Atlantic States Marine Fisheries Commission

Weakfish Management Board

October 23, 2012
12:30 – 1:30 p.m.
Philadelphia, Pennsylvania

Draft Agenda

The times listed are approximate; the order in which these items will be taken is subject to change; other items may be added as necessary.

1.	Welcome/Call to Order (*J. Gilmore)*	12:30 p.m.
2.	Board Consent • Approval of Agenda • Approval of Proceedings from February 9, 2012	12:30 p.m.
3.	Public Comment	12:35 p.m.
4.	Technical Committee Report (*J. Cimino)* • Update on Weakfish Stock Status Indicators	12:40 p.m.
5.	Consider 2012 FMP Review and State Compliance (*M. Waine*) **Action**	1:10 p.m.
6.	Other Business/Adjourn	1:25 p.m.

The meeting will be held at Radisson Plaza Warwick Hotel, 220 S. 17th Street, Philadelphia, PA; 215.735.6000

MEETING OVERVIEW

Weakfish Management Board Meeting
Tuesday, October 23, 2012
12:30 – 1:30 p.m.
Philadelphia, Pennsylvania

Chair: Jim Gilmore (NY) Assumed Chairmanship: 1/11	Technical Committee Chair: Joe Cimino (VA)	Law Enforcement Committee Representative: Mike Davis (NC)
Vice Chair: Russ Allen (NJ)	Advisory Panel Chair: Billy Farmer (NC)	Previous Board Meeting: February 9, 2012
Voting Members: MA, RI, CT, NY, NJ, DE, MD, PRFC, VA, NC, SC, GA, FL, NMFS, USFWS (15 votes)		

2. Board Consent

- Approval of Agenda
- Approval of Proceedings from February 9, 2012

3. Public Comment – At the beginning of the meeting public comment will be taken on items not on the agenda. Individuals that wish to speak at this time must sign-in at the beginning of the meeting. For agenda items that have already gone out for public hearing and/or have had a public comment period that has closed, the Board Chair may determine that additional public comment will not provide additional information. In this circumstance the Chair will not allow additional public comment on an issue. For agenda items that the public has not had a chance to provide input, the Board Chair may allow limited opportunity for comment. The Board Chair has the discretion to limit the number of speakers and/or the length of each comment.

4. Technical Committee Report (12:40-1:10 p.m.)

Background

- In August 2010, the Board approved the following motion: *Move that the Weakfish Management Board direct the Technical Committee to develop indicators for possible management use as the stock recovers.*
- In September 2012, the Technical Committee met to update stock status indicators through 2011 as directed by the Board.

Presentations

- Report on stock status indicators by J. Cimino, TC Chair (**Briefing CD**).

Board actions for consideration at this meeting

- None

5. Fishery Management Plan Review (1:10-1:25 p.m.) Action

Background

- State Compliance Reports are due on September 1 (**Briefing CD)**
- The Plan Review Team reviewed each state report and drafted the 2012 FMP Review (**Supplemental Materials)**
- The states of Massachusetts, Connecticut, Georgia, and Florida requested *de minimis*.

Presentations • Overview of the 2012 FMP Review by M. Waine
Board actions for consideration at this meeting • Accept the 2012 Fishery Management Plan Review and Compliance Report • Approve *de minimis* requests from Massachusetts, Connecticut, Georgia, and Florida.

6. Other Business/Adjourn

DRAFT PROCEEDINGS OF THE

ATLANTIC STATES MARINE FISHERIES COMMISSION

WEAKFISH MANAGEMENT BOARD

Crowne Plaza - Old Town
Alexandria, Virginia
February 9, 2012

These minutes are draft and subject to approval by the Weakfish Management Board.
The Board will review the minutes during its next meeting.

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ATTENDANCE

Board Members

Paul Diodati, MA (AA)
Rick Bellavance, RI, proxy for Rep.Martin (LA)
Pat Augustine, NY (GA)
James Gilmore, NY (AA)
Brian Culhane, NY, proxy for Sen. Venables (LA)
Russ Allen, NJ, proxy for D. Chanda (AA)
Tom Fote, NJ (GA)
Adam Nowalsky, NJ, proxy for Asm. Albano (LA)
Roy Miller, DE (GA)
David Saveikis, DE (AA)
Bernie Pankowski, DE, proxy for Sen.Venables (LA)
Tom O'Connell, MD (AA)
Bill Goldsborough, MD (GA)
Russell Dize, MD, proxy for Sen. Colburn (LA)
Rob O'Reilly, VA, proxy for S. Bowman (AA)
Louis Daniel, NC (AA)
Robert Boyles, SC (LA)
John Duren, GA (GA)
Aaron Podey, FL (AA)
Steve Meyers, NMFS
Jaime Geiger, USFWS
A.C. Carpenter, PRFC

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

Ex-Officio Members

Lee Paramore, Technical Committee Chair

Staff

Vince O'Shea
Bob Beal
Toni Kerns
Mike Waine
Mark Robson

Guests

Charles Lynch, NOAA
Patrick Geer, GA DNR
Jack McGovern, NOAA
Stew Michels, DE DFW
Derek Orner, NMFS
Dick Brame, CCA
Wilson Laney, MSFWS

The Weakfish Management Board of the Atlantic States Marine Fisheries Commission convened in the Presidential Ballroom of the Crowne Plaza Hotel, Alexandria, Virginia, February 9, 2012, and was called to order at 10:35 o'clock a.m. by Chairman James Gilmore.

CALL TO ORDER

CHAIRMAN JAMES GILMORE: Good morning, everybody. Welcome to the Weakfish Management Board. My name is Jim Gilmore. I'm the administrative commissioner from New York and I'll be chairing the meeting today.

APPROVAL OF AGENDA

CHAIRMAN GILMORE: The first order of business is approval of the agenda. Are there any changes to the agenda that was on the briefing CD that everyone received? Seeing none, we'll take that as approved.

APPROVAL OF PROCEEDINGS

CHAIRMAN GILMORE:Secondly, approval of the proceedings from the August 2011 meeting; I hope everyone has had a chance to look at them. Are there any changes to those? Seeing none, we'll accept those.

PUBLIC COMMENT

CHAIRMAN GILMORE:Before every meeting we have an opportunity for public comment on issues not on the agenda. Is there any public comment on anything coming before the Weakfish Board? Okay, seeing none, we'll move on to the fourth item on the agenda, the technical committee report, which is an update on the North Carolina Conservation Equivalency. Lee Paramore is going to take us through that.

TECHNICAL COMMITTEE REPORT

MR. LEE PARAMORE: At your last board meeting I gave you an update on North Carolina's performance, and this is basically an extension of that. We've added an additional time period onto this for you guys to look at. As you know, North Carolina asked for and received from you guys permission to put in a 10 percent bycatch allowance and a thousand pound cap in lieu of the hundred pound trip limit. That has been in place since August 20, 2010.

Essentially what we have done is we have looked at landings and overages that have occurred over three different periods, and those include September through December of 2010, January through April of 2011 and May through September of 2011 and our report results for each of those in this presentation.

The table you see here has each of those three periods. The first column shows pounds of weakfish. The second column is the total number of trips of weakfish. The third column is the percent of trips that had overages, so they exceeded the 10 percent bycatch allowance. The fourth column shows the total pounds of overages that were landed, and then the final column shows the percent of the total catch for that period that was landed as overages.

You can see in the initial period we had 17 percent of our trips that had fish that exceeded the 10 percent bycatch allowance, and that accounted for 31 percent of the landings. The second period, January through April 2011, only 6 percent – it dropped from 17 percent to 6 percent of the trips that had overages. Those accounted for about 4 percent of the total landings during that period. The most recent period, that is the number of trips that had overages. The percentage dropped to 4 percent so we have seen a steady decrease in the percent of trips that have occurred, but the actually the pounds landed went up. We had 19 percent of our landings during this last period that were from overages.

Just to give you an idea of where the overages are coming from in terms of the gears that are landing weakfish, I've highlighted them in yellow, basically the problem areas. Those would include our gill net fishery. Seventeen percent of the trips had overages. The September through December period accounted for 33 percent of the landings.

For long hauls, 29 percent of the trips had overages and that accounted for 35 percent of the total landings for that gear. For the second period, January through April of 2011, there really weren't any major issues. Compliance was actually pretty good or there were very few overages. Overall there was only 5 percent of the trips with overages and only accounted for 3 percent of the landings.

In this most recent period, which you have not had reported to you yet, you can see that the primary culprit here was long hauls. The percentage of trips with overages was 19 percent of all the trips, and 30 percent of the landings that occurred in long hauls were the result of overages. Overall for all gears, 4 percent of the trips had overages and that accounted for 19 percent of the landings.

You can see that during this period we landed about 12,000 pounds of weakfish and of those about 2,200 pounds were landed from overages. One thing I will point out from this for long hauls specifically is we did look a little further into the data and did notice that we had some incidents where we had some repeat offenders that accounted for most of these overages, so we're looking into letting those guys know that what they're doing needs to be changed. That will drastically reduce our overages in that regard.

If you just want to look at this in terms of how this pans out with the hundred pound trip limit, basically 97 percent of our trips that were made during these three periods landed less than a hundred pounds, and that accounted for approximately 53 percent of our overall landings. Only a little bit less than 4 percent of the trips landed a hundred pounds or greater, and that accounted for about 47 percent of our landings.

Very few trips landed over a hundred pounds, but the trips that did accounted for a large portion of our overall landings. The last time I presented some information based on some analysis that the technical committee had recommended. This was basically to set up some different scenarios where we tried to simulate what landings would have looked like had North Carolina had a hundred pound trip limit in place during this period.

Based on this analysis, we had two scenarios with different assumptions. One was for the level of adherence to regulations. Basically what I mean by that is we either assume that a hundred percent of the people adhered to the regulations or we assumed that people had the same level of overages that they had with the 10 percent bycatch allowance is what they would have had if we would have a hundred pound trip limit.

We also considered some assumptions on the magnitude of the discards. One is we assumed that were no regulatory discards that would be caused by the 10 percent bycatch allowance, and the other one is we assumed that if people did capture weakfish and met their 10 percent catch allowance, then those people actually had to throw fish back, so we made an assumption those trips would have had discards.

This first scenario basically shows you what would have happened if we would have had a hundred percent adherence to the regulations so we would have had no overages. The first scenario is basically the current rule. This is 86,334 pounds would have been landed had we have had no overages and everybody would have adhered to the 10 percent bycatch allowance.

Scenario Number 2 is what would have happened if we would have had a hundred pound trip place and we assumed that there would have no discards. Of course, we know that there were discards, but we just don't know the magnitude of the discards. Scenario Number 3 assumes that would have had a hundred percent adherence to the regulations, but it assumes that we would had a high level of discards.

Essentially what we did is if the people met their 10 percent bycatch allowance we assumed that those people would have landed weakfish up to the hundred pounds. When you look at this, you can consider Scenario Number 2 is basically a low estimate of what would have happened at a hundred pound trip limit, and Scenario Number 3 is a high estimate.

You can see that what actually happened falls out somewhere in between those two. This second slide here shows the same type of information but what it assumes is that we had the same level of overages; so the people who basically didn't abide by the law and brought more weakfish in than they should have, we assumed that they would have done the same thing under a hundred pound trip limit as what they did under the 10 percent bycatch allowance.

For this scenario we basically see 109,400 pounds, which is what was actually landed during this period. If we assumed that they would have landed a hundred pounds with no discards, it would have been around 90,000 pounds. If we would have assumed they would have had a lot of discards, it's around 114,000 pounds.

Under this scenario it falls in between but it does come closer to the high estimate of 114,000 pounds. Just to give you an idea of some of the most commonly landed species that occurred with weakfish in some of our major gears; winter trawls, weakfish were primarily landed with flounder, croaker and blue fish.

Gill nets we saw croaker, blue fish and sea mullet as the primary target species that weakfish were landed with. Long hauls it was spot, sea mullet and unfortunately weakfish. As you notice, long hauls was one of our problem gears and one we need to address for having overages, so that's why you see weakfish as a target species.

One of the things that was asked at the last board meeting was to have other states produce information to show how they were adhering to the regulations that they had in place. What I've done here is this is each state. Every state on the Atlantic coast is reported in this table. We did not get any data from New York so they're not included. I have highlighted anywhere the percent pounds overages were over 10 percent or the percent of trips that had overages was over 10 percent.

You can see in the first period North Carolina had 31 percent of their landings occur as overages, and that occurred on 16 percent of the trips. New Jersey had 13 percent of their pounds occur as overages. The trips weren't so bad; they were 9 percent. Maryland had 15 percent occur as overages and 11 percent of their trips. This was for the first period of September through December when the regulation first went into place.

During the second period, which was basically our winter fishery, going in the early spring, North Carolina's landings were actually quite good. We had 4 percent from overages and 6 percent of our trips had overages. New Jersey landed 9,000 pounds, which was somewhat substantial with their year-round landings, but not nearly what North Carolina landed, but 51 percent of their pounds were from overages and 29 percent of their trips occurred as overages.

Maryland had very few landings but you can see they were right around 50 percent both in the pounds landed and in the trips. In the final period things look a little bit better. I guess the one black eye that you see there is North Carolina still had 19 percent of their pounds landed from overages even though the number of trips was down to 4 percent. All the other states seemed to perform quite well.

As I mentioned, there is a large percentage of those trips that occurred from the long haul fishery that accounts for basically 17 percent of the 19 percent, so we had sort of a trouble spot that we need to address with long hauls. Some of the summary comments from the technical committee is basically the number of trips exceeding the bycatch allowance as we saw has decreased since the regulation was implemented.

A lot of the technical committee thought it was really important to look at the number of trips that had overage as opposed just to the landings that were landed as overages. Since you can have one or two fishermen come home with a big catch and really inflate the landings with overages, but if you look at all the trips together it kind of gives you a better idea of how everybody is performing.

In the most recent period the pounds landed that did overages, North Carolina accounted for 19 percent of the landings. As I said, the majority of those were from a few isolated incidents. Of course, the technical committee has asked us and other states that have seen similar type things to go look at their trip tickets and try to address some of these issues through law enforcement or other means to try to get these guys into compliance with the regulation.

The magnitude of landings in North Carolina has been within what was assumed to occur under the hundred pound trip limit based on the analysis that the technical committee conducted. The technical committee did note that the issue of adherence to the regulation as you saw for some other states was a problem, so the problem is really not unique to North Carolina.

The overages definitely while not desirable, it was noted by some of the people on the technical committee that they really are accounting for a very small percentage of the weakfish total mortality. One of the numbers that was put out said it was probably less than ½ of 1 percent of the total removals of the population or what these overages actually account for in the big scheme of total removals of weakfish, and we're talking about removals from both fishing and natural mortality. I think that concludes everything that I have.

CHAIRMAN GILMORE: Thanks, Lee, good presentation. Any questions for Lee? Pat.

MR. PATRICK AUGUSTINE: Lee, has anyone tried to convert the number of pounds into fish? I'm assuming that these are all juveniles and probably weigh a third of a pound at most. When we talk about 1 percent or 15 percent of the overage, it doesn't mean anything unless you relate it to the total number of fish that are actually being removed. If weakfish weren't in a depleted status it would be different, but can you convert numbers or is that possible?

MR. PARAMORE: It would be possible to convert these into numbers. We have samples and we have mean weights so it could be converted into numbers. I can tell you most of these fish are probably ranging 12 to 14 inches and so they're probably a pound or less. It's almost a one-to one conversion.

MR. ROY MILLER: Lee, refresh my memory; what is a long haul?

MR. PARAMORE: A long haul is two vessels. One basically pulls the net out and they can be as long as a mile long. They encircle the fish and it pulls it back to the second vessel, and then they basically bunt the net down and keep closing the net off until they get the fish into a bag, and then they scoop the fish out. They'll drag the net for a while and then they'll anchor off one boat and then circle around. The two boats will come together and then the one boat will bypass the other boat and basically cinch the net down until the fish get into a tight area.

MR. MILLER: So it kind of functions like a purse seine almost then?

MR. PARAMORE: A lot, yes, but there is no bottom in it.

EXECUTIVE DIRECTOR JOHN V. O'SHEA: Lee, the whole purpose of the addendum was to reduce overall catch of weakfish; how are we doing on that?

MR. PARAMORE: I think most states – you might can help me a little bit. I know North Carolina went down from about 160,000 pounds to 100,000 pounds in the first – it wasn't even a full year, right?

MR. MICHAEL WAINE: Yes, the FMP review details that but all states' landings have decreased since the addendum went in.

EXECUTIVE DIRECTOR O'SHEA: Significantly, because we were looking at a moratorium?

MR. PARAMORE: Yes, I want to say that the addendum called for between a 50 and 60 percent reduction. I think North Carolina saw about a 40 percent reduction, but that's based on a partial year of regulations being in place. That's a little bit of a slippery slope because we don't know – you never know how much of the reduction is coming from the regulation and how much of the reduction is coming from a continued decline in the weakfish. It's hard but we did see all states see reductions in their landings.

MR. ROBERT H. BOYLES, JR.: Lee, refresh my memory; isn't it true – I was struck by your last bullet you had there, the summary, but isn't it true we have established that F really is not really contributing as much to total mortality?

MR. PARAMORE: That's absolutely true and that's been sort of the stance of the technical committee; not that they don't think we should protect weakfish and we shouldn't measures to do so. I think when the technical committee recommended the trip limit, like a hundred pound trip limit, part of it was just to have a minimal fishery that was sort of a bycatch fishery – people weren't targeting weakfish – also allow us to continue to gather some of that biological information that we need to assess the stocks, but also not to have a fishery that could expand if the population does recover.

But because weakfish have such a high natural mortality rate right now, we have very little leverage in managing this fishery based on managing just the fishing mortality alone. That's the crux of the problem, I guess.

MR. ROB O'REILLY: I just wanted to also talk about the decline in landings, which are more pronounced on Table 4 of the 2011 Weakfish FMP Review and the recreational fishery from about 171,000 pounds down to about 72,000 pounds. The commercial decline, as Lee said, is in the 40 percent, somewhere in there.

I think some of the information based on the implementation schedule we'll be able to see more of this when full 2011 data are in as well. I just want to ask Lee for the future is it possible to have sort of a composite effect of all the states that is weighted by landings or something to that effect. In other words, where you're looking at each state and trips involved and the percentages that are over the hundred pounds or the 10 percent; is there some way to weight that as a composite as we go forward with this?

MR. PARAMORE: I'm not sure I'm following exactly what you're asking.

MR. O'REILLY: Well, I think you're using individual state information on how they're performing with the addendum. It would seem you could have an aggregate effect at some point which could be based maybe on their landings of that year or something of that effect.

MR. PARAMORE: So to look at states in terms of their proportion of the landings to the total?

MR. O'REILLY: Overall, yes.

MR. PARAMORE: Yes, I think that could be done.

CHAIRMAN GILMORE: Any other questions for Lee? I actually have got one question for Louis. When we first started this – and I go back to the August meeting – there was I guess a 30-something percent overage, and that was I guess attributed to some communication or outreach stuff, whatever, and I think that has been fixed pretty well.

And then it dropped right after and I guess we got some numbers that it went down to a single digit percentage and looked pretty good, and then it kind of went back up again, which even though the poundage is – I'm not so concerned and I don't think anybody really is, but it seems like now we have the issue of a couple of a bad actors, so what is the plan for them? I'm assuming you guys are going to try to educate them a little bit.

DR. DANIEL: That's one way to put it. Yes, the problem, just to be completely forthright on this, is the long haul fishery has been an issue because they catch fish, they bring them to the fish house and they cull them there. It's one of the very few fisheries that we have – this is the last remaining fishery that we have. They just don't have the ability to cull at sea.

That fishery is on its way out. There may be one crew left in the state of North Carolina. For confidentiality purposes I didn't say that. We'll have a talk with those folks and let them know that they're compromising the potential for the entire state; that if we can't nip this in the bud, then I don't know any other way to do it than to just come back and say we're not able to manage this.

I think we can, Mr. Chairman, and we'll commit to discussing this with the offenders and let them know that we're going to be watching them and we're going to need to write some tickets if they don't straighten up. I regret that it has happened but I am glad to see that it is a very isolated incident.

