory group or not. Earlier there was an opportunity for public comment.

And I didn't take the opportunity at that time to make comment because I guess I did think I could speak as the chairman of the public advisory group but if the commission feels that inappropriate, then so be it.

I assume that's the case in basically when anyone speaks who has any kind of business interests. I assume that this commission is equally as concerned whether they're speaking for, in one capacity or another. But I will -- I've made sure --

CHAIRMAN COLVIN: Mitchell, when we give you the privilege of sitting here at the head of the table in the seat reserved for the chairman of the advisory panel, generally speaking we expect that you will speak as the chair of the advisory panel and communicate on behalf of the advisory panel its views.

That is generally our practice. Now we have offered you latitude because of our awareness historically of your personal interest, passion, and involvement in the management of eels to

on occasion from that seat express your personal views and comments.

But we do ask that you keep it separate for the record. And I don't think that's too much to ask. It's very simple.

MR. FEIGENBAUM: Okay, well, like I said, and I think I addressed that. The group did not meet so if the question is whether I have met with the group and have been authorized to make any statements or offer any views of their behalf the answer is I have not.

So with that in mind I would like to continue. And I apologize for not having gone to the other seat earlier, when you asked for public comment. Perhaps that's what the commission would have preferred.

The stock assessment committee has been informed and has acknowledged that there were many datasets that were not included in their analysis. They also during their presentation -- I appreciate Matt identified that the peer review committee pointed out as their Number 2 and their Number 3 recommendations that they wanted the missing data.

They wanted all data updated and they wanted all dated to be considered with an explanation if data was not to be considered why it was not to be considered.

The peer reviewers did not say, did not distinguish between short- and long-term goals. And most importantly it's a matter of interpretation, they did not make a distinction between short- and long-term goals.

In the peer review, in the stock assessment version that we have been presented today there is commentary suggesting, not suggesting, stating, that some of these datasets also were not included in the COWESIC report. I would take issue with that.

I believe that all the datasets identified were in fact indicated in the COSEWIC report.

However, in fairness to the stock assessment committee the COSEWIC report did not, they had a main body of the report and an appendix.

And so it's true that not all of the datasets were included in the main body. But having participated in the COSEWIC process as a peer reviewer I can assure the group that all the data was considered.

And as has been suggested by the peer reviewers here, any data that was not considered was, the reason for it not being considered was discussed. And the fact that it had not been available at a data workshop in the past was not the kind of discussion. It was really substantive discussion as to why data wasn't included.

Coming to the point, in three separate forms, in writing and on the record here and to the technical committee I have pointed out that there are three surveys, there are three bodies of information highly relevant to the analysis and to the assessment of this stock of eels coastwide that have not been considered and to date are still not being considered.

One is the recruitment survey from the East River in Nova Scotia which is the longest-term glass eel recruitment survey on the continent. It's published. Its results are clearly stated in the COSEWIC report.

And it actually shows an upward trend, not a great upwardly trend. It's, as Matt would probably put it in that category of upward trend but not significantly up or not sharp slope up.

There is also the Saint Nicholas trap survey taking place on the mid-stem of the Saint Lawrence River which shows that although it has been clearly documented that the eel stocks have, you know, virtually been decimated in Lake Ontario above the big dams, in fact below the dams the adult eel population and the escapement of large spawners has been very stable going back almost 15-20 years. I don't have the exact dates.

The list that was put on the board of data indices that have not been considered was extensive. But in several forms and again today I would emphasize that those two datasets are highly material to the analysis of the stock of eel in North America.

In fact, as we saw today, the young-of-the-year surveys that this group authorized, that this group mandated several years ago, and I want to compliment this group very much for having given that mandate because although the young-of-the-year recruitment surveys are very short in length, they are now the essence of what will become a dataset for the future that will be most helpful in assessing eel stocks.

As we saw in the short-term surveys, the eels' recruitment to the various locations, the young-of-the-year recruitment, is highly variable. And when we include the North Carolina and the New Jersey datasets we see that that same kind of variability goes back almost 20 years.

When this, when one looks at that data and has the benefit of the East River data which is showing the same thing up in Nova Scotia, one can conclude that there is no decline in recruitment of glass eels over much of the species range.

Finally, there's a third data. It's not a dataset. It's three years' worth of snapshot work that has been done on the Saint Jean River in the Gaspé Peninsula.