MR. THOMAS FOTE: Through the Chair I'd like to ask Louis another question. When we started doing the Weakfish Plan, many years when we started talking about it, we basically talked about bycatch in the shrimp fishery and the bycatch in other fisheries, and that was 50 or 60 percent of the mortality on that. Is that mortality starting to creep up or is it still as it was 15 years – the cutbacks; are they still in place to reduce the amount of bycatch of weakfish and other species in those fisheries still the same?

DR. DANIEL: I'll just take that as a question directly from Mr. Fote. Tom, I would say that the overall bycatch of weakfish in the various fisheries in North Carolina since we started is much reduced and continues to decline would be my best scientific guess. With fuel prices, we've seen a reduction in the number of licenses we're selling.

We're seeing a reduction in the amount of shrimp trawling effort. They are still, though, required to have the bycatch reduction devices remain in those gears. We continue to work on getting better reduction estimates. We're certainly not backsliding on any of the bycatch reduction plans that we have in place.

The fishermen, with the size limit increases, have gone to larger nets so the days of old when this was a common bycatch occurrence in a lot of our fisheries is no longer. The flynet closure south of Cape Hatteras remains. There has been some effort to try to get that back for the croakers, but we recognize that has been a multispecies benefit having that area closed south of Hatteras.

I don't know that the politics in North Carolina would want to get that area open even if it was possible. Lee might be able to add a little bit more. He is now our weakfish expert. To answer your question, I think I would say it's reduced and continues to be reduced.

MR. PARAMORE: The only thing I would add is we've looked at this a little bit, and there has definitely been a decrease in the number of shrimp trawl trips in Pamlico Sound and other areas where you would think that the bycatch might be a problem. Just to sort of to add on to what Louis said and not really any additional information, but we have looked at that a little bit and noticed those trends.

MR. RUSSELL DIZE: All we do to limit the catch may not have a lot to do with how many weakfish we have. A good friend of mine is a conch fisherman off of Ocean City, Maryland, and off of Wachapreague, Virginia. Early in January they were catching spiny dogfish for bait for their conch pots because they couldn't get horseshoe crabs.

They caught about an eight to ten pound rockfish in that net; and when they threw it into the bottom of the boat, a weakfish of about seven inches came out of its mouth. It had been eating on weakfish. They gutted the fish and it had 26 weakfish in it. We have predation on it; and with more striped bass coming in the next three years, this may be really tough to fix.

CHAIRMAN GILMORE: Thanks, Russell, yes, that and dogfish I think – yes, I don't know if we're ever going to come back. Any other questions for Lee or anything on this topic? It sounds like at least we're not at any point anybody wants to raise an action right now, so hopefully we'll get that last little bit done in North Carolina and we'll be okay with this. Saying that, I'll move on to the agenda item, which is the Fishery Management Plan Review and Mike Waine is going to take us through that.

2011 FMP REVIEW AND STATE COMPLIANCE

MR. WAINE: This is the 2011 FMP Review, which reviews the 2010 fishery. Just briefly to go over the status of the FMP, Amendment 4 was in 2002 and it has been addended four times. The most recent, Addendum IV, revised the biological reference points; reduced the creel, implemented the trip limit and reduced the bycatch limit and finfish trawl undersized fish allowance, and that is what we have been discussing for the last half hour.

The status of the stock is depleted; overfishing is not occurring; biomass is an all-time low; F is modest and stable but M recently increased and is driving the stock dynamics. The SAW/SARC process in 2009 has an interim model and current level of fishing removals are exacerbating the stock decline.

This figure just shows stock status. The bars are the biomass and you can see the decrease precipitous decline recently. The solid line is the fishing mortality rate with the dashed line being the natural mortality rate being a larger component of total mortality, as was mentioned. Moving into the status of the fisheries, this figure shows commercial landings in the orange bars and recreational landings in the blue line; and once again a precipitous decline in both those landings as well.

For 2010 total landings were 272,000 pounds, and that has dropped 49 percent from 2009 and 93 percent from ten-year average. For the commercial fishery this figure shows the different bars indicate years. In this past year the three biggest players were North Carolina landing 53 percent, Virginia landing 29 percent and New York landing 7 percent; an 87 percent decrease in landings for New York and a general decrease in landings for other states with notable changes since 2009.

The gill nets continue to dominate the major gear types with haul seines and trawls as secondary and tertiary gears. This figure shows the recreational fishery harvest and releases. In 2010 releases went up and the harvest went down. That could potentially be attributed to Addendum IV which implemented the one-fish bag limit, which was a reduction from the six-fish bag limit. The most notable change was the fish released increased by 180 percent and fish harvest had decreased by 44 percent since 2009.

Talking about the recreational fishery, North Carolina anglers landed 69 percent of the coast-wide recreational harvest, followed by South Carolina anglers that landed 14 percent and Virginia anglers landed 5 percent. Most of the harvest is from private or rental boats, that's 82 percent; or from shore landings, which was 11 percent; and 89 percent of the landings come from the later waves or May through December.

Looking at de minimis, weakfish de minimis is based on two-year landings average that is less than 1 percent of the coast-wide landings. For 2009 and 2010 that average was 4,000 pounds. There were requests from Massachusetts, Connecticut, Georgia and Florida, and all of those states qualified for de minimis status with Massachusetts representing 0.01 percent; Connecticut, 0.17 percent; Georgia, 0.94 percent; and Florida, 0.36 percent of total landings.

The PRT is going to continue to report on Addendum II triggers even though Addendum IV replaces that. Trigger 1was the coastal commercial landings, which is if landings are greater than 80 percent of the 2002-2004 average. In 2009 landings were quite low at 199,780 pounds, so that trigger wasn't met.

Trigger 2 is a state-specific total landings and so if states are greater than 25 percent of their five-year mean, and all state landings except Massachusetts decreased from their five-year mean; and like I just mentioned, Massachusetts landings represent a very small component of the total landings.

Compliance for the regulatory requirements in Addendum IV, all states were in compliance since as Lee pointed out North Carolina was approved for conservation equivalency measures in lieu of Addendum IV. Just to move into the monitoring requirements, which are part of Addendum I, six lengths are required by metric tons that are landed commercially and three otoliths are required by metric tons landed from both the recreational and commercial fishery combined.

There were three states that were unable to meet the sampling requirements and that was Rhode Island, New York and Delaware. They cite funding, personnel and limited landings as reasons for being unable to meet their sampling requirements. The PRT recommendations are to consider the de minimis request from Massachusetts, Connecticut, Georgia and Florida, who all qualify; consider compliance with monitoring requirements with the sampling as just mentioned from Rhode Island, New York and Delaware; that the TC and SAS continue to explore alternative assessment techniques for the next benchmark and continue to file and put data for an interim model should an update be requested by the board. Thank you, Mr. Chairman, that completes my report.

CHAIRMAN GILMORE: Thanks, Mike, great report. Any questions? Pat Augustine.

MR. AUGUSTINE: No questions, good report. Weakfish aren't around and that's the name of the game. Whenever you're ready for a motion, Mr. Chairman, I would like to move the process forward.

CHAIRMAN GILMORE: Okay, hang on for a second, Pat, and let me get some more discussion. Louis.

DR. DANIEL: Mr. Chairman, just a question that might be more to Lee; in reviewing the report I noticed in the data needs' recommendation, the research needs there is an age validation. Can you give me some more information on that? I thought we had put that to bed a long time ago, but it's in the priority. There must be something that I'm unaware of as to why that's important.

MR. PARAMORE: You might have me on that one. I know there was some work done in North Carolina. I'm not really sure; I think it was – I don't know. We can find out and look into it. Obviously, somebody felt pretty strongly about it to put as a priority. There might some other states and stuff that wanted to look at some conversions; I don't know.

DR. DANIEL: Yes, I just would check because that's a very important list that a lot of folks use. If the cite the ASMFC plan review that that's an important need, we might start getting requests for funding and that. If it's not necessary, you might want to take that out. If it is, I'd be curious to know why.

MR. WAINE: I just wanted to add the stock assessment subcommittee and TC are looking towards an age-structured model for weakfish and so that is possibly the reason that remains a priority. We can certainly look into that further to make sure that is correct.

DR. DANIEL: Yes, and just a follow up, for those states that are having a hard time – even in North Carolina we're having a hard time because there are so few landings. It's hard when you go down to the fish house and you don't find them, it requires a lot of additional travel and a lot of additional expense. I don't know how to get around that and I'm sure we'll discuss here in a minute, but I can certainly sympathize with those states that are having a hard time finding them because even in North Carolina where we've got some landings we're having a hard time finding them.

MR. A.C. CARPENTER: I was wondering on the recreational catch, given the presentation we had earlier about the MRIP versus the MRFSS, I'm sure that what we were looking at was the MRFSS data; has there been anybody to see what impacts were for weakfish, which direction they went?

CHAIRMAN GILMORE: Good question, A.C.; hang on a second.

MR. PARAMORE: I know that I have looked at it from North Carolina and it was not a great difference. I meant to look at it for some of the other states, but I haven't had a chance to yet. The TC has not formally discussed it or talked about it yet.

MR. WAINE: Just to clarify, it was from MRFSS data that this was compiled as it was done before the turn of year, before 2012.

MR. O'REILLY: It was down coastwide, negative. I don't know the extent of it, but it was indicating in the MRIP that there were less landings than MRFSS. What I wanted to ask about is this a good time to talk about the monitoring in Addendum I and the requirements?

CHAIRMAN GILMORE: Sure, go ahead.

MR. O'REILLY: I guess on the one hand I understand the difficulties of obtaining these samples. I guess since 2006 when the addendum went into effect there have been reasons why certain states have not collected the samples. They sound similar

to the reasons today and with a truncated stock probably more so today.

That's understandable but I still think if there is a talk – and so the main focus is if from 2006 until now this really hasn't been a compliance issue that has been anything other than encouraging states to please try and get more samples because some states have always been doing that regardless, then the real issue is how we're going to miss out as we go in the future.

Louis had just talked about the validation, but I would think there is no verification of the age data. For example, yesterday you heard that for bluefish there will be now a collection of a hundred otoliths, fifty from each season from various states along the coast to augment the fact that one state has been responsible since 2005 for the age-length key.

The difference between bluefish and weakfish is the Center early on did have collections that they could at least say had some validation and some verification to using one set of data. That hasn't been done for weakfish. and you've heard quite a few times about the borrowed age-length key and the problems that causes.

That has been going on since as long as I can remember in that you take ages at length from one state and you have to make the assumption. Sometimes it's a large geographical assumption that the second state's lengths match up to the ages. If this goes forward as an age-based assessment in any way, then it probably would be better for the technical committee to look at some of these problems associated with the long-term borrowed age-length keys and the lack of ages and even some lengths in some geographical areas and perhaps make some recommendations as to whether some alternative ways to look at this population are necessary. Thank you.

CHAIRMAN GILMORE: I think that's good idea. Louis, have you got a follow up to that?

DR. DANIEL: It's a similar issue. I agree with what Rob has said and it always has been a problem is the borrowed age-length keys. I don't know how to fix that completely. One question I would have I guess might be to the Service. I know we've got the SEAMAP and I know the SEAMAP cruises pick up weakfish. I know that South Carolina has been sampling those fish.

Are we getting them out of the New England or the northeastern surveys; and if we are, then that could resolve our problem real quickly, especially when you're looking at these numbers. They're very low. I kind of see those numbers as meaningless, really, the requirement. What is it, we're missing 30 otoliths from three states – that's ten per state. I don't if that is going to give us a whole lot of additional confidence in anything we do.

But if we can those fish from the northeast samples, trawl cruises, and you get the GPS coordinates of where the trawl catch was, you could match them up to the various states and maybe that would help. It might not be precise to the fishery, but at least that would be some information spatially.

MR. STEVE MEYERS: Mr. Chairman, off the top of my head, I'd have to go and check the records to make sure, but if those data do exist most certainly we will share them.

CHAIRMAN GILMORE: Thanks, Steve. I think that's a good suggestion, Rob. We can have the TC maybe start looking at this because I think if you look at the slide it was at least from New York's perspective, and Rhode Island and Delaware can weigh in on it, but initially it was for staffing and resource limitations.

Now we're going out there a lot more than we have been and we're still just not getting the fish. I think you're right, it's like you look at, well, we were supposed to get 20 fish and we should be getting 200 or more or whatever to at least make this more usable. Lee.

MR. PARAMORE: I was just going to follow up on that a little bit. I do believe that some of those fish are utilized for aging out of the NMFS trawl survey. I think Charlie Wenner took them on originally and was aging those fish, and I think South Carolina has continued to do some of that.

One of the issues has been that a lot of those fish are unfortunately quite small and not necessarily representative of the commercial or recreational size distribution. Even if we do get those fish, a lot of times there is still a data gap there, but definitely having those fish is definitely a bonus.

CHAIRMAN GILMORE: Yes, that's a problem, too, we're getting a lot of small fish. Stew.

MR. STEWART MICHELS: I'd just like to say in Delaware's case it's just a matter of finding the fish. It's very difficult. We do have and we collect a number of age samples from our trawl survey which goes into the preparation of an age-length key.

MR. O'REILLY: Lee mentioned the collections from the past that Charlie Wenner did; and also to underline the problems with the age-length keys that have been used in the past and borrowed age-lengths, it was Charlie, when he was aging fish from anyone who would give him weakfish, came to the technical committee and the information was that geographically the differences are profound; that for a 12-inch fish you might an age that range from two to five depending on where and when that was collected. That is a complicating factor and it does indicate that this would be good thing for the technical committee to probe as they get ready for another assessment.

CHAIRMAN GILMORE: Good suggestion. Is that something we can just have the TC look into or do we have to have a motion on that, Lee or Vince? Can we just task them to do this? Okay, so I think that's a great idea. If we can have the TC look into alternatives for this and maybe report back, that would be very helpful. Vince.

EXECUTIVE DIRECTOR O'SHEA: Mr. Chairman, maybe the bigger question is do you want to do an assessment? I mean, why?

CHAIRMAN GILMORE: Opinions on that from the board.

MR. O'REILLY: I guess the answer is to talk to Pat Campfield and Katie Drew to get their ideas. As you probably know, there has been work done by Virginia Tech which moves away a little bit from the traditional VPAs or statistical catch at age, but can incorporate the statistical catch at age. There has been work that has been progressed.

There was a workshop held a year ago January which several folks here or a few folks here attended to go over the methodology and the results, and so I would suspect that the technical committee, which has been introduced to this information but not fully, probably would know the answer to Vince's question or at least maybe give an idea of the possibilities that should there be an assessment in the very near future or is that something to wait.

EXECUTIVE DIRECTOR O'SHEA: Well, I think it's maybe a response from the technical guys, but I think it's a policy question for the management board, because what are you going to do once you get an assessment? You're probably not going to increase the harvest of weakfish.

DR. KATIE DREW: As Rob was saying, we have been working on developing a better model for weakfish, working with Yan Chen of Virginia Tech as well as the stock assessment subcommittee to go beyond what was done in the last assessment. The last assessment I think did not provide a lot of useful results for management; but I think if we have the ability – we think we have the ability – and perhaps the peer review panel disagree with us – to take the data that we have further with a better model, a better, more sophisticated model that can make full use of the available data that we have.

We're currently scheduled for a 2014 benchmark assessment; so if we start working now on some of the age issues and, some of the model development issues we could be prepared for a peer review in 2014. I think Vince is right in the sense that it's not going to give us a miraculous answer that everything is better and we can open up the weakfish fishery again, but it will give us the chance to have a better model in place to help monitor the stock going forward; and perhaps should we start to see changes, it will give us a framework in place before management changes are necessary.

DR. DANIEL: She said it much better than I could have so I don't have anything to add to what she just said.

MR. AUGUSTINE: Now that we're on a move to what we're going to do – thank you, Katie – are you ready for a motion?

CHAIRMAN GILMORE: One more comment from A.C. and then we'll look for a motion.

MR. CARPENTER: I was just going to say that based on the existing schedule, I would suggest that we would stick to that benchmark in 2014 rather than start off interrupting the other schedules in order to accommodate this one.

CHAIRMAN GILMORE: Good point, A.C. Okay, Pat, go ahead.

MR. AUGUSTINE: **Mr. Chairman, I move that the board accept the 2011 Fishery Management**

Plan Review and Compliance Report and then approve de minimis requests for Massachusetts, Connecticut, Georgia and Florida.

CHAIRMAN GILMORE: Do we have a second to the motion; Robert Boyles. Discussion on the motion? Okay, are we ready to vote? All those in favor please raise your hand; those opposed; null votes; abstentions**. Okay, the motion carries fifteen, zero, zero, zero.** The last agenda item we have is Committee on Economics and Social Sciences membership. We have a candidate and Mike is going to talk a little bit about him.

COMMITTEE ON ECONOMICS AND SOCIAL SCIENTISTS MEMBERSHIP

MR. WAINE: The Committee on Economics and Social Sciences has recommended that Mr. Manoj Shivlani be appointed as the social scientist representative to the plan development team and technical committee for weakfish. Just a little background, Mr. Shivlani is the program manager at the Center for Independent Experts, and he is pursuing his PhD on the impacts of non-fishery factors on the persistence of commercial fishing communities in the Florida Keys.

MR. AUGUSTINE: **Move to approve the acceptance of Mr. Shivlani to the Committee on Economics and Social Scientists**.

OTHER BUSINESS

CHAIRMAN GILMORE: Seconded by Aaron Podey. Any objections to the motion? **Seeing none, we will add him to the membership.** That's the business we have before the Weakfish Board other than any other business or new information anybody wants to add. Roy.

MR. MILLER: Mr. Chairman, I would just like to take a moment to acknowledge an elephant in the room that we've heretofore haven't mentioned today; and that is when Tom Fote put us on the path in the fall of 2009 with his motion for the one-fish creel limit and the hundred pound trip limit, I had hoped in the years that have intervened since then we would begin to see some stock recovery.

I see no evidence in the material presented to us today to indicate that stock is beginning to recover. We all know the potential reasons for that and they may be totally unrelated to the fishing mortality. However, I'm worried about the public's perception. I had fishing friends that approached me and said, "Why haven't you closed this fishery? This fishery is in worse shape than striped was back in the 1980's when you instituted a moratorium. Why are you so afraid to institute a total moratorium on harvest?" Even if it doesn't help, it sends a message to the public that we care deeply about the stock and that we're doing all within our power to help this stock reach restoration. I just throw that out there for your consideration. I know Katie told us that there is a benchmark assessment in 2014 and the attempting approach would be to say, well, let's wait for the benchmark assessment in 2014.

I just wonder if there is anyone else on this board that feels that perhaps a more proactive measure like a total moratorium between now and then might send the right message to the fishing public. Thank you, Mr. Chairman, for indulging me in those off-the-top-of-my-head thoughts.

DR. DANIEL: Well, the top-of-the-head response is that I agree in principle to what Roy is saying. The problem that I would have would be the unquantified discards that would occur in many of these multispecies fisheries. I think that's what we would struggle with probably more than the public perception because we would have lots of situations where we would have a lot of discarded fish that we would now not have any kind of characterization of the fishery for. I'd be very concerned about going in that direction. Just to give an opposite opinion there.

MR. FOTE: I am very sensitive to that situation. I look at the fact that we have the Atlantic Coast Conservation Act because of weakfish, because then Congressman Carper who later became governor and senator from Delaware basically put a bill and basically the Weakfish Conservation Act.

And through the work of the commission we convinced him to basically do it for all species, and that was the start of the new era for the Atlantic States Marine Fisheries Commission. The poster child for us getting the Act is still in the toilet is a simple way of putting it. When people talk to me about moratoriums of striped bass, there was never a moratorium on striped bass.

Certain states in certain areas put a moratorium. Massachusetts was still landing 100,000 pounds, we were still fishing, but we were protecting an '82 year class until it spawned and 90 percent – well, until 80 percent of females became – whatever, it's a long time ago. My memory is not as good as it used to be.

That was the purpose and we had a purpose that would recover the fishery. If we put a moratorium, what is the purpose of the moratorium? That's my concern here because, yes, it will look good to people but will it do any difference. I mean, with the small amount of fish that we're catching, and it just goes down every year, I worry about it, I think about it.

I mentioned it to Jack Dunnigan when he was here Monday. I mentioned it to people all during this week that when I look at the Act and I think about it, I'm saying the poster child for the Act is still in the garbage and what are we doing. In a lot of ways we can't do anything, so maybe what we should be stressing to those fishermen that ask the question when are they going to get involved with the environmental issues that are causing the bays and estuaries that not only affect weakfish but winter flounder and many of the other species that are estuarine dependent.

That's part of why we had a Habitat Committee. I helped start that committee with Al Goetz in '94 and '92. I haven't been paying much attention to it lately because I'm not on the committee anymore. But, yes, that was one of the things we looked at and that's maybe where we should be pointing in that direction. I think a lot of this is environmental when it comes to weakfish, and I think it's affecting other species that we look at rebuilding.

MR. MARK GIBSON: The only way you can know if a depleted fish stock can recover is to eliminate all sources of man-induced mortality and see what potential it has. Unfortunately, as lobster has showed us the recommendation was there but the will wasn't there to do that, and I doubt that it would be the will here to do that in this case either. But that's really the bottom line for me, if you want to know if something can rebuild you have to stop killing it and then nature will sort out the bodies and tell you. Thanks.

CHAIRMAN GILMORE: Roy, I don't disagree with you. I guess the same questions back in New York and they're saying, well, why didn't you shut this fishery down? I think we're still – you know, as Louis had pretty much described, I think the thinking around the table still follows that.

I guess it's going to get to the point of when is that not going to hold any longer because if we go into a third and fourth year and we don't have any kind of recovery, it's going to get harder for us to say, yes, why are we letting any take on this, but I don't think we're there yet unless someone wants to disagree. Rob.

MR. O'REILLY: Well, the diagnostics that we have are fishing mortality rates which the technical committee characterized as moderate and recruitment. That's what we're left with. Recruitment seems to have a little bit of a slight downward trend, but all in all recruitment has been holding.

That's what we should look at and maybe those are the types of things that we always look at. We don't have anything on SSB right now to speak of that we can tell. We've got two diagnostics and until we have an assessment where we have more confidence in the fishing mortality rate maybe than we do now, perhaps that's what we look at in the meantime.

MR. WAINE: Mr. Chairman, I just wanted to remind the board that the TC is looking at those metrics along with others and is annually reporting that to the board.

MR. AUGUSTINE: The final I think on it is, as Dr. Gibson said, the board has to have the will to put on the table those gears that are most effective and showing those species of fish we're trying to protect. I don't think we've got it. We don't have it with shorebirds, we don't have it with horseshoe crabs, we don't have it with striped bass that is the monster of the sea. It is what it is.

It's the food chain predator/prey relationship and the human factor is what gear we're allowing to be used. Case in point, when we use purse seines to wipe out the total population of menhaden in Long Island Sound where in a matter of a few days they used to wipe out 15 or 17, I don't know, million pounds and then we had no striped bass and no other fish coming in there, including bluefish and fluke.

But it's pretty basis, if you want to be black and white about it, it's gear. If the gear is killing them, the only alternatives we have are closed off areas, whether it's spawning areas or whatever or it is or eliminating when those gears can be used. Beyond that, it's a matter of reducing the size of the gears and then it becomes an enforcement issue, soak time and the rest. The bigger picture is until we're willing to get our arms around those issues, we're just going to beat our gums and come up with little miniscule fixes to try to correct the serious problems that we're faced

with. Thank you, Mr. Chairman; and a motion to adjourn if you're done.

ADJOURNMENT

CHAIRMAN GILMORE: Any other questions or comments on this? Okay, motion to adjourn; do we have a second? Thanks, we are adjourned.

(Whereupon, the meeting was adjourned at 11:35 o'clock a.m., February 9, 2012.)

Atlantic States Marine Fisheries Commission

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Weakfish Technical Committee Report

Conference call: September 21, 2012
Summary Report

Participants

Technical Committee / Stock Assessment Subcommittee Members

Joe Cimino (VA), Chair
Lee Paramore (NC)
Jim Uphoff (MD)
Mike Greco (DE)
Joseph Munyandorero (FL)
Nicole Travisono (RI)
Pat Geer (GA)
Christina Grahn (NY)
Jen Pyle (NJ)
Erin Levesque (SC)
Ellen Cosby (PRFC)
Jeff Brust (SAS; NJ)

ASMFC Staff

Katie Drew
Mike Waine

Objective: To address the ASMFC Weakfish Management Board tasks to (1) begin developing stock indicators for possible management use as the weakfish stocks begin to recover and (2) review trends in gear- and area-specific weakfish landings, 2007-2011.

Stock Indicators for Weakfish

The weakfish stock status indicators the TC updates annually include,

1. Proportion of trips that max out the harvest limit
2. Relative biomass indices (recreational CPUE, Delaware Bay Trawl CPUE, New Jersey Trawl positive tows)
3. Proportional Stock Density (a size quality index estimated from the Delaware Bay trawl survey and the NJ trawl survey)
4. Relative F (harvest and discards divided by an index of abundance or biomass)
5. Juvenile Abundance Indices (JAI)

Proportion of trips that max out the harvest limit

Information on the number of trips that max out the 100 lb trip limit (or the 10% bycatch allowance for North Carolina) could provide managers with some information on potential changes in discards of legal size weakfish over time. This status indicator is limited to states that have a trip level reporting system. It was also noted that changes in the proportion of trips that max out the harvest limit may be indicative of either stock changes or changes in fishing behavior.

2011 Results

From states with trip ticket reporting systems, a total of 6,899 trips landed weakfish in 2011. Approximately 4.4% of those trips maxed out or exceeded the trip limit implemented through Addendum IV to Amendment 4. State trip level data are shown in the table below.

Table 1: Total trips that harvested weakfish and the proportion of trips that exceeded the weakfish trip limit by state.

State	total trips with weakfish	# trips over trip limit	% overage trips	total lbs weakfish	overage lbs (lbs over trip limit)	% pounds over trip limit
NC	3,986	252	6.3	65,896	6,828	10.4
RI	602			5,766		
NJ	309	30	9.7	13,324	4,941	37.1
DE	195	0	0.0	1,100	0	0.0
MD	108	4	3.7	2,751	744	27.0
PRFC	13	0	0	45	0	0
VA	1,581	8	0.5	26,104	2,631	10.1
FL	105	0	0.0	608	0	0.0

[redacted] confidential data

Relative Biomass Indices

Three age-aggregated adult indices were recommended to provide information on trends in the stock size of weakfish. The indices include a fishery-dependent recreational CPUE index and two age-aggregated adult indices (Delaware Bay and New Jersey Trawl Surveys). All three indices were included in the 2009 peer reviewed assessment and are highly correlated. The recreational CPUE (age 1+) is based on total catch (A+B1+B2) divided by effort (trips by private/rental boats) from MRIP. It represents the only coast wide index used in the stock assessment. The Delaware Bay trawl survey provides an age aggregated index of abundance over time based on CPUE while the New Jersey trawl survey index is based on the proportion of positive tows for weakfish occurring during August.

2011 Results

In recent years, the Delaware Bay survey and MRIP index have declined to very low values. In 2011, the New Jersey Trawl survey showed an increase from previous years (see table below). Concern was expressed by the TC since indices are at such low levels, a signal from these indices can be lost as a result of any noise; however, all indicate very low stock size.

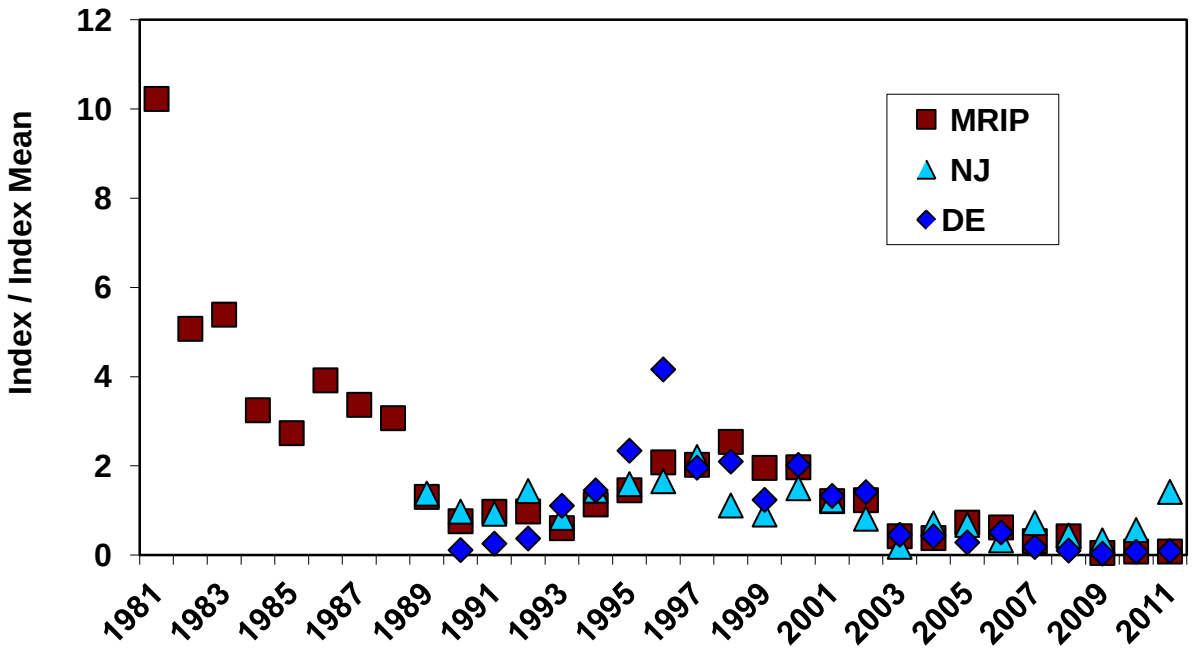


Figure 1: Relative biomass indices.

Proportional Stock Density

Proportional stock density (PSD) is a method that can be used to quantify length frequency data and provide managers with information on the proportion of fish in a population that are of a certain size. The TC recommended providing PSD information for both the Delaware trawl and New Jersey trawl surveys. While the relative biomass indices provide information on trends in stock size, additional PSD analysis could compliment this information by providing a standardized index on the size structure of the population. The TC notes several positive aspects to this index. It is easy to calculate, it reflects population dynamics (even when there is uncertainty in what the signal is from JAIs), it should reflect fishery performance and it is significantly correlated ($P < 0.05$,) with commercial landings ($r = 0.94$) and recreational harvest ($r = 0.87$).

2011 Results

PSD is at an all time low, meaning the proportion of larger fish is very low. This follows trends of a skewed abundance towards juveniles while recruitment to adult sizes appears to remain an issue.

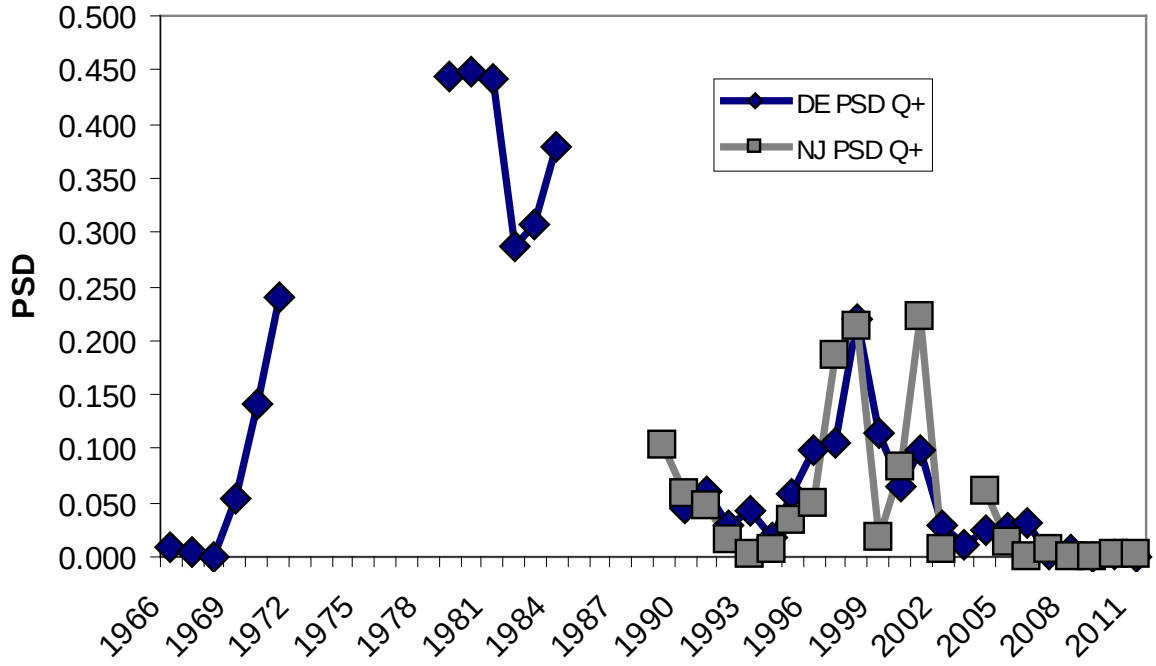


Figure 2: Proportional stock density indices for the DE and NJ Trawl Surveys.

Relative F

Relative F is calculated as the ratio between annual harvest and an annual index of abundance (recreational CPUE). For weakfish, relative F was used in the 2009 peer reviewed assessment because it was free of the assumption of a constant M as was assumed in the previously used ADAPT VPA. Relative F is easily updated once annual landings are finalized. Concern was expressed that this index may not be as informative near term because the CPUE from the index of abundance has become too low. This makes interpretation of relative F more difficult because there is potential that noise in the index could mask the overall signal. An additional issue with using this relative F as an indicator is that calculating it requires an estimate of total removals from the population. This is a concern because annual estimates of discards are not available for the commercial fishery. Past methods use ratio-based estimates calculated across all years. However, with recent changes in the regulations (i.e. 100 lb trip limit), the most recent discard ratios may not reflect what is happening under current management. The TC recommended updating the relative F index possibly through 2010 pending the availability of landings data and noting the above concerns.

2011 Results

Regarding the discard estimates, the ratio-based estimates of the past can be scaled up and some 2011 estimates did just that. However, overall a recent decline in relative F is still indicated. This may reflect actions taken in Addendum 4, but it should be noted the estimate of relative F for 2010 was also affected by averaging the high 2011 NJ index, with lower 2011 MRIP and DE indices.

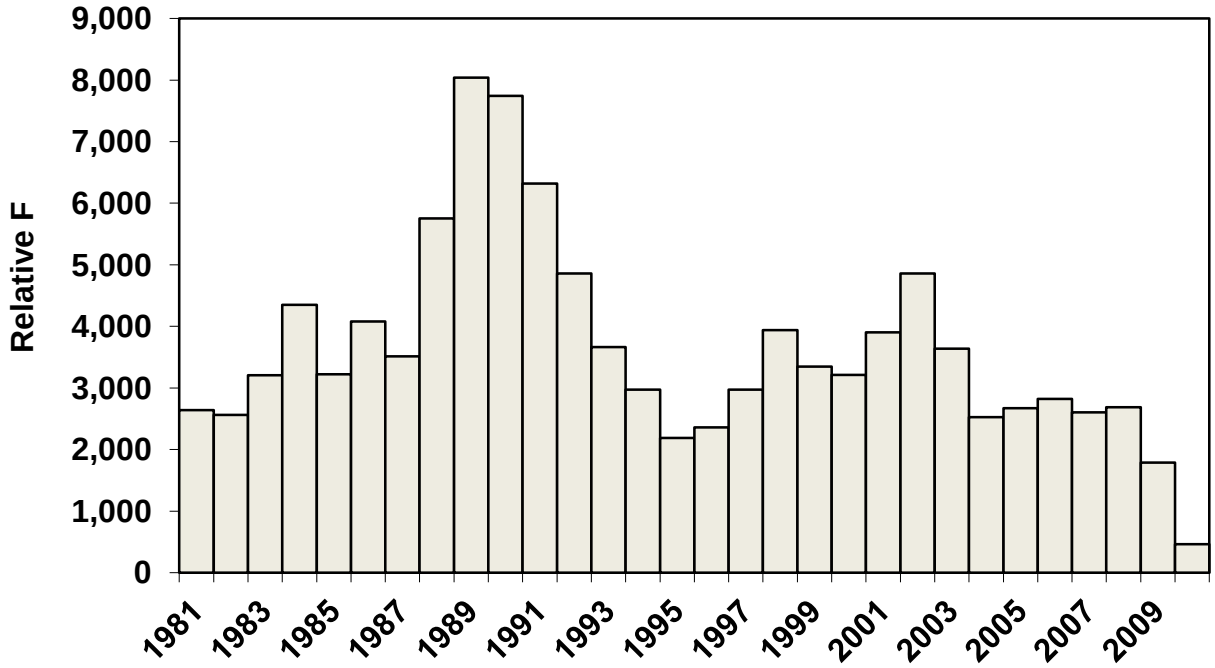


Figure 3: Relative F for weakfish.

Juvenile Indices (age 0)

The TC recommended that age 0 indices of abundance be updated and presented to the Board as an early indicator of stock recruitment.

2011 Results

Standardized indices continue to show some fluctuation, recruitment is still occurring at a level that does not reflect the complete downward trend in stock status shown everywhere else. However since a spike in the unweighted grand mean in 2007, the values have remained fairly low for a four year period, when compared to the time series.

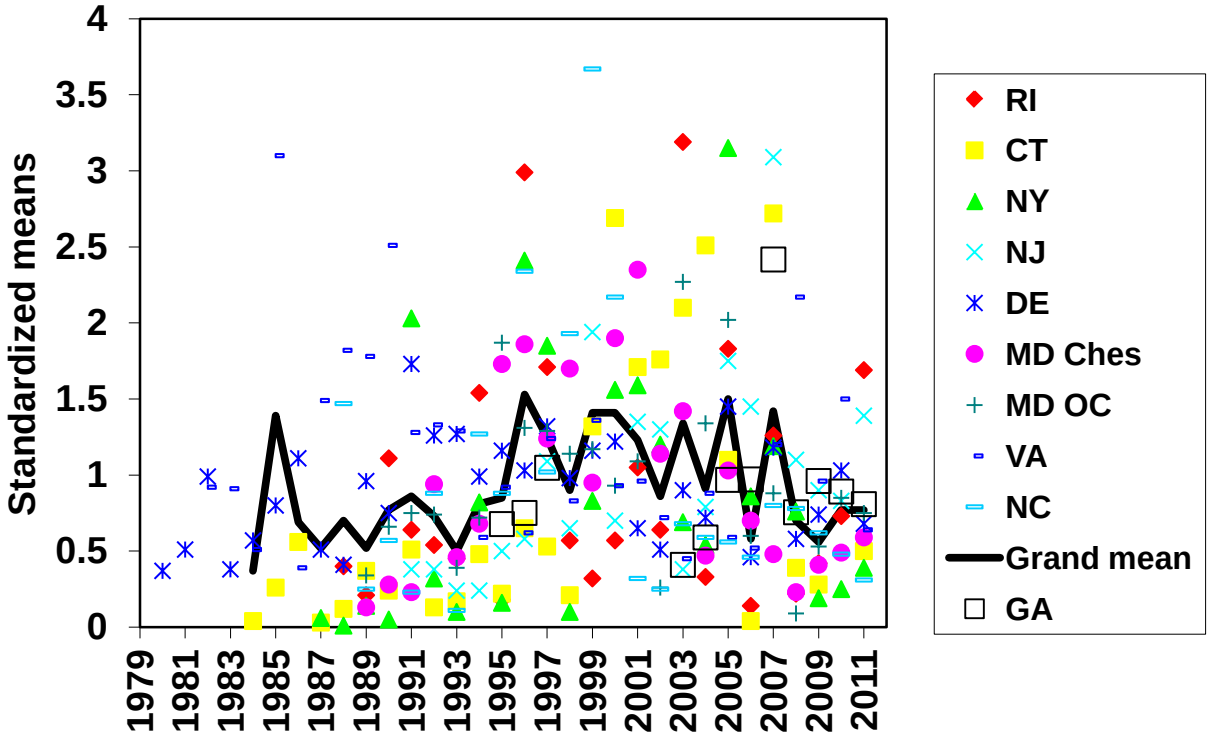


Figure 4: Juvenile abundance indices by state and grand unweighted mean for weakfish.