This is the closest watershed, the final major watershed before the Saint Lawrence River. The work that has been done there, again it's not an index of recruitment or an index of population but what it is is an overall assessment of the resident population in pristine waters that are not subject to fishing pressures.

And that data, likewise, shows that the presence of eels among its entire life cycle, from glass eels up to silver, you know, silver eels, pre-

spawning, are in fact consistent with what one would conclude a healthy population would be based on densities measured historically, going back many decades.

The point is I give this commission, I put my entire reputation on this statement. I have not picked out three obscure datasets that might change the analysis a little bit. And I'm not trying to grasp at any kind of data that I can find that would hopefully present a more balanced picture.

Rather, these are three essential and fundamental pieces of data that Canada has considered in making a final determination of its COSEWIC petition.

It's major data upon which it relied in deciding not to list eel as endangered or threatened but rather a species of special concern, something that, by the way, there was no opposition from industry, fishing, or any of the various regions that participated in the process.

These are major, major datasets. And I would like to think that if the Fish and Wildlife Service is going to move forward on an endangered species listing based on this the stock assessment and if this group is going to empower a plan development team to start coming up with recommendations for the future that at a very minimum those three datasets ought to be brought to the fore for this commission's consideration.

CHAIRMAN COLVIN: Okay --

MR. FEIGENBAUM: I do have some other points.

CHAIRMAN COLVIN: We are now running about ten minutes late. I'm going to -- and we have a very tight schedule to bring this meeting to a close.

MR. FEIGENBAUM: All right. I'd like the opportunity to follow up in a letter if I might.

CHAIRMAN COLVIN: That would be great, Mitch. I'm going to ask Matt to briefly respond to the issues regarding the three datasets and then we're going to return to our agenda item quickly and try to bring our current agenda item to closure and move on to the next one.

DR. CIERI: Each one of those three datasets are up here in Table 2.1.1, Page 24.

CHAIRMAN COLVIN: Thanks, Matt. And, Mitchell, if you want to bring your further comments on this data issue forward that's fine. And I'm sure you and Matt can discuss where they are in the table and the reasons specified as to how they were evaluated by the technical committee.

MR. FEIGENBAUM: Thank you, Gordon. And I would just like to point out I did have several other comments to make about the full range of issues that have been discussed today. If you're saying that I don't have time to make them, then I will bring them forward in a different form.

CHAIRMAN COLVIN: That would be great. And I will also say this. I think it is fully appropriate to make sure that we mail to our advisory panel members the report that was presented today from the stock assessment subcommittee, Steve Gephard's presentation, and to the extent that we have an opportunity to proceed as I recommended earlier with the impaneling of an effort involving our plan development team and the technical committees that any output from those bodies and deliberations that is prepared for the upcoming board meeting would be mailed to the AP members prior to the board meeting as well.

I'm not sure when we will next actually have an AP meeting but I think it would certainly be some time after that board meeting, after we've begun to move ahead. Now, we're still on this agenda item on the future management of American eel.

We've talked about some ideas and suggestions both as to process and what might be thinking about in terms of future stock goals. And I don't know that any of that constitutes direction, but it certainly does constitute discussion.

Let me ask if there is anybody who has any other points or suggestions that they'd like to offer today or is there any objection to proceeding as the chair outlined at the outset of this agenda item? No hands going up. Eric.

MR. SMITH: I agree with the approach and I agree with at least one of the two things we talked about as goals. And one of those was to look at that green, yellow, red table and see if that can at least be a first cut at a kind of a goal target.

CHAIRMAN COLVIN: Thanks. I think the other suggestion was that, that I heard from Matt was maybe something that deals with reversing this 12.5 percent annual rate of decline or at least bringing it level as a first step as well.

And I think both of those can serve as kind of straw proposals for people to focus their discussion around. That, no other hands up, I think we'll move on to Agenda Item 8, review of the technical committee's comments on the state Addendum I proposals. -- Roy, I'm sorry.

MR. ROY MILLER: Thank you, Mr. Chairman. I've been trying to make sense of all this today and I certainly appreciate Steve and Matt's presentations for their thoroughness. There is only a few things that are clear to me, very few things.

It's clear to me that if we want to avoid depleted stocks that we should take some steps to restore these stocks. It's not at all clear to me if coastwide action is necessary to do this. Therefore, it seems to me prudent to take local action to deplete or to arrest the decline in depleted local stocks, even though apparently I

believe I heard Steve say that there is no guarantee that even that would work.

It's also clear to me that we would like to see increased escapement or recruitment to the spawning population in the assumption that there is some sort of yet undescribed stock recruitment relationship, spawning stock per recruit and recruitment.

Our technical advisers have advised us that resource conservation is prudent and that precautionary action may be appropriate. I think we need to focus on those items in our future discussions and our future meetings how we can get there.

In other words, even given the uncertainties it appears the only thing we can do in the short term is to attempt to address the localized depletion problems on a local basis. And maybe we can be thinking about what we can do to increase recruitment to the spawning population while we're doing that. Thank you.

CHAIRMAN COLVIN: Thanks, Roy. That's certainly another suggestion to include in, I can't go so far as to call it terms of reference but at least some straw ideas for the group to begin to discuss. Thank you.

And I'm not quite sure where we are in terms of the membership on the plan development team but I'm going to ask Erika to send a memo out to the board laying out where we currently are with that membership and we can assess whether or not it would be helpful to add some members at that time. Let's proceed then to Item 8, Steve.

REVIEW OF TECHNICAL COMMITTEE COMMENT ON STATE PROPOSALS TO IMPLEMENT ADDENDUM I

MR. GEPHARD: Okay, thank you. I'll try to make this brief. We don't have to go through all of the states here. This slide just recaps the history, just reminding you that the board asked

the technical committee to review the different proposals in February.

The technical committee did that in June, communicated its preliminary approvals to the board in July. At this point the technical committee has approved the proposals of most of the jurisdictions.

There are still seven proposals that were either deficient or needing clarification. Comments were forwarded to these parties and my purpose right now is to update the board on where we stand with those seven proposals.

The state of Maine, Maine chose Option 1A. The technical committee felt that the required data would not provide a sufficient trip level effort because they were asking for the weight of landed eels by month not by trip.

And so the, I seem to have some sort of glitch in my PowerPoint slide but the technical committee recommended that Maine require the fishers to report the catch by pots by day and the little blue text that is underneath there indicates we have not heard further from Maine yet so we have nothing more to report on this one.

Rhode Island, Rhode Island has chosen Option 2 feeling that its existing regulations meet these requirements. And the technical committee agreed with that. But Rhode Island also intends to work toward meeting the requirements of Option 1A as well.

And the technical committee recommended that the state require soak-time data to better collect effort data and certainly encouraged the state to move forward with a commercial permit system.

And, again, my formatting on these slides doesn't seem to be working but in blue font below what I've indicated is that Rhode Island has developed a new finfish logbook with soak time and definitions of fixed and mobile gear and it has met the technical committee's

concerns and so we probably are all set, so-to-speak for Rhode Island.

New Jersey has chosen Option 1A. The technical committee conditionally approved the proposal with the caveat that the state extend the reporting period. Initially the reporting period began in March.

The technical committee also noted there was going to be some potential confusion over gear description because New Jersey refers to eel pots as miniature fyke nets while NMFS calls the pots.

And so what the blue text reports is that New Jersey has come back and said that they have changed the reporting period. It is now January 1st to December 31st. And it will clarify the gear restriction language. So it has addressed the technical committee's concerns.

Pennsylvania has chosen Option 2. However, this is complicated by the fact that the Pennsylvania Fish and Boat Commission does not work with Fish dealers but the Pennsylvania Department of Agriculture does.

So now these two state agencies are working together to figure out how to best collect the dealer information that the addendum requires. We have not seen the plan yet so we have taken no action. We're waiting to hear back when the state figures out how to pursue this.

The technical committee noted that since there is no commercial fishery for eels in Pennsylvania that the dealers will be reporting eels that are caught elsewhere. And therefore it is going to be imperative that the origin of these eels be collected in Pennsylvania's system so that we're not double-counting them.

If eels are coming in from Virginia we know that they're coming in from Virginia and we don't double-count them. And there has been no further communication with Pennsylvania on this matter.

Delaware, Delaware has chosen Option 1A and the technical committee approved the proposal with the caveat that the state must collect daily estimates of landings. What was happening in Delaware is that eelers would collect eels from several days and lump them in a, you know, a holding bin and then would weigh them when they are going to sell their catch.