Potential for Triggers based on Stock Indicators

The TC discussed whether there was any basis for setting triggers for management changes. No definitive recommendations were made. It was put forward that the biomass indices provided a reasonable option. A potential trigger would be to consider management changes once current index levels are near those realized in the period of 1997 to 1999, a period when the stock size was considered to be above 20% SSB.

Review of Trends in gear- and area-specific weakfish landings, 2007-2011

Percent of Landings by State for Recreational Fishery
There has been an ongoing shift in the area where a majority of the recreational harvest occurs from New Jersey to North Carolina over the most recent years. However, Addendum IV to Amendment 4 (2010) implemented a 1 fish bag limit in the recreational fishery.

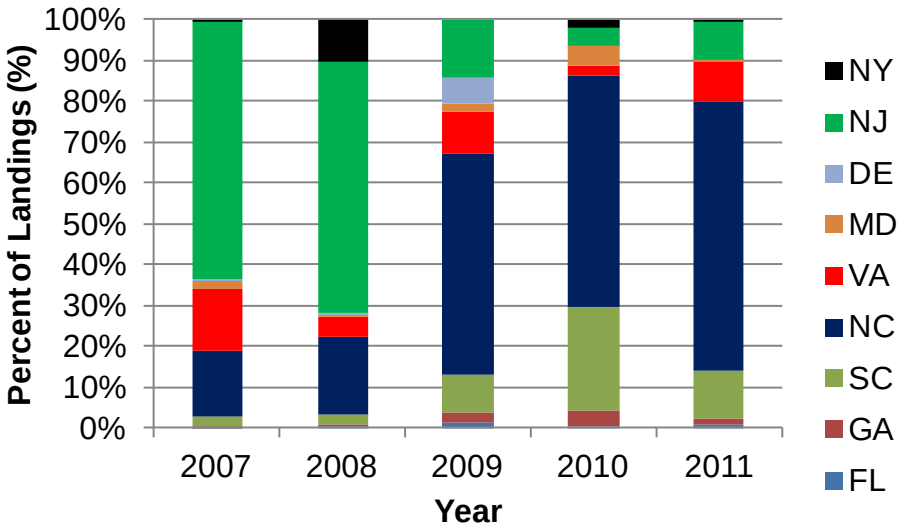


Figure 5: Percent of recreational landings by state.

Percent of Landings by State for Commercial Fishery

There has also been an ongoing shift in the area where a majority of the commercial harvest occurs from New Jersey to North Carolina over the most recent years. However, Addendum IV to Amendment 4 (2010) implemented a 100 lb trip limit in the commercial fishery.

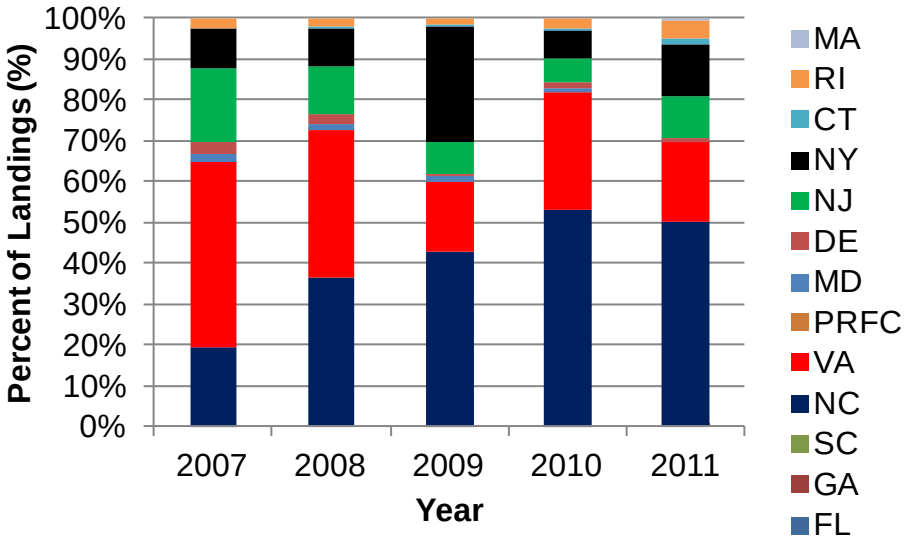


Figure 6: Percent of commercial landings by state.

2011 Compliance Report - Weakfish
Due Date: September 1
State: Massachusetts

1. Introduction

   The coastal waters of Massachusetts represent the northern limit of weakfish and low numbers are landed by commercial and recreational fishermen in this state. In 2011, Massachusetts maintained a minimum size of 16 inches, a recreational creel limit of one fish, and a commercial trip limit of 100 lbs per 24-hour day or trip, whichever is longer.

2. Request for *de minimis*, where applicable

   Massachusetts would like to continue with *de minimis* status, which was requested and approved by the Board in May 2007. To support this request, please note that weakfish landings in Massachusetts were 0 lbs, 0 lbs, 350 lbs, 58 lbs, and 615 lbs from 2007-2011, respectively.

3. Previous calendar year's fishery and management program

   a. Activity and results of fishery dependent monitoring (provide general results and references to technical documentation).

      NA

   b. Activity and results of fishery independent monitoring (provide general results and references to technical documentation).

      NA

   c. Copy of regulations that were in effect, including a reference to the specific compliance criteria as mandated in the FMP.

      Massachusetts has 16-inch commercial and recreational minimum size limits, a one-fish recreational creel limit, and a commercial trip limit of 100 lbs per 24-hour day or trip, whichever is longer. The relevant section of the Code of Massachusetts Regulations is as follows:

      322 CMR 8.00: Coastal Fisheries Conservation and Management
      8.06 Minimum Size and Possession Limits
      (4) Weakfish.
      (a) It is unlawful for any person to possess weakfish less than 16 inches in total length.
      (b) It is unlawful for recreational fishermen to possess more than one weakfish per day.

(c) It is unlawful for commercial fishermen to possess on board or land more than 100 pounds of weakfish per 24-hour day or trip, whichever period is longer.

d. Harvest broken down by commercial (by gear type where applicable) and recreational, and non-harvest losses (when available).

According to NMFS, there were 615 lbs (613 lbs by otter trawl; 2 lbs uncoded) of commercially landed weakfish in Massachusetts during 2011.

No recreational harvest of weakfish was recorded by the MRIP in 2011. The MRIP also estimated that no weakfish were released alive in 2011.

e. Review of progress in implementing habitat recommendations.

NA

4. Planned management programs for the current calendar year

a. Summarize regulations that will be in effect (copy of current regulations if different from 3c).

Same as noted above.

b. Summarize monitoring programs that will be performed.

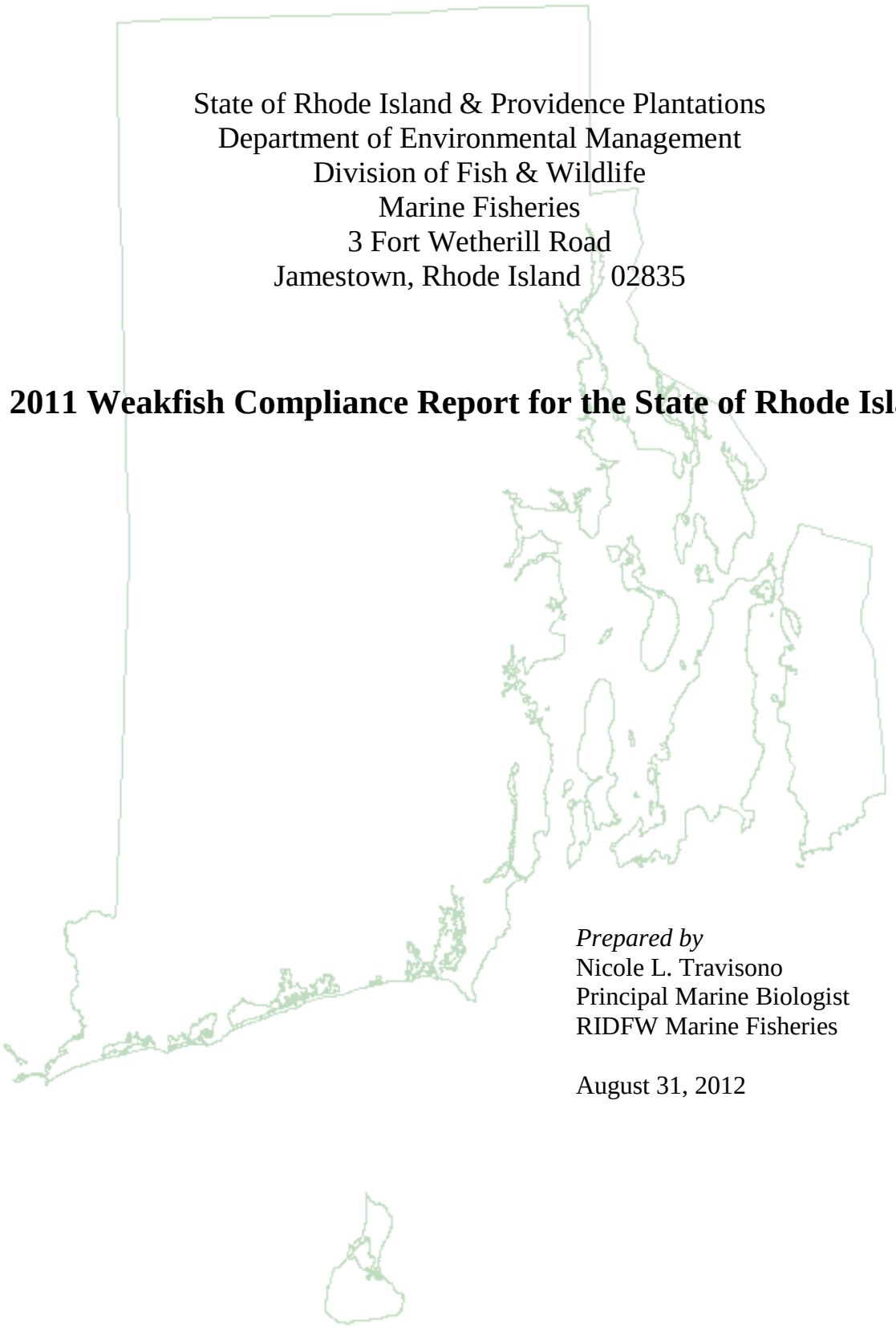
NA

c. Highlight any changes from the previous year.

NA

State of Rhode Island & Providence Plantations
Department of Environmental Management
Division of Fish & Wildlife
Marine Fisheries
3 Fort Wetherill Road
Jamestown, Rhode Island 02835

2011 Weakfish Compliance Report for the State of Rhode Island



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August 31, 2012

Rhode Island's 2011 Annual Compliance Report for Weakfish

I. Introduction

Commercial landings for weakfish increased from 5 thousand pounds in 2010 to 6 thousand pounds in 2011. Recreational harvest of weakfish remained the same at 0 pounds in 2010 and 0 pounds in 2011. Fishery-independent monitoring suggested an increase in the relative biomass and abundance of weakfish in Rhode Island waters. Weakfish are rarely observed in the spring component of the RIDFW seasonal trawl survey, but are not uncommon in the fall. An average of 1.2 kg/tow of weakfish was observed in 2011 during the fall component of the RIDFW seasonal trawl survey, up from 0.31 kg/tow observed the previous year. Similarly, the weakfish abundance index derived from the fall data increased significantly from 7.95 fish/tow in 2010 to 70.63 fish/tow in 2011.

Rhode Island provides regulations for both the commercial and recreational weakfish fisheries. There was a minimum size limit of 16 inches for weakfish taken by participants in both the commercial and recreational sector. Effective April 28, 2010, there was a possession limit of 1 weakfish per person per day for recreational anglers. The commercial sector was limited to a daily limit of 100 pounds per vessel per calendar day June 1 – June 30 and Aug 7 – Nov 8. At all other times there was a 100 pound bycatch limit with at least an equal poundage of other species as weakfish on board the vessel.

II. Request for *de minimis*, where applicable

The state of Rhode Island does not wish to apply for *de minimus* status.

III. Previous Calendar Year's Fishery and Management Program

A. Activity and results of fishery dependent monitoring.

In 2011, the RIDFW was able to collect 10 weakfish to obtain otoliths and lengths. According to Addendum I, the minimum sample size should have been 7 otoliths and 15 lengths. Although we did not meet the required number of lengths, we did meet the required number of otoliths.

Estimates of recreational fishery statistics for Rhode Island are obtained from the MRFSS/MRIP online data query (NMFS, Fisheries Statistics and Economics Division, Silver Spring, MD, pers. comm.).

Trends in commercial and recreational harvest patterns for weakfish landed in Rhode Island are depicted in Figure 1.

B. Activity and results of fishery independent monitoring (provide general results and references to technical documentation).

The RIDFW Marine Fisheries Section operates a seasonal trawl survey to monitor finfish resources (Olszewski 2011). Weakfish are rarely observed in the spring component of this survey, but it is not uncommon to encounter this species in Rhode Island waters in the fall. Weakfish biomass and abundance indices updated for 2011 were calculated as mean number per tow and mean weight per tow, respectively. Indices were only calculated for the fall due to the infrequent occurrence of weakfish in the spring component of this survey. Estimated relative biomass of weakfish in RI for 2011 was 1.2 kg/tow, an increase from the 2010 estimate (= 0.31 kg/tow). Relative abundance also demonstrated a dramatic increase from the previous year with an estimate of 70.63 fish/tow for 2011 compared to 7.95 fish/tow observed in 2010.

C. Copy of regulations that were in effect, including a reference to the specific compliance criteria as mandated in the FMP.

1. Commercial

A commercial fishing license is required to take weakfish for commercial purposes from Rhode Island waters. Effective April 28, 2010 (as outlined in Addendum IV), several revisions were made to the existing management measures. Under the revised regulations, there was a 16-inch minimum size limit and a 100 pound/vessel/calendar day possession limit during the month of June and from August 7 through November 8 for the commercial fishery. A daily 100-pound bycatch limit was imposed during all other times with at least an equal poundage of other species as weakfish on board the vessel.

2. Recreational

The state of Rhode Island did require a license for marine recreational fishing in 2011. Effective January 1, 2010, all recreational anglers were required to possess one of the following licenses: a RI Recreational Saltwater Fishing License, a National Saltwater Angler Registration, or a recreational saltwater fishing license from a reciprocal state. Effective April 28, 2010 (as outlined in Addendum IV), several revisions were made to the existing management measures for weakfish. Under the revised regulations, recreational fishermen were subject to a 16-inch minimum size limit and a daily possession limit of 1 weakfish per person. There were no closed seasons during the year.

D. Harvest broken down by commercial (by gear type where applicable) and recreational, and non-harvest losses (when available).

1. Commercial

The commercial fishery sector landed 5,766 lbs of weakfish in Rhode Island in 2011. All trips where weakfish was landed commercially in 2011, were in compliance with

the regulations in place at that time. Therefore, the State of Rhode Island had 100% compliance with the new regulations outlined in Addendum IV.

2. Recreational

Recreational harvest (Type A + B1) is considered as the sum of landings (Type A) and dead discards (Type B1), following MRFSS/MRIP definitions. Recreational harvest of weakfish in Rhode Island for 2011 was 0 lbs. Estimates of the amount of weakfish that were released alive (Type B2) are available in terms of numbers only. In 2011, there were no B2 landings recorded for RI.

E. Review of progress in implementing habitat recommendations.
NA

IV. Planned Management Programs for the Current Calendar Year

A. Summarize regulations that will be in effect.

1. Commercial

The regulations in place for the commercial weakfish fishery effective April 28, 2010, as outlined in Addendum IV, remain unchanged for 2012. The regulations are as follows:

- 16" minimum size
- June 1 – June 30 and Aug 7 – Nov 8: 100 pound possession limit
- Jan 1 – May 31, July 1 – Aug 6, Nov 9 – Dec 31: 100 pound bycatch limit with at least an equal poundage of other species as weakfish on board the vessel
- The commercial hook and line fishery is not permitted a bycatch allowance
- Directed trawl: codend mesh size ≥ 4.5" diamond or 4.0" square (100 pound bycatch limit with at least an equal poundage of other species as weakfish on board the vessel for trawls not meeting the mesh requirement)

During the 2002 legislative session the Rhode Island General Assembly adopted the Commercial Fisheries Management Act, which implemented a new commercial fishing license system and ended the moratorium on the issuance of new commercial fishing licenses that had been in place since 1995 (RIDFW 2002). The regulations identify two endorsement categories for finfish, restricted and non-restricted. The RI Department of Environmental Management (DEM) has limited access to species listed in the restricted category to the current number of participants and currently issues new licenses to harvest species in the non-restricted category, which included weakfish in 2006. The current list of species placed in the restricted and non-restricted endorsement categories is updated annually, based on updated stock status information and fishery performance in the previous year.

2. Recreational

The regulations in place for the recreational weakfish fishery effective April 28, 2010, as outlined in Addendum IV, remain unchanged for 2012. The regulations are as follows:

- 16" minimum size
- Open all year
- 1 fish bag limit

Additionally, beginning January 1, 2010, the state of Rhode Island does require a license for marine recreational fishing. Details regarding the new RI recreational saltwater fishing license can be found at www.saltwater.ri.gov.

B. Summarize monitoring programs that will be performed.

1. Commercial

For 2012, the RIDFW Marine Fisheries Section is required to collect 8 otoliths and 16 lengths from weakfish. So far this year, a total of 13 weakfish have been sampled. The RIDFW will continue efforts to collect additional samples throughout the rest of 2012. All otoliths collected in 2012 will be used for aging purposes and the data included in the 2012 Weakfish Compliance Report.

2. Recreational

Rhode Island recreational fishery statistics will continue to be collected and managed through the MRFSS/MRIP program. Information characterizing the catch of weakfish from Rhode Island waters by recreational anglers will be obtained via the MRFSS/MRIP online data query.

C. Highlight any changes from the previous year.

Effective April 28, 2010, the commercial and recreational regulations for Weakfish in RI were changed according to Addendum IV. See section IV-A above.