Relying on the data from these weighing days would not give us a clear indication of daily effort and therefore the technical committee suggests that it provide true trip-level catch effort data. Delaware has indicated it will do so and that it now has a new logbook that will require daily data entry.

Maryland, again Option 1A. The TC conditionally approved the proposal but originally there was no requirement for the crabbers to, the folks who hold crab fishing licenses to report the harvest of eels even though they are allowed to harvest a substantial number of eels as bait.

And the technical committee felt that that was an oversight and that these crabbers should be required to report their catch. Maryland has stated that the reporting requirements will be extended to crabbers as of January 2007, thus addressing the technical committee's concern.

The Potomac River Fisheries Commission has chosen Option 1A but insufficient details were provided. The technical committee has requested more documentation on the nature of the forms will be used and how effort data will be collected. We have not heard back from the commission.

So, in summary we're in pretty good shape. You've seen there is a couple of parties that we need to hear back from and find out what their intent of addressing our concerns are. But most parties are moving along.

We have made two general recommendations. One is that we encouraged everyone to collect life stage information with catch data even though it is not required by the addendum at this time. I think Erika may have mentioned this earlier, that in some cases it doesn't require a lot more effort.

If you've got a logbook and you're asking people to report how many eels they caught in one day, it's not very burdensome to ask them what life style, whether it's glass eel or elver or yellow eel or silver eel, that they're reporting. And these data can be extremely helpful to us in the future.

So, when possible we would encourage all parties to do that. Furthermore, the technical committee encourages everyone to note the intended disposition of the eels when it's possible. That is to say are these being sold as bait or food.

Again, this is not required but it may be something that is easily done and would help all of us better understand the fisheries we're trying to manage. Thank you.

CHAIRMAN COLVIN: Thanks for that report. Steve. I know that. as I recall one of the issues that concerned us as we developed the addendum was this issue of how we define yellow versus silver in particular.

And I am wondering have we developed any further guidance for the states on that in terms of what they tell the fisherman if we're going to ask them to report?

MR. GEPHARD: Yes, excuse me. Yes, we do. And I'm going to, it was on the other presentation, please. As we take a moment to pull this up, it wasn't on the agenda and I wasn't sure we'd be discussing this but I do have that if we go to the, I think it's Slide 16, perhaps.

CHAIRMAN COLVIN: A.C, was that your question?

MR. CARPENTER: Yes.

MR. GEPHARD: Thank-you. So, I just want to make note that these are intended for harvesters, not for scientists. We did, the technical committee discussed these. We also consulted with scientific experts on American eels and they had some ideas that were helpful and some ideas that were just way too technical.

One person suggested measuring the diameter of the eyeballs and I just didn't think that that is something that we wanted to be dealing with. So with this caveat I will share our proposed definitions.

The glass eel, an unpigmented, as in transparent, or partially pigmented miniature eel less than 2.5 inches long with an elongated, rounded body. Let me explain a couple of things. First of all, the photograph in the middle with the dime, you can easily see the elver around the left part of the dime.

What you may have to look a little harder to see, the glass eel which is above the dime and its head and you can see the two eyeballs. Yes, thank you. That's the glass eel there. Now, as the glass eels stay in brackish or freshwater longer, a little bit more pigmentation, not necessarily yellow or green but dots of black and others may start to collect on it.

Those are still considered glass eels and we would not suggest that if there is some additional pigmentation on them they're not glass eels. So that is why the definition includes partially pigmented. We'll get to elver in a moment by contrast.

The other thing is elongated, rounded body. The photo at the upper right corner which you can't see very well but that's a leptocephali. That's the larvae that comes to our coastal waters.

And it's from this phase that the glass eel changes to invade our inland habitats. And that's in the shape of a willow leaf. That's

laterally flattened. And so we wanted to distinguish between that. That's also transparent. So a glass eel is no longer laterally transparent. It's rounded, elongated. It's just transparent.

So then we move on to the elver definition and we see a wholly pigmented eel less than six inches long with an elongated, rounded body possessing all of the characteristics of a yellow eel.

I think that the distinction between glass and elver are fairly clear. It's just a matter of pigment. One is transparent or nearly so and the other is greenish-yellow. And so that is not too bad.

Now you will note the definition between elver, which I show on this slide -- and I'm about to change the slide to yellow eel -- the difference there is going to be one of just length because in fact biologically there isn't a whole lot of difference between an elver and a yellow eel.

An elver is a small yellow eel. It's more of a management distinction than a biological distinction. So let me show you that definition: yellow eel, an American eel larger than six inches long with dark to olivaceous green backs and yellowish bellies.

Now, we get into the distinction between yellow and silver eel. It becomes a little tough because as I think most of us are beginning to appreciate silver eel as the sexual mature form of the species is very plastic.

And when they become silver -- and it's a misnomer because they're not really silver -- when they become sexually mature, whether they are a male or a female, where they're living and also you cannot use a very precise length distinction. Plus the fact is the coloration is a little bit subtle.

So I think that the silver eel definition is the most problematic of all of them. It's a sexually

mature American eel -- and we put down the sexually mature simply as a way of telling people why were making the distinction. It's not like a salmon or a trout. If you squeeze it you're not going to get gametes out of it so you're not going to know that it's sexually mature unless it hits on you or something -- a sexually mature American eel actively migrating to the ocean during the summer and fall -- but note we do not define summer and fall because that varies by latitude -- commonly greater than 11.8 inches long but may be of variable lengths and is often characterized by a very dark coloration on the back, white on the bottom, and a complete lack of yellow on the bottom, bronze or silver on the sides, and enlarged eyes.

So that is what we've got. We're fairly happy with the first three definitions even though there is a lot of overlap. We recognize that the silver eel definition is problematic but frankly we don't have a lot of options there.

CHAIRMAN COLVIN: Thanks, Steve. I appreciate that. I think it might be useful, it's probably the first time the board has seen this and although some of our technical committee members obviously are aware of this effort to create these distinctions I suggest that we make sure that these proposed definitions get sent out to the board.

We can think about them and perhaps be prepared to discuss them further as working definitions for guidance to fishermen in the reporting.

I think it would also be useful to run it by the advisory panel and get some input from that, again, in terms of how working fishermen may be able to work with this, and dealers, to help them as we may be requesting them to report in these life stages. Thanks Steve. A.C.

MR. CARPENTER: Very good report and I appreciate very much. The only thing that I would suggest is if you have a photo of a silver eel that could be included with this, I mean you

had the, all the life stages except that one, and maybe one that would call attention to the larger eye size and silver underbelly of it, it would really be helpful. And I think that this could go a long way to educating the public.

CHAIRMAN COLVIN: Think in terms of some of the identification manuals and guides we've seen with things like sharks and sea turtles and things of that nature where we get a card, a laminated card that has actual photographs. It might be very helpful. Steve.

MR. GEPHARD: I think that's an excellent idea. I just would note that I was putting this together on my way down here and realized that I didn't have a good library so I just pirated the illustrations that was available to me.

But working with silver eel experts who have, you know, a very extensive photo library I'm sure we can come up with excellent examples that not only would show it but also hopefully illustrate it in black and white so that these things can be mass-produced. So I think that's a great idea.

CHAIRMAN COLVIN: Any other questions for Steve on his report? Leroy? No. Okay, thank you. Erika, the fish passage workshop and hydro passage power. Go ahead, sorry.

MR. LEROY YOUNG: When you mentioned Steve's report I thought you just meant the eels' different life stages. But in terms of Pennsylvania's plan you can anticipate receiving that I believe within the next week.

We have met with the Department of Agriculture twice. It is complicated in Pennsylvania. Agriculture regulates dealers; however, we have a regulation which stipulates which species can be cultured or transported and through that authority we have a role in this that we can, we update that list every year.

Eels are on the list. And we feel that we can condition the list to require this reporting. Our

chief counsel to looking at this right now. And we may, we plan to implement this in January. But we might have to or we may formulate some regulations to deal with this more clearly. We are trying to deal with that right now.

CHAIRMAN COLVIN: Thank you. Erika.

**ANNOUNCEMENT OF THE 2006
YOUNG-OF-YEAR WORKSHOP, FISH
PASSAGE WORKSHOP, AND
HYDROPOWER PASSAGE
WORKSHOP**

MS. ROBBINS: Thank you. I just wanted to make sure that the board was aware of some upcoming technical committee workshops that we are planning. In December we will be holding a young-of-year workshop that is intended to help all of the states in their sampling of young-of-year.