V. Plan Specific Requirements

No plan specific requirements for weakfish

VI. Law Enforcement Reporting Requirements

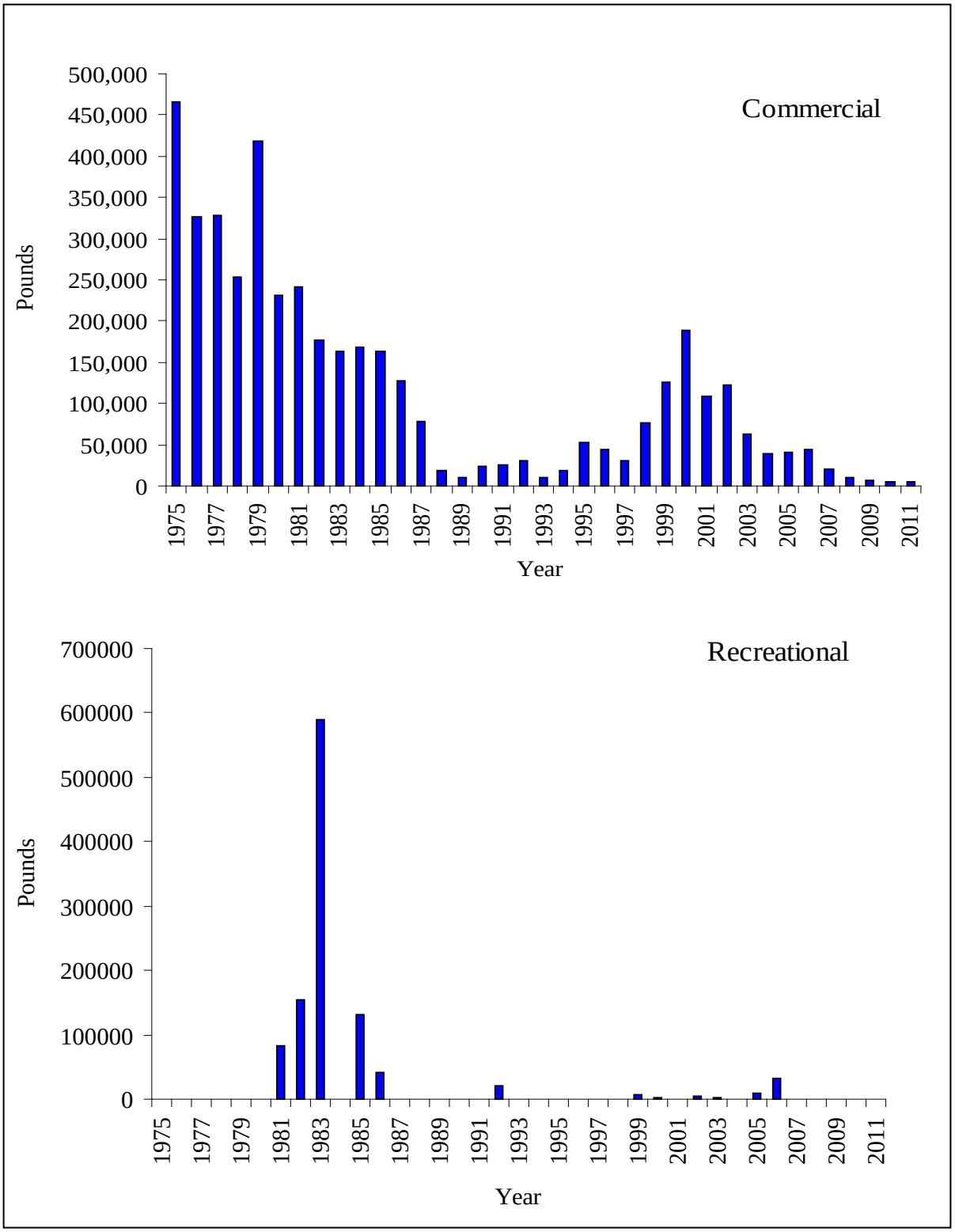
No law enforcement reporting requirements for weakfish

VII. References

Olszewski, S. 2011. Assessment of Recreationally Important Finfish Stocks in Rhode Island Waters. Rhode Island Division of Fish and Wildlife Coastal Fishery Resource Assessment Trawl Survey 2010.

RIDFW. 2002. Management Plan for the Finfish Fishery Sector. RI Dept. Env. Mgmt., Div. Fish and Wildlife, Marine Fisheries (3 December 2002) 25 pp.

Figure 1. Annual harvest of weakfish from Rhode Island commercial and recreational fisheries, 1975 - 2011.



State of Connecticut
Compliance Report for Weakfish
September 2012

I. Introduction

The Atlantic States Marine Fisheries Commission requires States to submit an annual report to include: 1) current weakfish commercial and recreational regulations, 2) commercial and recreational landings by gear and area and, 3) fishery independent indices of abundance. This report fulfills that compliance requirement.

a. Summary of the year highlighting any significant changes in monitoring, regulations or harvest.

There were no significant changes in monitoring and in commercial regulations in 2011. The minimum size is 16 inches and the daily creel limit in the recreational fishery is 1 fish/day. A new possession limit of 100 pounds for the commercial fishery was enacted in July 2012.

II. Request for de minimus, where applicable.

The weakfish commercial fishery in Connecticut has been at *de minimus* status since 2003.

III. Previous calendar year's fishery and management program.

a. Activity and results of fishery dependent monitoring.

Mandatory commercial fishery reporting requirements include monthly logbooks of daily fishing activity and sales from fishermen and monthly reports of individual purchase transactions from dealers. Landings are reported to NMFS and data through 2011 are currently available online at http://www.st.nmfs.gov/st1/commercial/. Commercial landings of weakfish in 2011 totaled 2,105 pounds (preliminary) as compared to 960 pounds in 2010 and 492 pounds in 2009.

Recreational harvest was monitored by the Marine Recreational Fisheries Statistics Survey (MRFSS) but is now monitored through the Marine Recreational Information Program (MRIP), see Section IIId. CT DEEP manages the field component of the survey within the state, while the telephone survey is conducted by an MRIP contractor. Survey results through 2011 are available at: http://www.st.nmfs.gov/st1/recreational/index.html. MRFSS numbers are reported on the website for 1981 – 2003 and MRIP numbers are reported for 2004 – present. Total estimated recreational harvest for 2011 was zero, there was also zero catch.

b. Activity and results of fishery independent monitoring.

Relative abundance (mean catch/tow) of weakfish in Connecticut waters has been monitored annually since 1984 based on the Sound-wide CT DEEP fall (September-October) trawl surveys. Trawl Survey results are summarized in detail in annual reports to the US Fish and Wildlife service and are available online at CT DEEP's website: http://www.ct.gov/dep/cwp/view.asp?a=2696&q=322718&depNav_GID=1630&depNav=|.

Abundance indices (mean number/tow) of weakfish young-of-the-year (age 0) from Long Island Sound (LIS) varied without trend from 1984 to 1998 (Table 1), but age 0 indices from 1999 to 2007 rose abruptly and remained relatively high, except for 2006 . The 2006 juvenile index (1.05 fish/tow) was the third lowest juvenile index in the time series (1984-2011), whereas the 2007 juvenile index (63.93 fish/tow) was the highest in the time series. The 2008 (9.03 fish/tow) and 2009 juvenile indices (6.48 fish/tow) are well below the long-term (1984-2009) average juvenile index (19.85 fish/tow). The 2011 age 0 index of 11.64 fish/tow was closer to the time series average and typical of the values seen in the late 1990's. Adult weakfish (ages 1+) relative abundance was low and relatively stable from 1984 to 1994, then relative abundance rose about threefold from 1995 to 2001 (Table 1). Recent age 1+ indices (2002 to 2009), fell back to the pre-1995 abundance levels, however, the 2011 index of ages 1+ (0.68 fish/tow) has rebounded to the third highest in the time-series (Table 1).

c. Copy of regulations that were in effect.

Regulations required under the Weakfish FMP are addressed in Connecticut DEEP Marine Fishing Regulations, Sections 26-142a-8a(b) (commercial minimum size), 26-159a-4(a) (sport minimum size), 26-159a-7 (creel limits), 26-159a-new section (commercial possession limit). Current regulations are summarized under IV.a. See Appendix 1 for all current weakfish regulations

d. Aggregate commercial harvest and recreational, and non-harvest losses (when available).

Otter trawls accounted for the majority of the commercial landings in 2011 (approximately 64%). Approximately 34% of the landings were reported from unidentified gear type while the remaining 2% were reported under gill nets and pots. The breakdown of landings by gear type is confidential for the gill net and pot categories. Non-harvest losses were not estimated from commercial and recreational fisheries.

IV. Planned management programs for the current calendar year.

a. Summarize regulations that will be in effect (provide copy if different from IIIc).

The weakfish commercial fishery regulations in Connecticut during 2011 were the same as that for 2010. The 2012 commercial fishery is regulated by a 16" minimum size limit with no seasonal restrictions and a 100 pound possession limit. The Connecticut recreational fishery will also be regulated by a 16" minimum size limit and a 1 fish /day creel limit. See Appendix 1 for all current weakfish regulations.

b. Summarize monitoring programs that will be performed.

Both fishery-dependent and fishery-independent monitoring programs as described in III a and III b will be continued in 2012.

c. Highlight any changes from the previous year.

None in 2011. See Section IV a and Appendix 1 for 2012 regulations.

V. Plan specific requirements.

None.

Table 1. Relative abundance (geometric mean number/tow) of young of the year (age 0) and adult (ages 1+) weakfish based on the Connecticut fall trawl surveys in Long Island Sound from 1984 to 2011. Note that about 95% of the ages 1+ fish are age 1.

YEAR	AGE 0 INDICES	AGE 1+ INDICES
1984	1.00	0.53
1985	6.19	0.24
1986	13.16	0.24
1987	0.63	0.11
1988	3.49	0.06
1989	8.69	0.02
1990	5.56	0.08
1991	11.95	0.31
1992	3.05	0.18
1993	4.08	0.12
1994	11.19	0.06
1995	5.22	0.70
1996	15.23	0.56
1997	12.38	0.89
1998	5.02	0.28
1999	30.93	0.39
2000	63.31	0.30
2001	40.09	0.52
2002	41.35	0.16
2003	49.41	0.07
2004	58.98	0.21
2005	25.86	0.12
2006	1.05	0.29
2007	63.93	0.06
2008	9.03	0.08
2009	6.48	0.30
2010**	-	-
2011	11.64	0.68

** There was no multi-species trawl survey conducted during the fall of 2010 due to engine breakdown of the Connecticut DEEP research vessel.

Appendix 1. Current Connecticut fishing regulations for weakfish.

26-142a-8a. Species restrictions (COMMERCIAL)

(b) Minimum Legal Length. No person shall possess any fish taken by any commercial fishing gear or for commercial purposes less than the lengths specified below measured from the tip of the snout to the end of the tail and, notwithstanding section 26-159a-4 of the Regulations of Connecticut State Agencies, no person shall buy, sell, offer for sale or possess in a place where fish are offered for sale, any of said species less than the minimum legal length stated herein.

(9) Weakfish (*Cynoscion regalis*) - 16 inches

26-159a Weakfish (*Cynoscion regalis*) – (NEW By Commissioner Declaration Authority**)**

(a) Commercial Fishery Possession Limits

(1) No person shall possess or land weakfish taken by commercial fishing gear or for commercial purposes in excess of 100 pounds. This possession limit shall apply to the aggregate of all persons on board the vessel per trip or per day whichever is the longer period of time. Transfer of weakfish between vessels at sea is prohibited.

26-159a-4. Minimum lengths (RECREATIONAL)

(a) No person, while on the waters of this state or on any parcel of land, structure, or portion of a roadway abutting tidal waters of this state shall possess or land any fish of the following species taken by sport fishing methods, regardless of where taken, if it is less than the identified length as measured from the tip of the snout to the end of the tail:

(9) Weakfish (*Cynoscion regalis*) - 16 inches

(b) Any of said species taken contrary to subsection (a) of this section shall, without avoidable injury, be returned immediately to the water from which taken. Culling or high-grading, as defined in section 26-142a-16 of the Regulations of Connecticut State Agencies, is prohibited, except in fishing tournaments granted an exemption by the Commissioner of Environmental Protection pursuant to section 26-159a-26 of the Regulations of Connecticut State Agencies. This subsection shall not be construed to prevent tagging and release of fish, other than striped bass, under a tagging program consistent with the Atlantic States Marine Fisheries Commission's standards for scientific tagging programs.

26-159a-7. Creel limits (Adjusted by Commissioner Declaration Authority**)**

(a) Unless otherwise specified in section 26-112-45 of the Regulations of Connecticut State Agencies, the daily creel limit for species taken by sport fishing methods, including spears of any kind, shall be as set forth in this subsection. No person, other than a person authorized to take finfish under a license or registration issued pursuant to section 26-142a of the Connecticut General Statutes, while on the waters of this state or on any parcel of land, structure, or portion of a roadway abutting tidal waters of this state shall possess or land any of the following species, regardless of where taken, in excess of the identified number.

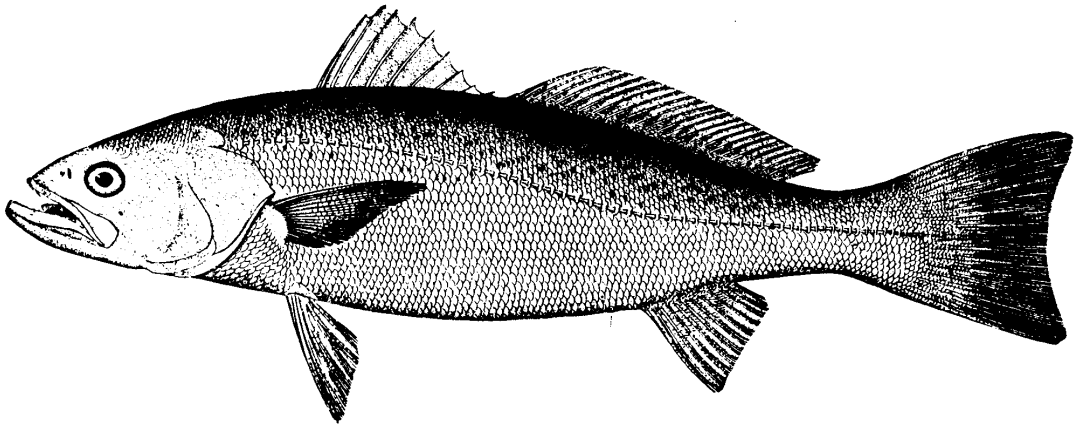
(12) Weakfish (Cynoscion regalis): [~~6~~] **1** fish;

(b) This section shall not be construed to restrict the number of legally acquired fish that may be kept in storage in the home or other storage facilities, or in a commercial storage facility where seafood is handled, stored, processed, or marketed.

(c) Any of said species taken contrary to subsection (a) of this section shall, without avoidable injury, be returned immediately to the water from which taken.

(d) No person fishing under the provisions of this section or section 26-159a-2 shall also, during the same trip for which the creel limit applies, possess any fish taken under commercial fishery trip limits specified in the Regulations of Connecticut State Agencies.

New York's Annual Report to the ASMFC On Weakfish for 2011



September 2011

New York State
Department of Environmental Conservation
Bureau of Marine Resources
205 North Belle Mead Road, Suite 1
East Setauket, New York, 11733

New York's Annual Report to the ASMFC on Weakfish for 2011

I. Introduction

Amendment four to the Atlantic States Marine Fisheries Commission's Fishery Management Plan for Weakfish requires each state to file an annual report summarizing its weakfish fisheries and management programs.

II. Request for *de minimis* – None

III. 2011 Weakfish Fishery and Management Program

a) Fishery Dependent Monitoring

NMFS Marine Recreational Fishery Information Program (MRIP) landings data for 2011 indicates that 127 weakfish were landed by the recreational fishery in New York (Table 1, Figure 1). Recreational fishers released a total of 55,172 weakfish in 2011. Additionally MRIP recorded the length of one weakfish in 2011 at 17 inches for the recreational fishery.

New York's commercial landings of weakfish for 2011 as reported by NMFS indicate that 17,143 pounds of weakfish were landed in New York. This is a decrease from the prior year (Table 1, Figure 1). This is 98 percent below the long term average of 815,192 pounds harvested commercially in the years 1970-1995.

New York collected 63 weakfish length samples of which 6 were also sampled for age from NY's commercial fishery. The lengths ranged from 394 - 631 mm, with an average length of 539 mm.

b) Fishery Independent Monitoring

Since 1985, New York State has conducted an ongoing trawl survey program to monitor the abundance and recruitment of young of the year finfish in our local waters, although for the purpose of this report only 1987 and beyond is reported on. Young of the year (yoy) weakfish are taken by survey gear from July through October. The 2011 yoy index of abundance was 34.5 (Figure 2). While this is an almost twofold increase from the previous year, it is the 11th lowest documented year class in the twenty six years that the survey has been conducted. It is slightly more than half the long term average of 61.8. It should be noted that the index of abundance is calculated using only the months of July and August.

c) New York's 2011 Regulations for Weakfish

New York's regulations included a 16-inch total length minimum size limit for both the recreational and commercial fishery as well as minimum

fillet (10") and dressed (12") length requirements for both recreational and commercial fisheries. Fish below this length may not be taken or possessed, nor bought, sold, or offered for sale in New York. For recreational fishermen there was also a one fish daily possession limit. There is a one hundred pound trip limit in effect all year for the commercial fishery. There was no closed season for recreational fishermen, while for all commercial gears there was a split closed season that extended from June 25th through August 27th and November 16th through March 31. During the commercial closure periods, there was a 100 pound bycatch allowance for net fisheries only. For directed weakfish trawl fisheries (defined as any trawl vessel with 150 or more pounds of weakfish on board), there is a minimum cod end mesh size of at least four and one-half inches diamond, or four inches square mesh, inside measure. For directed gill or trammel net fisheries (defined as any gill net vessel with 150 or more pounds of weakfish on board), there is a three and one-half inch minimum stretched mesh requirement throughout the net. In addition, there is a prohibition on the sale of weakfish taken aboard party or charter vessels while carrying passengers for hire.

The following are excerpts from 6NYCRR for 2011, which includes all of New York's marine finfish regulations specific to weakfish fisheries:

6NYCRR Part 40 Marine Finfish Regulations

Part 40.1 (d)(1) It is unlawful to take or possess bluefish, scup, black sea bass, striped bass, summer flounder, tautog, weakfish, or winter flounder for commercial purposes on any charter vessel, or party boat or any other vessel while carrying passengers for hire. No person fishing on any charter vessel or party boat or any vessel, while such vessel or boat is carrying passengers for hire, including persons who hold a license pursuant to Section 13-0335 of the ECL, may take or possess more than the recreational possession limit for bluefish, scup, black sea bass, striped bass, summer flounder, tautog, weakfish, or winter flounder nor take or possess any species of fish during any recreational closed season or in excess of any recreational possession limit or smaller than any recreational size limit (See Table A - Recreational Fishing).

f) Table A - Recreational Fishing.

Species	*Open Season*	*Minimum Length*	*Possession Limit*
Weakfish	All year	16" TL 10" Fillet length+ 12" Dressed length**	1

(I) Table B - Commercial Fishing.

Species	*Open Season*	*Minimum Length*	*Trip Limit*
Weakfish	Hook and Line April 1 - June 24 and August 28 - Nov.15 All other gears April 1 - June 24 and Aug 28 - Nov. 15 June 25 - Aug 27 and Nov 16 - Mar 31	16" TL 10"fillet length** 12" dressed length##	100 100 100 pounds, per vessel, in the round***, and provided that at least an equal poundage of other foodfish species caught during the same trip is on board the vessel

`* Total length is the longest straight line measurement from the tip of the snout, with the mouth closed, to the longest lobe on the caudal fin (tail), with the lobes squeezed together, laid flat on the measuring devise.

** The fillet length is the longest straight line measurement from end to end of any fleshy side portion of the fish cut lengthwise away from the backbone, which must have the skin intact, laid flat on the measuring device.

The dressed length is the longest straight line measurement from the most anterior portion of the fish, with the head removed, to the longest lobe of the caudal fin (tail), with the caudal fin intact and with the lobes squeezed together, laid flat on the measuring device.

(q) Weakfish commercial fishing - special regulations.

((1) Except as provided in (2) below weakfish may only be sold, traded, bartered, offered for sale or transported in New York during the open season, or within two weeks following the close of the season.

(2) Persons authorized by Table B may sell during any period where there is a closure for weakfish lawfully taken and landed provided that the fish are in boxes closed and sealed and the boxes are marked with a tag at least two inches wide and four inches long of substantial, water resistant material. Such tag must indicate clearly the state of origin, the shippers name, location landed, and the date landed. Weakfish lawfully taken and landed in other states may be shipped into New York for trade, or sale during any closure, provided that they meet the tagging requirements above and that:

(i) such weakfish meet the minimum total length, fillet or dressed length requirement for this species; and

(ii) such state authorizes reciprocal privileges within its borders for weakfish taken in New York.

(3) Nothing in this subdivision shall prohibit the lawful transportation through the state of weakfish lawfully taken from waters outside the state to other states, provided that such fish are in their original unopened container and written documentation of their origin and destination accompanies such container.

(4) Except during the open season, it is unlawful for any person to land or possess on the waters of the marine district, weakfish from which the head or tail have been removed or that have been otherwise cleaned, cut, filleted, or skinned so that the total length or identity cannot be determined.

(5) The use of pair trawls, two boat trawls or paranzella nets for the taking of weakfish is prohibited. The landing of weakfish from any vessel having aboard a pair trawl, two boat trawl or paranzella net is also prohibited.

1) Except as provided in (2) below weakfish may only be sold, traded, bartered, offered

d) Weakfish, trawls and gill nets.

(d) *Weakfish, trawls and gill nets.*

(1) Trawls. Effective January 1, 1998. Only nets having a minimum cod end mesh size of at least four and one-half inches diamond mesh, or four inches square mesh, inside measure, may be used in a directed trawl fishery for weakfish. Any trawl vessel that has on board more than 150 pounds of weakfish will be presumed to be engaged in a directed fishery for weakfish.

(2) It is unlawful for operators of trawl vessels that have on board more than 150 pounds of weakfish to use or have available for immediate use any net, or any piece of net, that does not meet the minimum mesh regulations contained in subdivision (d) (1) on board.

(3) It is unlawful to use or have available for immediate use any combination of mesh or liners on board a vessel engaged in a directed trawl fishery that effectively decreases the mesh below the minimum size.

(4) All weakfish on vessels fishing with a net mesh smaller than the legal minimum size must be kept separate from other fish.

(5) Gill nets. Effective January 1, 1998. Only gill or trammel nets having a minimum mesh size of at least three and one half inches stretched mesh, inside measure, throughout the net, may be used in a directed gill net or trammel net fishery for weakfish. Any gill net or trammel net vessel that has on board more than 150 pounds of weakfish will be presumed to be engaged in a directed fishery for weakfish.

(6) Operators of gill or trammel net vessels that have on board more than 150 pounds of weakfish may not have any net, or any piece of net that does not meet the minimum mesh requirement contained in paragraph (5) of this subdivision on board.

(7) All weakfish on vessels fishing with a net mesh smaller than the legal minimum size must be kept separate from other fish.

d) Recreational and Commercial Harvest by Gear; Non-harvest Losses.

In 2011, New York's recreational fishers encountered 55,283 weakfish of which 99% (55,172) were released (B 2). A total of 111 weakfish (A+B1) were harvested by the recreational fishery in 2011. Wave 4 accounted for the all of the weakfish harvested in NY which were taken by partyboat anglers in EEZ waters. A total of 55,172 weakfish were encountered and released (B 2) by recreational fishers in 2011. Waves 3 accounted for the majority (99.8%) of released weakfish by private/rental anglers in the inland waters, with the remainder (.02%) taken beyond 3 miles by partyboat/charter anglers during wave 5.

New York's commercial landings of weakfish for 2011 as reported by NMFS indicate that 17,143 pounds of weakfish were landed in New York. The majority of coded (39% were not coded) weakfish harvested were taken by otter trawl (40%) followed by gill nets (12.5%) and 3% taken in by the line fisheries. Weakfish were landed by commercial fishers all months of the year and the majority of weakfish harvest occurred in the months of September, October and November (27%). Commercial landings of weakfish continue to be well below the long term average of 815,192 pounds harvested in between 1970-1995.

III. Planned Management Programs for 2012

a) 2012 Weakfish Regulations - no change

b) 2012 Monitoring Programs

The trawl survey monitoring of year class recruitment is ongoing for 2012. New York will continue to collect commercial age and length samples as required by the FMP.

c) Changes from prior year

None

Table 1 NYS Weakfish Commercial and Recreational Landings

Year	Commercial Landings (Pounds)	Recreational Landings (Pounds) (A+B1)	Recreational Landings (Number) (A+B1)	Recreational Released Catch (Number) (B2)
1979	1511500	-	-	-
1980	1593600	-	-	-
1981	1357800	1570407	275120	22524
1982	1257100	725194	88234	0
1983	850000	164227	36934	15870
1984	484500	51464	20133	0
1985	386200	638913	89538	0
1986	359900	242217	34582	4556
1987	329100	51830	7447	1266
1988	124500	26127	13215	0
1989	103500	46133	6436	1980
1990	19924	4317	3057	570
1991	111629	35931	28072	33046
1992	168087	19824	5282	8362
1993	88379	18889	12610	20995
1994	99470	2579	1872	45537
1995	172431	24467	22310	81236
1996	365307	199081	16320	84990
1997	336752	220718	112986	90549
1998	496403	63298	21392	29836
1999	489935	63058	18347	35459
2000	352832	164525	42406	68631
2001	578797	151584	28126	69123
2002	513977	58627	24962	62803
2003	144416	37106	9234	7286
2004	178414	19231	10634	38306
2005	109861	606	315	76318
2006	152867	13926	9759	17120
2007	86656	8141	3602	108709
2008	44275	114011	40027	25450
2009	101448	0	0	3179
2010	13105	1,294	3423	3073
2011	17143	172	111	55172

Figure 1

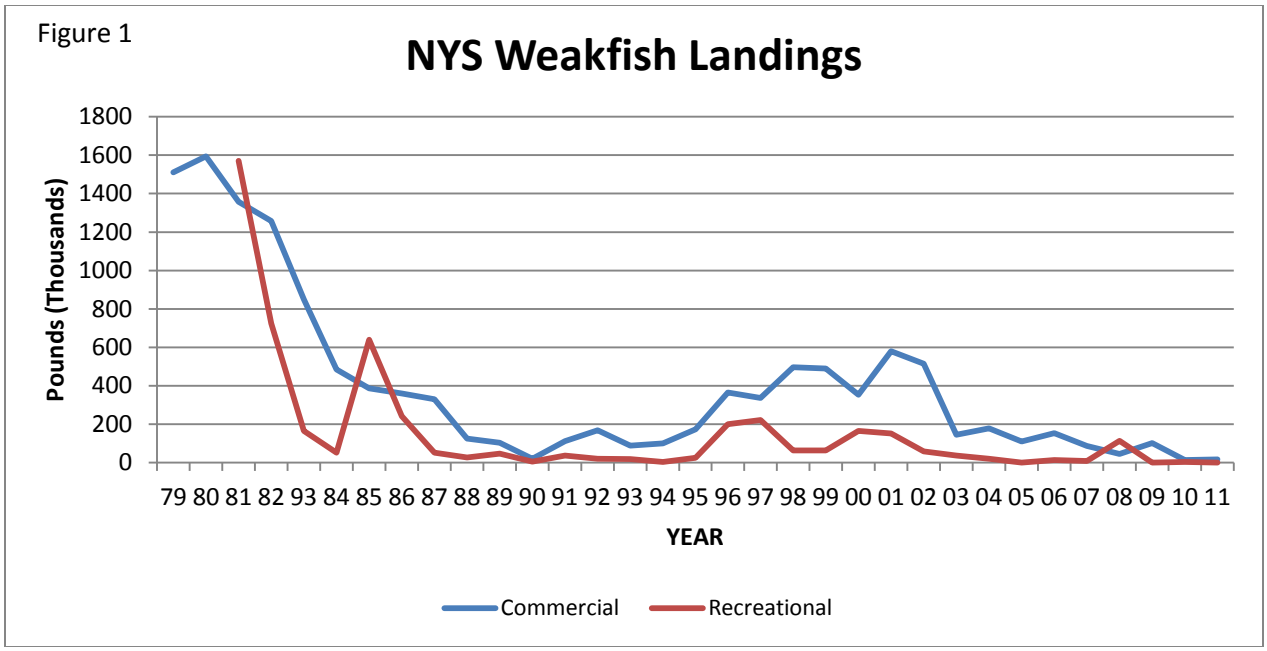
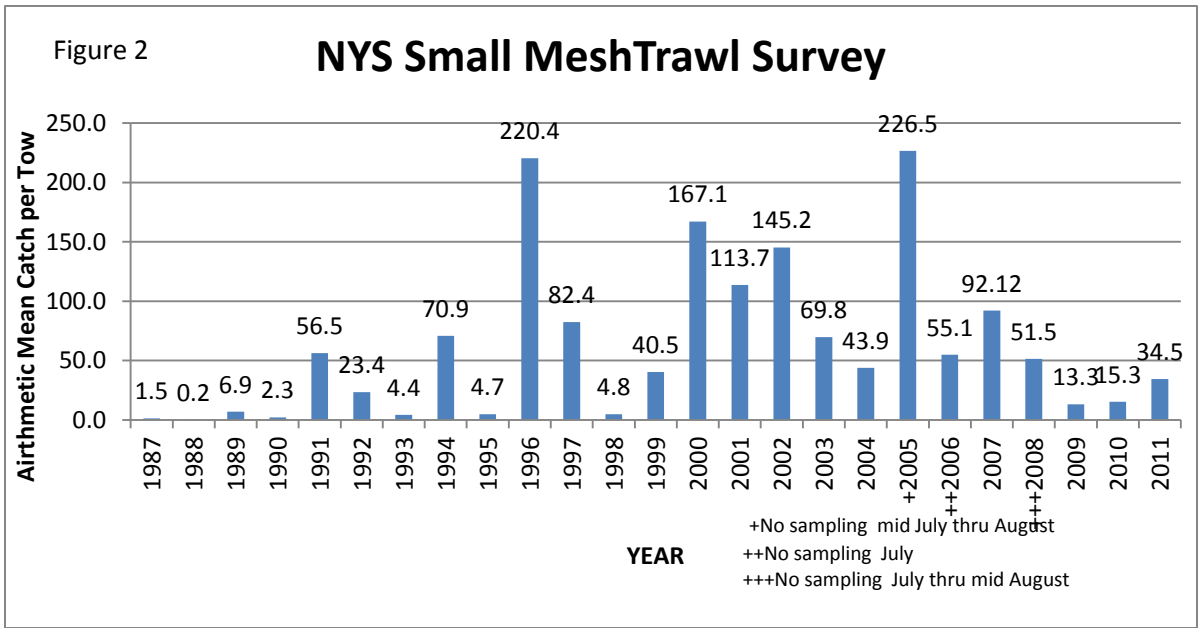


Figure 2



State of New Jersey
DEPARTMENT OF
ENVIRONMENTAL PROTECTION

DIVISION OF FISH AND WILDLIFE

Annual State Report for Weakfish for 2011 and Fishery Summary for 2012

August 2012

Report By: Jennifer Pyle

Submitted to the Atlantic States Marine Fisheries Commission as a Requirement of Amendment 4 to the Interstate Fisheries Management Plan for Weakfish

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In accordance with Amendment 4 of the Interstate Fisheries Management Plan for Weakfish (Plan), the State of New Jersey herein submits its annual report on weakfish fisheries conducted within state waters during 2011. This report covers New Jersey's management programs for commercial and recreational fisheries as well as all fishery independent monitoring.

I. Harvest and Losses

A. Commercial Fishery

1. Characterization of Fishery

General regulations for the commercial weakfish fishery can be found in Table 1. Gill net fishers have had a 13-inch size limit on weakfish since March of 1992. For 2011, the minimum mesh size for gill nets was 3.25 inches stretched mesh with the following exception: gill nets with a mesh size between 2.75 inches and 3.25 inches stretched mesh could be fished within two nautical miles of the mean high water line provided fishers obtained a permit and submitted monthly reports.

The gill net season was closed from May 21 through September 2 and October 20-26. This closed season yields a 31.9% reduction as required under the Board's directive to use the corrected Evaluation Manual with respect to fishing after April 1, 1995.

The size limit for the trawl fishery was 13 inches from January 1 through December 31. Most weakfish taken during this period are bycatch from other fisheries. The minimum mesh size of any otter trawl used in a directed fishery for weakfish was 3.75 inches stretched diamond mesh or 3.375 inches stretched square mesh, inside measurement.

The pound net fishery in New Jersey historically contributed up to two percent of the weakfish catch. In recent years, the percentage has increased somewhat due to the severe decrease in landings from the trawl and gill net fisheries. The season was closed June 7 through June 30.

Anglers can land and sell weakfish legally taken by hook and line. The imposition in March 1992 of a ten fish bag limit initially reduced this fishery more than 70 percent. Hook and line commercial landings began increasing in 1995, probably due to the increase in the bag limit to 14 weakfish but decreased again in recent years with the drop in the bag limit.

On March 25, 2010, New Jersey implemented a commercial daily possession limit of 100 pounds during the open commercial weakfish season, and 100 pounds of weakfish during the closed commercial season. During the closed season, the 100 pound possession limit may only be kept if it does not exceed 50 percent, by weight, of the total weight of all species landed and sold.

2. Characterization of Catch and Harvest

a. Landings and method of estimation

New Jersey's commercial weakfish landings from 1950 to 2011 are found in Table 2 while the 2011 weakfish landings for all gear types are found in Table 3. The 2011 landings, at 13,324 pounds, were the second lowest recorded landings of the time series and reflect a downward trend in commercial landings since 1998 and a longer downward trend since 1979 (Figure 1). However, the 2011 landings were 1,300 pounds higher than the 2010 landings of 12,053 pounds.

Trawl landings accounted for 73.6% (8,870 pounds) of New Jersey's 2011 weakfish landings, while gill net (17.1%, 2,061 pounds) and pound net fisheries (3.9%, 475 pounds) made up the majority of the remaining landings. The percent of trawl landings increased for 2011. In addition, 15.9% (1,918 pounds) were landed by other or unknown gear types. With the decline in weakfish hook and line catches, the sale of these fish has also declined with none reported in 2011. Additional gears vary through time with no significant landings recorded in recent years.

b. Catch composition

The Atlantic States Marine Fisheries Commission (ASMFC) requires the State of New Jersey to comply with the sampling protocols set forth in Addendum 1 to the Plan. The New Jersey Division of Fish and Wildlife developed a sampling program in 2009 that was approved by the Weakfish Plan Review Team. The program was based on commercial and recreational landings data and the projected sampling requirements from ASMFC in March 2009. New Jersey landed 6.3 metric tons of weakfish during 2010 resulting in the need to collect an estimated 33 lengths and 19 ages for 2011.

The number of samples was adjusted during the year due to actual landings data obtained through a cooperative agreement with the major port facilities throughout the state.

The State of New Jersey collected 310 samples from coastal fisheries and fisheries independent surveys for age analysis during 2011. Mean length was calculated by gear and season (Table 4) for all samples collected. All samples were utilized for age determination (Table 5). All of the samples were aged at less than five years of age. Beginning in 2010, weakfish samples were collected from New Jersey's Delaware Bay Trawl Survey. This is a blue crab based survey, which also catches a large number of finfish, including weakfish. Due to the availability of samples, New Jersey began collecting weakfish from this survey in order to supplement the samples collected from the commercial fishery. Of the 155 weakfish at age zero, all (100%) were caught in this trawl survey. Sampling will continue in subsequent years.

A summary of mean length and age by gear type since 1995 is presented in Table 6. Combined with the length samples collected in the Gill Net Mesh Exemption Program (below), the total number of length samples collected in 2011 was 908.

c. Biological monitoring assessment

Based on landings for 2010, New Jersey was expected to collect 33 length and 19 age samples for 2011. Actual otolith samples were collected from 310 weakfish including 53 from commercial fisheries for 2011. This was more than the estimated total samples that New Jersey was required to collect.

A comparison of 2011 samples by area, gear type and time can be found in Table 7. The areas for the comparison are not exact and there may be some overlap of the different regions. It was apparent that sampling for 2011 was adequate for compliance with the Plan. All fisheries were adequately sampled although additional samples for the early period (Jan-Mar) would have been useful. New Jersey will continue to monitor all aspects of these fisheries in the future to ensure sufficient sampling.

3. Characterization of Other Losses (poaching, bycatch, etc.)

The Gill Net Mesh Exemption Program for 2011 allowed non-directed fishers to possess no more than 150 pounds of weakfish in the small mesh gill net fishery through March 25. From March 25 to December 31, the allowable harvest was 100 pounds. Under the program, gill net fishers

may apply for a permit to fish gill nets with a mesh of at least 2.75 inches and less than 3.25 inches within two nautical miles of the mean high water line. The program was instituted to allow continuation of a traditional multi-species fishery that was eliminated in 1992 when the minimum gill net mesh size of 3.25 inches was implemented in keeping with the L_{25} retention for a 13-inch weakfish.

The primary species targeted by this fishery are Atlantic menhaden, white perch, butterfish, northern kingfish, and spot. There are also incidental landings of other species, such as Atlantic croaker, river herring and bluefish. In 2011, 16 individuals applied for and were issued permits. Twelve fishers reported no activity for the year. Ten species, other than weakfish, with a total weight of 192,430 pounds were landed (Table 8). Atlantic menhaden and spot accounted for 90.8% of the total.

During 2011, 829 weakfish were caught and 598 were measured in the small mesh gill net fishery (Table 9). Seasonally, the weakfish were distributed with 14.0% caught during March-June and 86.0% caught from July through October. They ranged in size from 8 to 32 inches with peaks at 12-14 inches and again at 24-25 inches. Of those fish measured, 61.2% were less than 13 inches. No attempts have been made to confirm reports of weakfish lengths or actual dead versus live weakfish but reporting forms were changed in 2009 in order to obtain additional information.

B. Recreational Fishery

1. Characterization of Fishery

The possession limit of one fish at a minimum length of 13 inches was in effect from January 1 through December 31, 2011.

2. Characterization of Directed Harvest

The Marine Recreational Fisheries Statistical Survey (MRFSS) data for 2011, queried August 14, 2012, show that New Jersey anglers caught 102,967 weakfish with a harvest of 3,003 fish weighing 2,449 pounds (Table 10, Figure 2). These are the lowest values of the time series. Mean weight per harvested fish, 0.8 pounds, was the lowest in the time series, and well below the series mean. Figure 3 highlights the trends of the recreational and commercial landings since the mid 1980s. Table 10A shows the recreational catch data for the years 2004-2011 obtained from the MRIP website.

3. Characterization of Other Losses

Previous discussions at ASMFC regarding recreational discards have led the Technical Committee to decide on a discard mortality of 10% of the weakfish releases as estimated by MRFSS. New Jersey's releases for 2011 were 99,964 fish resulting in a discard mortality estimated at 9,996 fish. Recreational discards increased dramatically in the mid 1990s due to regulatory changes but varied without trend through 2008 (Figure 4). Similar to 2010, the 2011 estimate is low due, in part, to the low number of fish caught.

II. Fishery Independent Monitoring

Abundance indices for weakfish in New Jersey are measured in three fishery independent surveys. Two surveys are conducted in the Delaware Estuary while the third collects data along the New Jersey coast. None of the surveys are mandated by ASMFC, however they are reported here for assessment purposes.

A. Delaware Bay Trawl Survey

The Delaware Bay Trawl Survey is a nearshore fixed station trawl survey conducted from April through November since 1991 using a 16-foot otter trawl at eleven stations. For weakfish, only the June through August trawls are used to develop a juvenile abundance index (JAI).

The 2011 JAI for the Delaware Bay trawl was above average at 11.86 and ranked 4th in the time-series (Table 11, Figure 5). The 2011 index was higher than the previous three years. Other high year classes occurred in 1999, 2002 and 2007. The proportion of positive tows (PPT) was also calculated for this survey. The PPT closely follows the geometric mean for most years including 2011. Both measures of abundance show an increase in recruitment from the mid-1990s until 2002 and again through 2007 for the mean and 2008 for the positive tows.

Length frequency data for weakfish is also collected during this survey. During this survey, weakfish lengths are measured by total length. Regardless, weakfish mean length decreased from 1995 to 2000 but generally increased from 2001 through 2010 (Figure 6).

B. Delaware River Seine Survey

The second survey utilizes a bagged, 100-foot long by 6-foot deep by ¼-inch mesh beach seine conducted for striped bass young-of-year in the Delaware River since 1980. The survey consists of seining 32 stations twice a month from August through October. For weakfish, the JAI is calculated for the lower 24 stations within the Delaware River.

No weakfish were collected in 2011 continuing poor recruitment for this area of the estuary since 1986, except for a good year in 1995 (Figure 7). Additional analysis will be performed on this data set to determine if it is useful for future stock assessments.

C. Ocean Trawl Survey

The New Jersey Ocean Trawl Survey samples the near shore waters from the entrance of New York Harbor south, to the entrance of the Delaware Bay. The survey net is a two-seam trawl with forward netting of 4.7 inch stretch mesh and rear netting of 3.1 inches stretch mesh. The cod end is 3.0 inches stretch mesh and is lined with a 0.25 inch bar mesh liner. Data for weakfish has been thoroughly analyzed during past assessments so that only data for the month of August are used for calculating the geometric mean, PPT and length frequencies.