Some states are having difficulties with time in the field and want to find ways that they can best maximize their resources to produce the best data they can in the easiest fashion. So we'll be addressing that in December.

And together with several of the other diadromous species we will be putting together a workshop in 2007 for fish passage. Other species would be surgeon, shad and river herring, and the other diadromous species that the commission manages.

And we'd also like to have a hydropower passage workshop in 2007. That would be specifically for eels to address downstream migration and downstream passage and ways that the commission and states can work with things like the FERC re-licensing process to improve downstream passage for eels.

CHAIRMAN COLVIN: Question? Okay, thank you. The next item I think I already stepped on Erika a little bit on that and let that cat out of the bag. Do you have anything to add to what I said earlier, Erika?

**ANNOUNCEMENT OF THE
OPPORTUNITY TO WORK WITH THE
GREAT LAKES FISHERY COMMISSION**

MS. ROBBINS: I just wanted to let the board know that I've had a discussion with John Dettmers who is the biologist in charge of eels with the Great Lakes Fisheries Commission. And he invited ASMFC to become a part of their initiative to develop a recovery plan for American eel in the Saint Lawrence River. It's a joint initiative with Canada.

And they would like us to participate in their American eel task group as an observer as well as coming to our meetings and our technical committee meetings, stock assessment subcommittee meetings, and learning what we're doing and how we're approaching eel management to possibly develop stock assessments in the future, establish a method for sharing data, and to possibly develop objectives for the stock as a whole, you know, that extends from South America through Canada, and work together knowingly that it's a panmixic stock and we're not going to be, they wouldn't like to be operating in the closet by themselves. They want to be working with everyone else.

CHAIRMAN COLVIN: Thank you. Any further questions on that subject? That takes us to the issue of new business. In new business actually all I had was two announcements I wanted to make that Wilson Laney had spoken to me about earlier.

First is to make folks aware that Wilson has been talking to some scientists at North Carolina State University who are developing a PCR-based assay that will enable detection of the parasite *anguillacola* in eels.

There are issues and I remember a slide earlier today talking in terms of possibility of management including introduction of eels into some new watersheds. There are concerns were

doing that where the parasite may be present in the introduced eels and how that might affect the ecosystem and the effort.

But you can't detect it at present techniques without killing the animals. So this technique bears promise in terms of enabling us to use the PCR assay technique without sacrificing the animals.

There is some funding needed to advance the effort and get it perfected to the point where it can be used. And I would encourage folks to talk to Wilson about this further for details. But it will be discussed further. I'm sure the technical committee will also be taking an interest in it.

The second issue is that the Management and Science Committee had some discussions that included the recommendation for the development of an American Eel Working Group.

This is just to give the eel board members a heads-up that when Linda Mercer presents the Management and Science report to the Policy Board that this recommendation on American Eel Working Group will be put forward and it will perhaps create a framework for some of, particularly the habitat and restoration and passage issues that we've all been talking about.

So it's just kind of FYI and stay-tuned for Linda's report. Anything further to come for the board today? Dr. Kray.

DR. EUGENE KRAY: Gordon, just a point, I don't remember us approving the minutes of our previous meeting. If we haven't I would like to make a motion that they are approved with a correction.

Mr. Cozzo and myself were not included in the list so I would have those two added to the board and I put a motion on the floor to accept the minutes.

CHAIRMAN COLVIN: Thank you. Yes, I indeed looped right past that. And I will accept that motion to approve the minutes with that addition. A.C.

MR. CARPENTER: I would like to have my name added to the list of attendees at that last meeting as well. And I'll second the motion.

CHAIRMAN COLVIN: Thank you. We will add the vice-chair's appearance to the list of attendees. And with that is there objection to the motion? Seeing none, the proceedings stand adopted.

Further business to come before the eel board? Sir. If you would like to comment I would ask you to take the microphone. I haven't seen any hands over there and that may be my oversight.

OTHER BUSINESS

MR. KEVIN MCGRATH: Thank-you. My name is Kevin McGrath and I'm with the New York Power Authority. And what I would like to do is offer a comment on the updated stock assessment. We only received the updated stock assessment report last week.

We are currently reviewing the report. And we tentatively plan on offering comments in the future. However, we continue to be concerned about the lack of use of some datasets we believe are relevant and the statistical treatment of some data.