During the 2011 August survey, there were 11,705 weakfish caught resulting in a geometric mean of 29.39 (Table 12, Figure 8). This was the highest geometric mean in the time series. The portion of positive tows (PPT) for August was also calculated for this survey and used in the current assessment. The PPT correlates well with the geometric mean throughout the time-series (R-square = 0.656). The 2011 PPT value of 0.718 was above average for the first time since 2002. This may have contributed to the high number of weakfish caught in the bays during 2012. While this value is not of concern, it may directly impact the future of the fishery, and will be monitored closely for changes.

Length frequency data is also collected during this survey. Figure 9 shows the mean percent length frequency throughout the time-series with the 2011 data being found in Figure 10. It is obvious that the length structure has contracted and older, larger fish are not as readily available in recent years.

III. 2011 New Jersey Weakfish Regulations and Monitoring

A. Recreational and Commercial Regulations

A possession limit of one (1) fish at a minimum length of 13 inches will remain in effect for 2012.

B. Commercial Fishery

There are no planned changes to the current regulations for the harvest of weakfish in New Jersey waters. See Section 1A1 and Table 1 for the current regulations.

C. Research and Monitoring

The State of New Jersey will continue to develop methods to achieve the sampling protocols set forth in Addendum 1 to Amendment 4 of the Plan, through biological sampling of weakfish during existing programs as well as the recreational fishery. A long term sampling protocol was developed and approved by ACCSP with an implementation date in September 2006. This program will continue in 2011.

Harvest data will be obtained from individuals participating in the small mesh gill net fishery described above and from data collected by NMFS port agents and/or SAFIS for commercial fisheries while harvest and catch data for recreational fisheries will be collected through MRFSS.

Table 1. New Jersey's directed commercial regulations for the harvest of weakfish: 2011

Gear	Size Limit	Season Closure	Other Restrictions
Gill	13-inches	May 21 to Sep 2 and Oct 20 to 26	*Net not less than 3.25 inch stretch mesh Limited entry; Additional gear restrictions in defined areas
Trawl	13-inches	Aug 1 to Oct 12	Net not less than 3.75 inch inside stretch diamond or 3.375 inside stretch square mesh measurement; Additional gear restrictions in defined areas
Pound	13-inches	Jun 7 to Jun 30	Max length: 750 feet including leader and hearts; Additional gear restrictions in defined areas

A vessel shall not land and a dealer shall not accept more than 100 pounds of weakfish in any one day taken by any gear type not listed above or by the gear types listed above. In addition, for any vessel landing weakfish during the closed season, the amount of weakfish landed shall not exceed 50 percent, by weight, of the total weight of all species landed and sold.

*Anyone fishing gill nets less than 3.25 inches stretched mesh in the Atlantic Ocean or Delaware Bay within two nautical miles of the mean high water line after February 29, must possess a Gill Net Mesh Exemption Permit. All permit holders must submit monthly reports on harvest and effort.

Table 2. New Jersey's commercial weakfish landings, 1950-2011

Year	Pounds		Year	Pounds
1950	1,082,400		1981	3,750,300
1951	1,965,000		1982	2,073,500
1952	2,176,500		1983	2,172,700
1953	2,162,200		1984	2,751,600
1954	2,002,600		1985	3,030,100
1955	1,876,900		1986	3,208,600
1956	2,001,800		1987	2,094,100
1957	2,025,000		1988	2,332,800
1958	546,200		1989	1,458,500
1959	372,300		1990	968,318
1960	526,100		1991	1,174,181
1961	418,000		1992	940,695
1962	649,900		1993	834,446
1963	333,000		1994	695,280
1964	545,100		1995	867,262
1965	596,300		1996	822,041
1966	344,300		1997	1,036,470
1967	455,600		1998	1,804,618
1968	532,000		1999	1,291,319
1969	1,862,500		2000	1,071,428
1970	1,961,200		2001	837,550
1971	3,099,000		2002	863,088
1972	3,178,600		2003	340,269
1973	2,562,300		2004	197,108
1974	2,686,400		2005	196,710
1975	4,370,300		2006	206,626
1976	5,709,300		2007	164,506
1977	3,221,500		2008	56,884
1978	3,865,600		2009	30,082
1979	6,518,900		2010	12,053
1980	4,896,000		2011	13,324
			Mean	**1,642,568**

Table 3. New Jersey's commercial weakfish landings, by month and gear: 2011

Month	Trawl	Gill	Pound	Other*	Total
Jan	1,575	-	35	206	1,816
Feb	2,281	-	154	3	2,438
Mar	3,122	-	21	217	3,360
Apr	1,145	124	16	50	1,335
May	14	66	45	7	132
Jun	-	-	89	-	89
Jul	-	-	41	-	41
Aug	2	13	74	-	89
Sep	205	212	-	263	680
Oct	38	1,025	-	1,107	2,170
Nov	316	548	-	46	910
Dec	172	73	-	19	264
Total	**8,870**	**2,061**	**475**	**1,918**	**13,324**

*Other refers to any other or unknown gear types

Table 4. Mean length (TL) of weakfish collected in New Jersey, by gear type and season: 2011

				*Mean Length	
Gear	**Data Type**	**# Samples**	**Period**	**TL max, mm**	**TL rel, mm**
Trawl - Ocean	Research	100	Jun-Oct		290.18
Trawl - Delaware Bay	Research	156	Jul-Oct		126.95
Hook & Line - Ocean	Research	1	August		335.0
Gill	Commercial	53	Oct	410.24	341.75
All		**310**		**410.24**	**193.58**

*TL max is bending of tail while TL rel is the longest length while flat

Table 5. New Jersey's weakfish age data for 2011

Age	# at Age	% at Age	Mean TL (mm)	Mean Wt (lbs)
0	155	50.00	125.38	0.06
1	50	16.13	246.06	0.28
2	79	25.48	356.75	0.68
3	25	8.06	409.64	0.87
4	1	0.32	465.00	2.34
	310		227.83	0.324

.

Table 6. Age data from weakfish collected in New Jersey waters: 1995–2011

Year	# ages	Gear	Mean TL	Mean Age
1995	82	Trawl	285.21	2.44
1996	199	Trawl	319.18	2.62
1997	31	Trawl	345.84	4.35
1998	35	Gill	582.89	4.97
2003	64	H & L	683.17	5.67
2004	4	Gill	720.75	7.75
	40	H & L	448.23	3.60
	13	Trawl	377.54	2.54
	57	All	451.23	3.65
2005	1	Gill	707.00	4.00
	12	H & L	809.08	7.67
	135	Trawl	354.53	3.13
	148	All	393.77	3.50
2006	270	Gill	435.82	3.11
	236	Pound	618.26	4.47
	30	Trawl	499.17	3.30
	536	All	519.24	3.84
2007	88	Gill	620.57	4.90
	13	H & L	399.69	3.00
	118	Pound	657.97	5.60
	324	Trawl	448.38	3.12
	543	All	520.66	3.95
2008	216	Gill	433.43	2.61
	5	Pound	795.20	7.40
	227	Trawl	358.41	2.29
	448	All	399.46	2.50
2009	141	Gill	449.04	3.18
	19	Pound	816.37	8.84
	94	Trawl	294.74	2.20
	254	All	419.41	3.24
2010	84	Gill	416.04	2.25
	488	Trawl	124.43	0.41
	572	All	167.25	0.68
2011	53	Gill	405.08	2.21
	1	H & L	335	2.00
	256	Trawl	190.71	0.66
	310	All	227.83	0.93

Table 7. Number of weakfish samples collected in New Jersey, by area, during 2011

		Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	All
North	Trawl	-	5	-	33	38
	H & L	-	-	1	-	1
Central	Trawl	-	-	6	-	6
	Gill	-	-	-	49	49
South	Trawl	-	-	177	35	212
	Gill	-	-	-	4	4
ALL		-	5	184	121	310

Table 8. Gill net mesh exemption landings (pounds), by month and species: 2011

	Bluefish	**Bunker**	**Butter**	**Cobia**	**Croaker**	**Flounder**	**Herring**	**Kingfish**	**Perch**	**Spot**	**Total**
Jan									79		**79**
Feb							146		1,749		**1,895**
Mar		2,212					806		3,379		**6,397**
Apr	383	5,667			98		682		5,190		**12,020**
May	58	5,394			31				1,038		**6,521**
Jun	8	7,188			6					126	**7,328**
Jul	151	34,528	22	153	284	1	1	21	1	25,932	**61,094**
Aug	618	30,296	277		77			30		39,915	**71,213**
Sep	382	13,738	192					27		1,503	**15,842**
Oct		3,718	94				143		471		**4,426**
Nov		3,808					82		704		**4,594**
Dec		795					5		221		**1,021**
Total	**1,600**	**107,344**	**585**	**153**	**496**	**1**	**1,865**	**78**	**12,832**	**67,476**	**192,430**

Table 9. Reported weakfish lengths (tl, in) caught in the gill net mesh exemption program: 2011

	Alive	Dead	<13	14	15	16	17	18	19	20	21	22	23	24	25	26
Mar	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Apr	24	20	1	2	0	8	2	4	2	2	2	2	2	1	3	0
May	34	11	1	6	2	2	1	3	4	1	1	1	2	1	4	1
Jun	18	8	2	1	1	1	2	0	0	1	1	0	0	0	5	0
Jul	249	37	227	14	5	4	2	0	0	0	0	0	0	0	0	0
Aug	140	67	81	43	8	9	2	2	3	2	0	1	0	1	2	0
Sep	97	39	34	11	12	4	1	3	3	0	0	1	1	2	2	0
Oct	70	14	20	3	1	4	1	2	0	1	3	0	0	5	2	0
Total	**632**	**197**	**366**	**80**	**29**	**32**	**12**	**14**	**12**	**7**	**7**	**5**	**5**	**10**	**18**	**1**

Note: There were 231 weakfish caught that were not measured

Table 10. New Jersey's recreational weakfish estimates (from MRFSS): 1981-2011

Year	Catch (#)	Harvest (#)	Harvest (Lbs)	Mean wt
1981	1,035,104	1,028,787	3,892,216	3.8
1982	105,761	104,066	613,223	5.9
1983	3,012,209	2,857,093	6,080,018	2.1
1984	1,030,508	1,026,043	3,987,542	3.9
1985	1,059,123	812,839	1,876,608	2.3
1986	3,395,665	2,500,622	3,184,095	1.3
1987	1,848,638	1,666,619	3,353,362	2.0
1988	647,176	642,032	833,197	1.3
1989	326,130	303,289	575,109	1.9
1990	249,248	216,385	358,456	1.7
1991	784,311	545,665	896,801	1.6
1992	561,505	311,659	677,811	2.2
1993	485,366	203,915	312,840	1.5
1994	1,643,502	591,571	706,207	1.2
1995	2,285,681	671,850	898,565	1.3
1996	2,963,300	1,104,251	1,730,057	1.6
1997	2,003,614	1,028,334	1,817,033	1.8
1998	1,698,738	920,558	1,910,868	2.1
1999	1,135,167	583,883	1,374,170	2.4
2000	2,365,304	760,279	1,916,092	2.5
2001	1,800,678	736,069	1,251,151	1.7
2002	843,686	492,876	1,213,558	2.5
2003	782,539	151,101	333,690	2.3
2004	763,372	228,536	287,912	1.3
2005	2,380,450	1,008,393	1,109,733	1.1
2006	1,824,928	489,440	793,148	1.6
2007	842,452	229,755	422,391	1.8
2008	1,733,627	298,076	369,941	1.2
2009	90,952	11,928	23,637	2.0
2010	105,048	2,261	2,723	1.2
2011	102,967	3,003	2,449	0.8
mean (81-11)	1,287,314	694,554	1,380,794	2.0
mean (02-11)	947,002	291,537	455,918	1.6

Table 10A. New Jersey's recreational weakfish estimates (from MRIP): 2004-2011

Year	Catch (#)	Harvest (#)	Harvest (Lbs)	Mean wt
2004	763,372	228,536	287,912	1.3
2005	2,380,450	1,008,393	1,109,733	1.1
2006	1,824,928	489,440	793,148	1.6
2007	842,452	229,755	422,391	1.8
2008	1,733,627	298,076	369,941	1.2
2009	90,952	11,928	23,637	2.0
2010	105,048	2,261	2,723	1.2
2011	102,967	3,003	2,449	0.8
mean	980,475	283,924	376,492	1.4

Table 11. Weakfish data from New Jersey's Delaware Bay Trawl: 1991-2011

	Geo Mean	Prop pos tows	Mean Length (mm)
1991	1.95	0.615	59.91
1992	2.42	0.636	60.31
1993	2.02	0.588	62.74
1994	1.84	0.500	60.66
1995	3.11	0.697	53.18
1996	3.89	0.727	45.20
1997	6.46	0.788	42.13
1998	5.59	0.727	50.23
1999	**15.89**	0.909	41.80
2000	5.68	0.818	36.57
2001	10.26	0.818	44.69
2002	**13.17**	0.879	53.44
2003	2.63	0.545	67.30
2004	6.58	0.758	46.05
2005	9.84	0.667	56.25
2006	9.80	0.727	60.60
2007	**14.70**	0.848	70.28
2008	6.99	0.879	62.15
2009	5.97	0.667	61.32
2010	7.59	0.788	70.82
2011	11.86	0.879	55.12
AVG	**7.06**	**0.736**	**55.27**

Table 12. Weakfish data from New Jersey's Ocean Trawl Survey: 1989-2011

	Geometric mean	Prop pos tows
1989	4.14	0.441
1990	2.27	0.350
1991	3.12	0.368
1992	3.02	0.513
1993	2.48	0.410
1994	**12.76**	0.667
1995	**17.24**	0.667
1996	9.01	0.615
1997	11.54	0.667
1998	1.13	0.282
1999	3.26	0.385
2000	5.75	0.538
2001	1.53	0.359
2002	5.32	0.410
2003	0.09	0.103
2004	3.86	0.333
2005	3.44	0.308
2006	0.52	0.154
2007	3.59	0.350
2008	1.57	0.256
2009	0.99	0.179
2010	2.61	0.256
2011	**29.39**	0.718
AVG	**5.59**	**0.406**