Further, we are concerned that there seems to be a disconnect between the results analysis, particularly Figures 3.5-2 and 4.3-2 which are the coastwide composite indices and the dramatic statements in the last page of the report.

But I now have a question to the board and that is if we do offer comments, when and where will they be addressed? Is there a chance that the report would be revised should the technical

committee and the stock assessment committee find the comments appropriate? There just doesn't seem to be any venue for public comment to be incorporated into this procedure.

CHAIRMAN COLVIN: Thank-you. I would encourage you to submit the comments. Those comments will be of course transmitted by the board to the technical committee and the stock assessment subcommittee with an invitation for them to respond as Dr. Cieri did earlier today preliminarily to Mitch's comments.

And any communication and feedback we get from our technical advisors with respect to comments they've receive will be copied to the board and we will be made aware of their reaction to it.

MR. MCGRATH: Thank you.

MR. DIXON: My name is Doug Dixon. I'm with the Electric Power Research Institute. And first I'd like to say I'm very pleased to see that the technical or the stock assessment committee did go back and re-examine the datasets and include additional datasets.

That was very unclear after the February meeting whether or not that was going to happen so subsequent to my letter that I wrote to the board, to this board, I'm very pleased to see that at least some effort has been directed towards, you know, that type of work.

However, there is a but. As Kevin mentioned, we only learned that there was going to be this new report, revised report, available -- I only found out about it last Thursday. And as the board knows, I recommended many datasets.

And my letter is noted in the review report yet I never received a comment or a response to my submission of the datasets, even to the point of saying, "thank you, we appreciate the datasets with the information you have provided and we're going to use that in the future assessments." So, it came as a complete surprise

last week that I even, that my letter didn't just go out there into a black hole.

An additional point is that while it's great that the committee has done this work, it's only partially done. They looked at short-term issues that they could address. There are still several datasets, as Mitch has noted, some very important ones like the East River, the Gaspe River, the Saint Nicholas datasets, that should be included.

Yes, they are mentioned in Table 3-1 but what is mentioned in Table 3-1 is these datasets were not available at the time the stock assessment committee did the work. So it's kind of like saying there is an incomplete analysis that is out there.

But, anyway, as I started to say, the committee has done the short-term work, not the long-term work that was also recommended by the peer review committee.

For example, I'll give you a quick what it looks like, if I submit a paper to the Transactions of the American Fisheries Society and I get comments back from my peer review committee and then I only address those comments I can do in the short-term and then send the paper back in and expect it to be published, that committee will laugh at me.

However, what has happened now with this revised report, it has been posted to the ASMFC Website. It is there. It's in the public domain and it can potentially be used to influence regulatory policy, the ESA status report that is going on right now, and yet it's only a partial data analysis.

And the last point I'd like to make is that you know the report comes out with some very dramatic conclusions at the end regarding the status of the stock. However, when you look at the databases only 3 of 15 databases showed a significant decline.

Alex Rodriguez is getting run out of New York for batting that level after the championship series. And if you include further datasets it will even bring that batting average down much further.

So, there is a very, there is a large disconnect between the conclusions that are in the report and the data that is being presented, as the committee has pointed out. There is a tremendous amount of uncertainty in the data.

One additional point I forgot to make, in my comment letter that I wrote back in March I said one of the very important things to do is to take a look at the VIMS trawl survey data. What needed to be examined was the importance of the catchability coefficient to the reliability of that dataset.

That dataset is driving much of the analysis that has been presented today. But there is an assumption in that dataset that the catchability remains the same throughout the entire period. Now, if you think about it, a quarter-inch trawl survey is a lousy gear to use as an index for eels,

for eels that are collected that are thinner than this pencil.

The catchability is very much affected by what else is in the net, whether that be eelgrass, other fish, jellyfish, so it's very important to know when somebody asks a question about the reliability of the data, since this VIMS dataset is driving the analysis, you need to look at the catchability coefficient.

You need to determine does that catchability coefficient change with time and does that change affect the reliability of the information that is being reported? Thank you.

CHAIRMAN COLVIN: Thank you. Any further business to come before the eel board this afternoon? Without objection we stand adjourned.

(Whereupon, the meeting adjourned at 6:25 o'clock, p.m., on Tuesday, October 24, 2006.)

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