Figure 1. New Jersey's commercial weakfish landings: 1950-2011

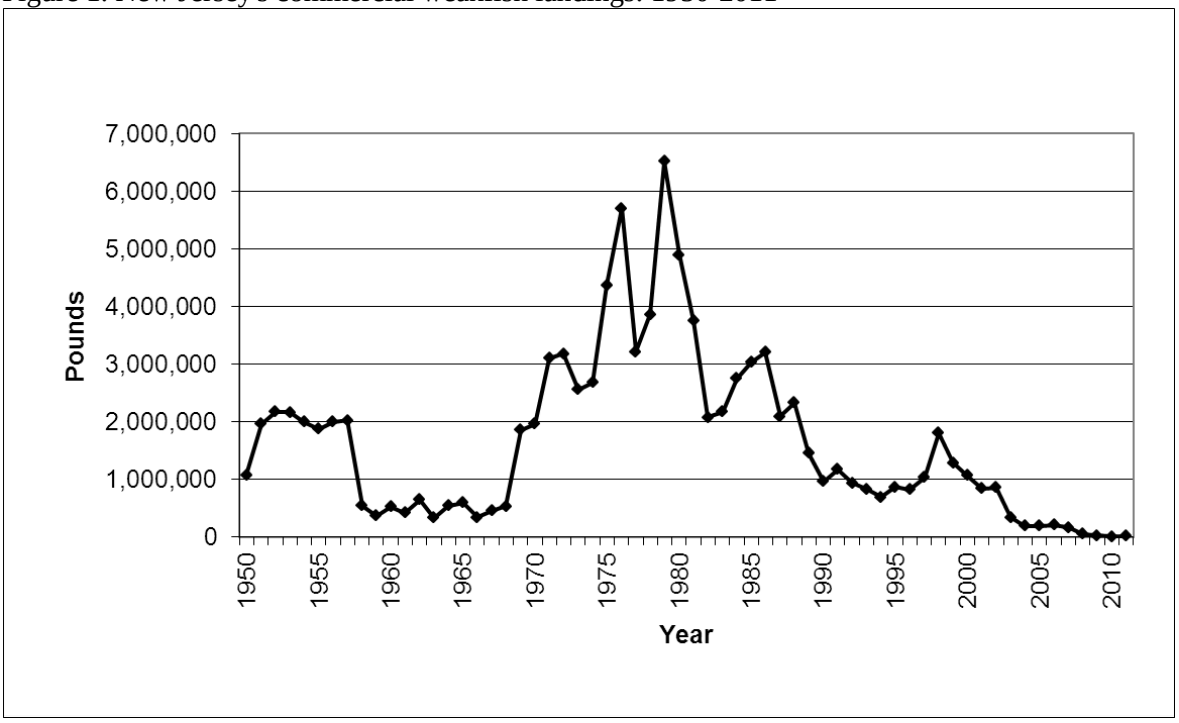


Figure 2. New Jersey's recreational weakfish estimates (from MRFSS): 1981-2011

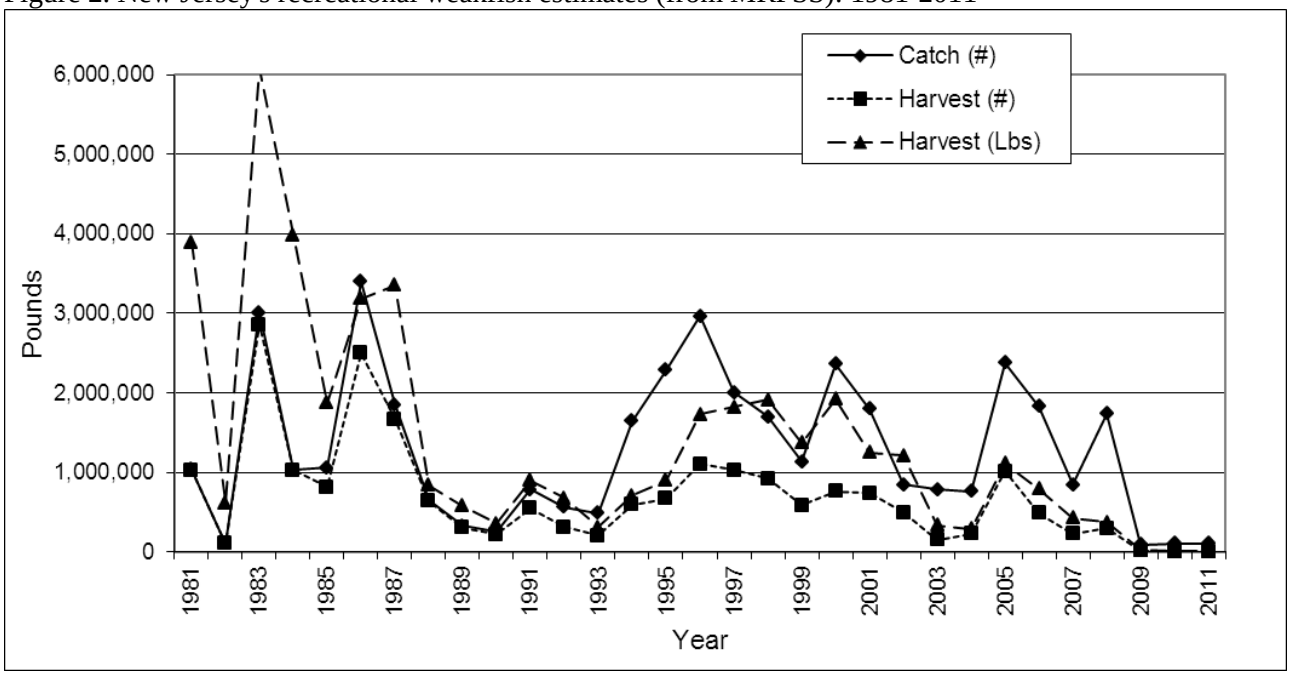


Figure 3. New Jersey's recreational and commercial weakfish landings: 1950-2011

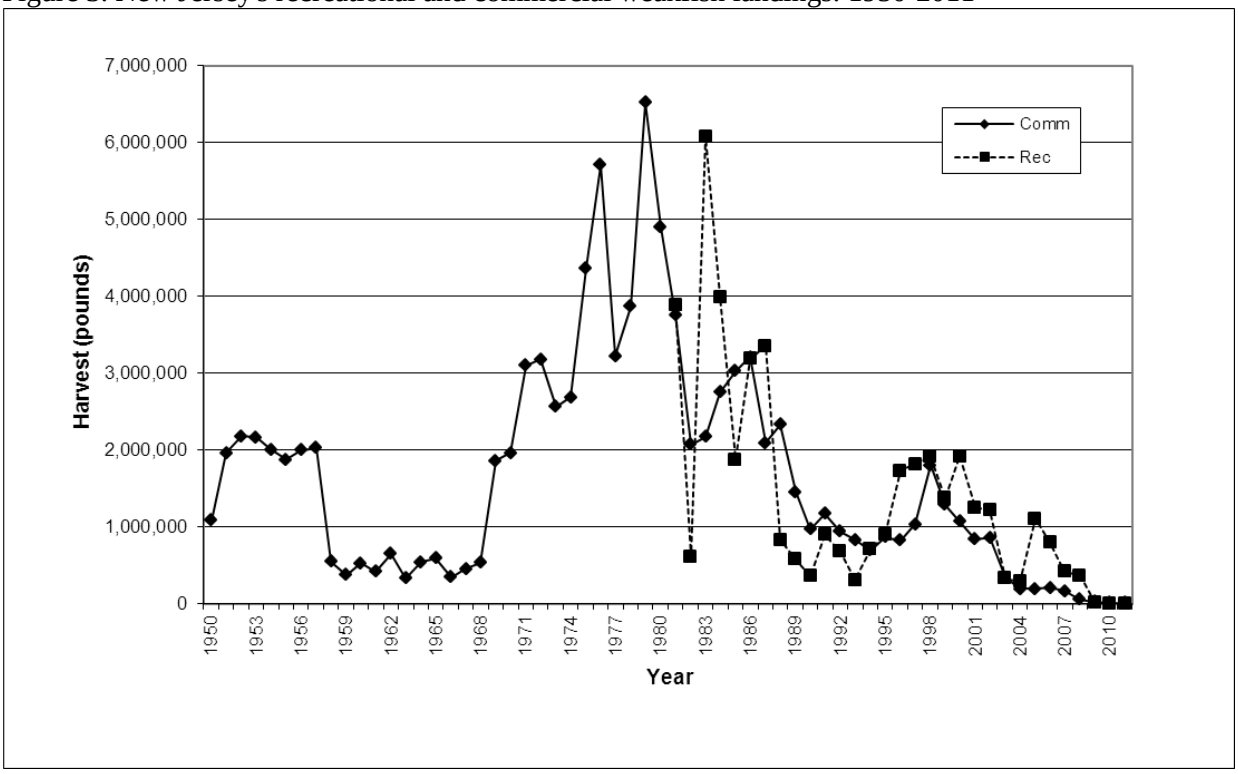


Figure 4. New Jersey recreational weakfish discard mortality: 1981-2011

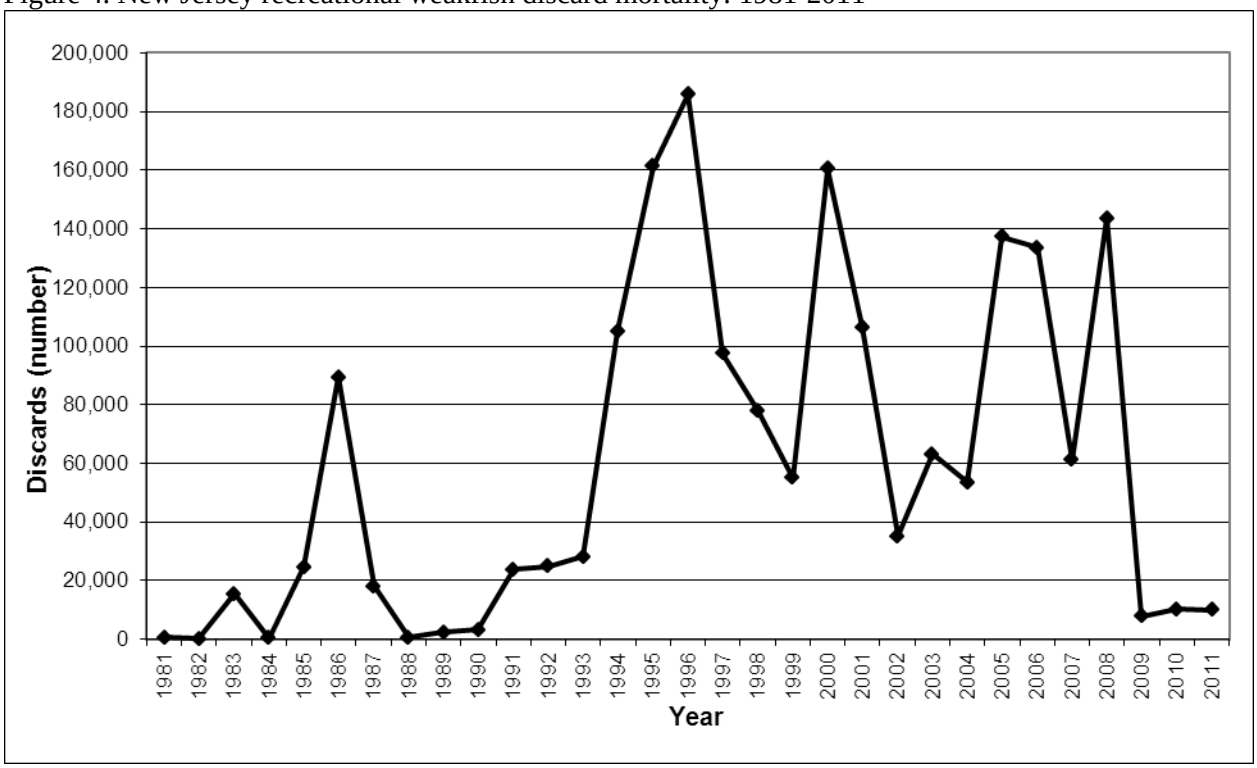


Figure 5. Weakfish data from New Jersey's Delaware Bay Trawl Survey: 1991-2011

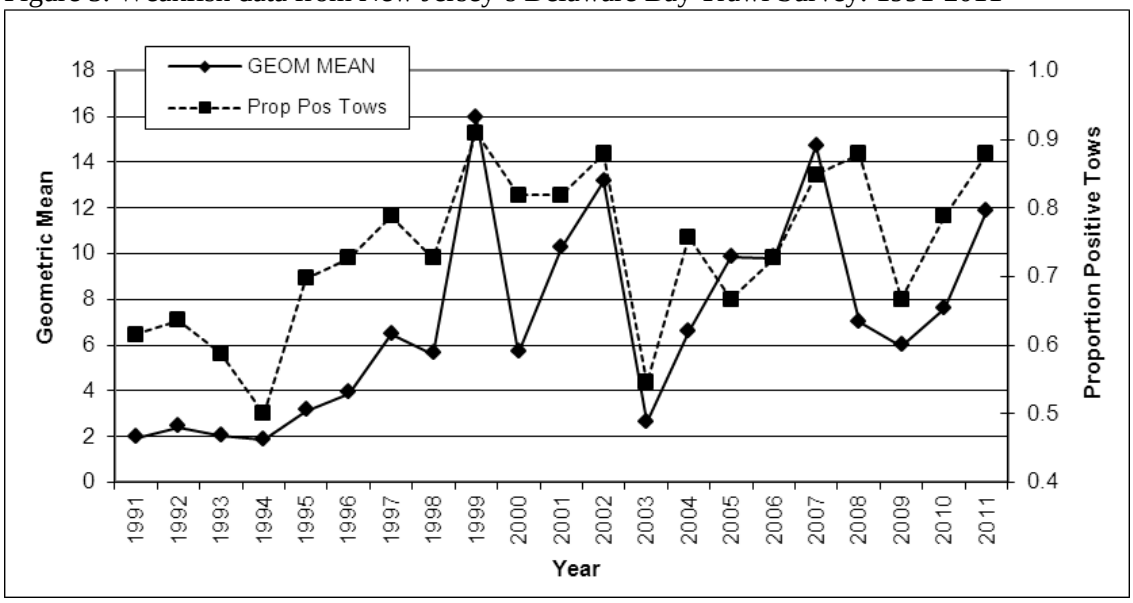


Figure 6. New Jersey's Delaware Bay Trawl Survey mean length: 1991-2011

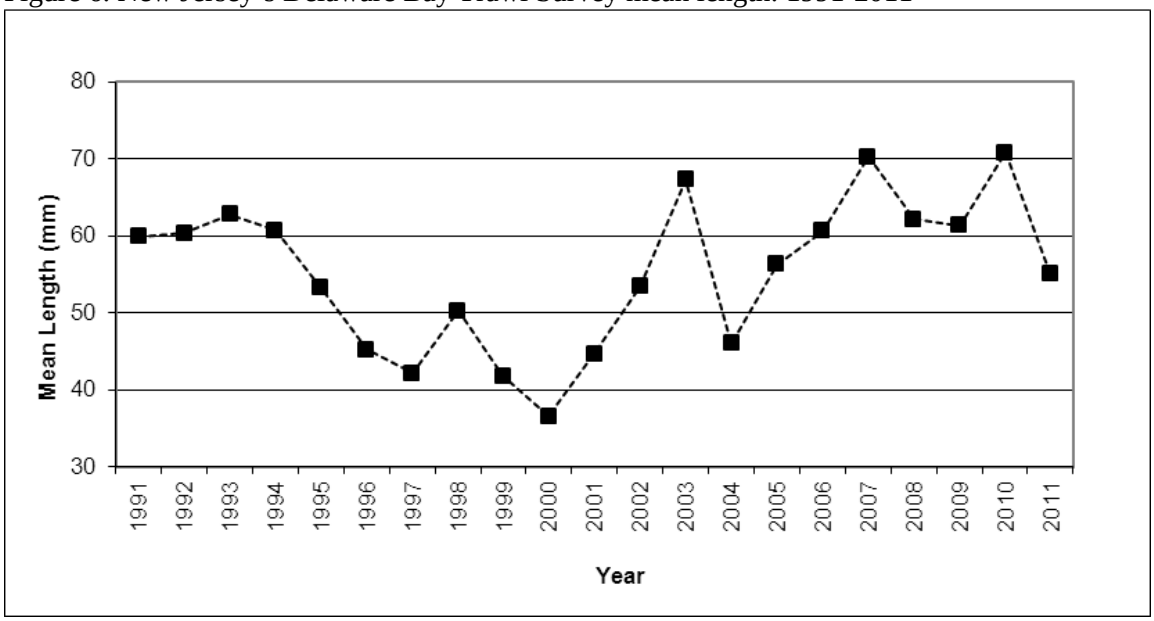


Figure 7. New Jersey's Delaware River Seine Survey geometric mean: 1980-2011

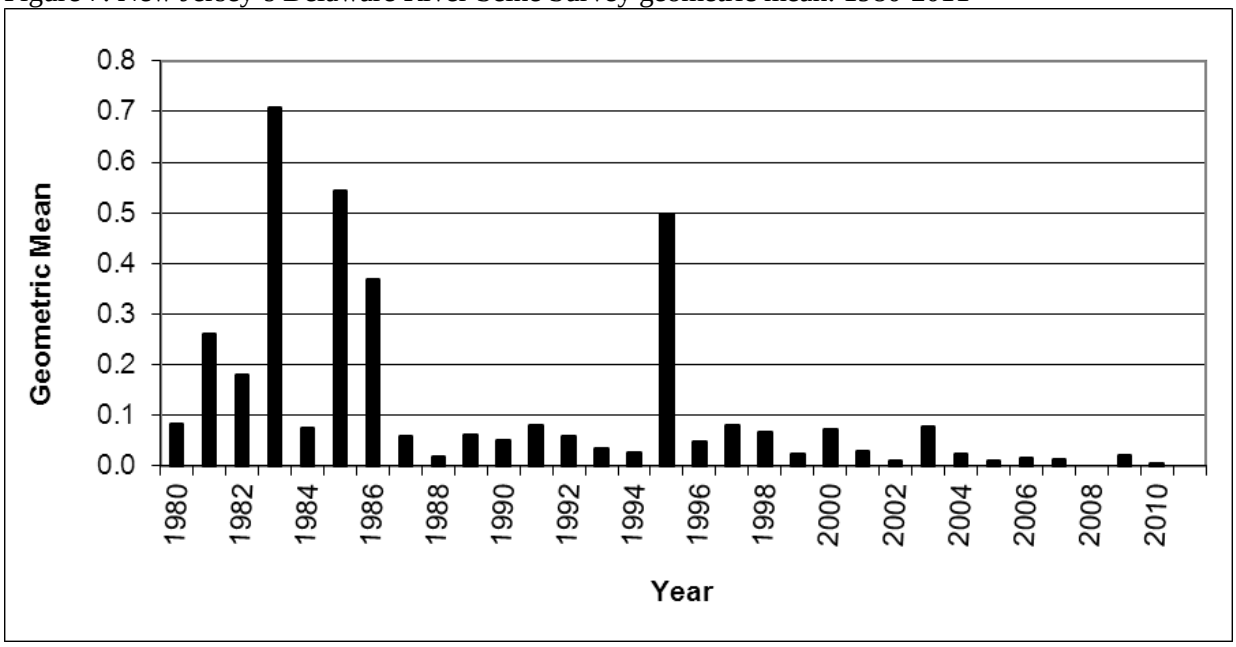


Figure 8. Weakfish data from New Jersey's Ocean Trawl Survey: 1989-2011

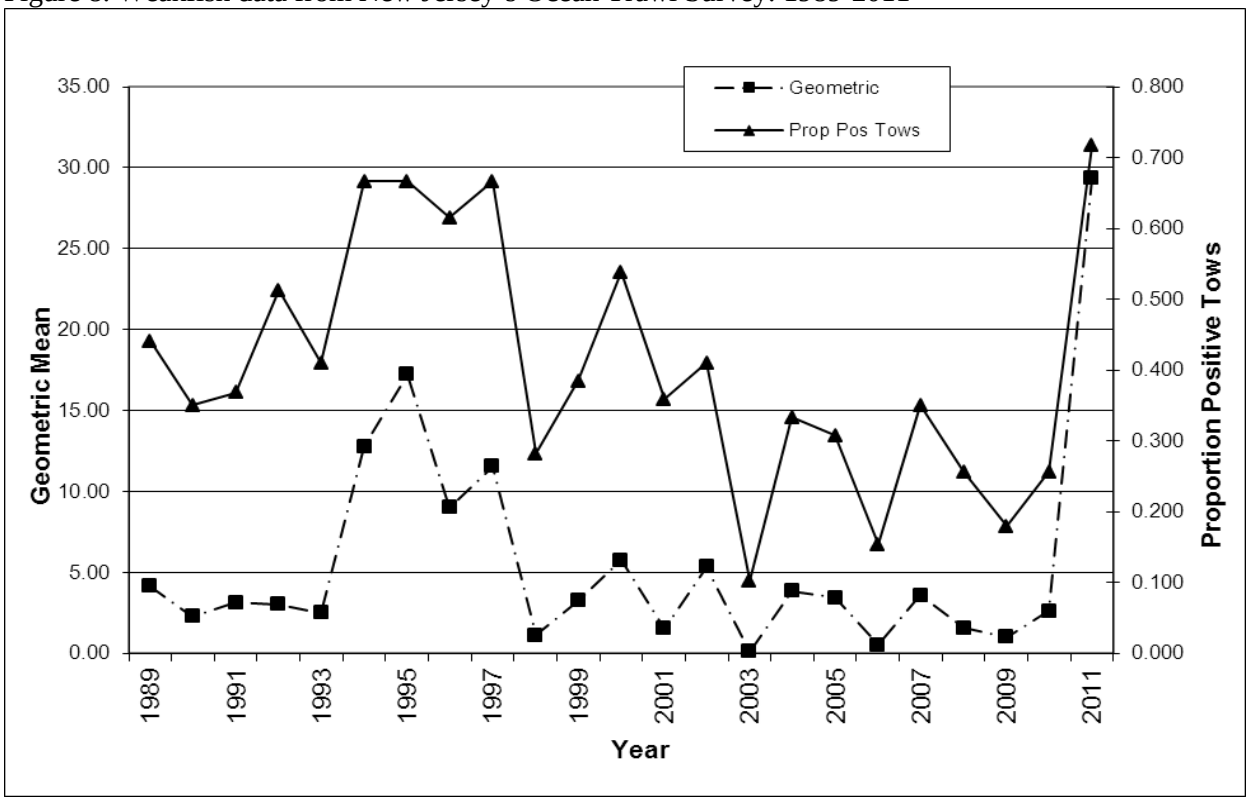


Figure 9. New Jersey's Ocean Trawl Survey weakfish percent length frequency: 1989-2011

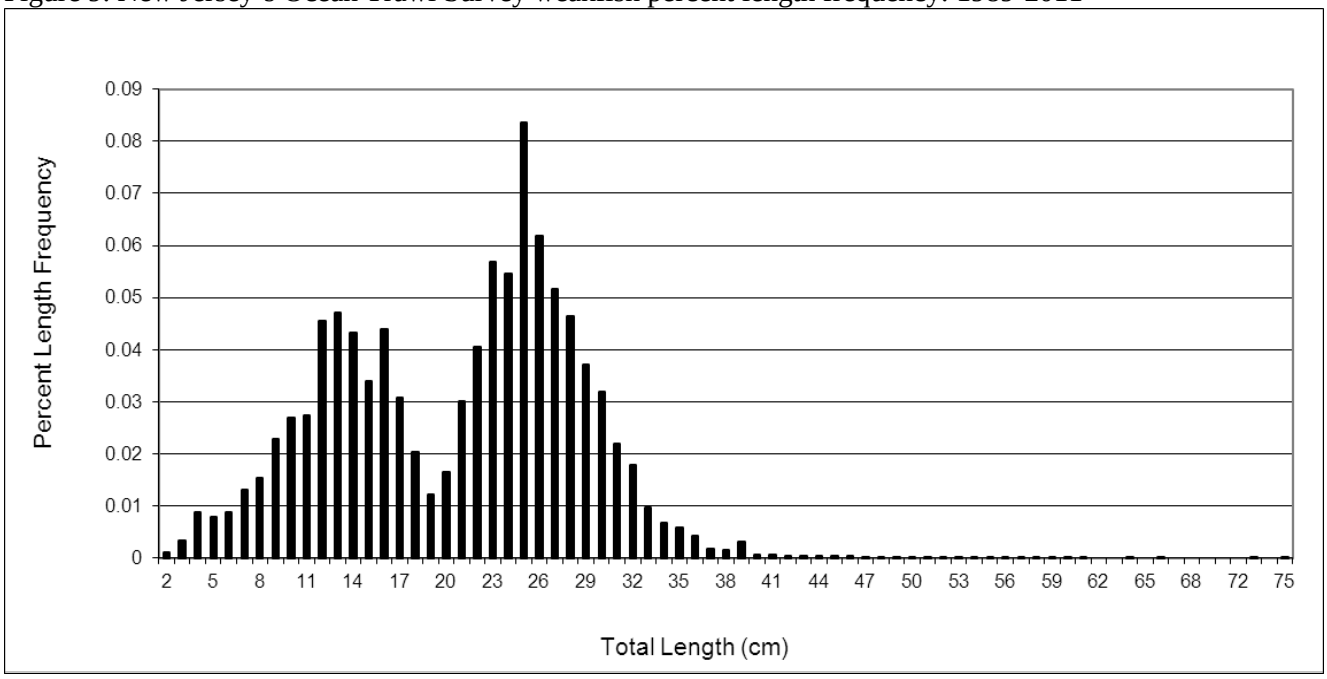
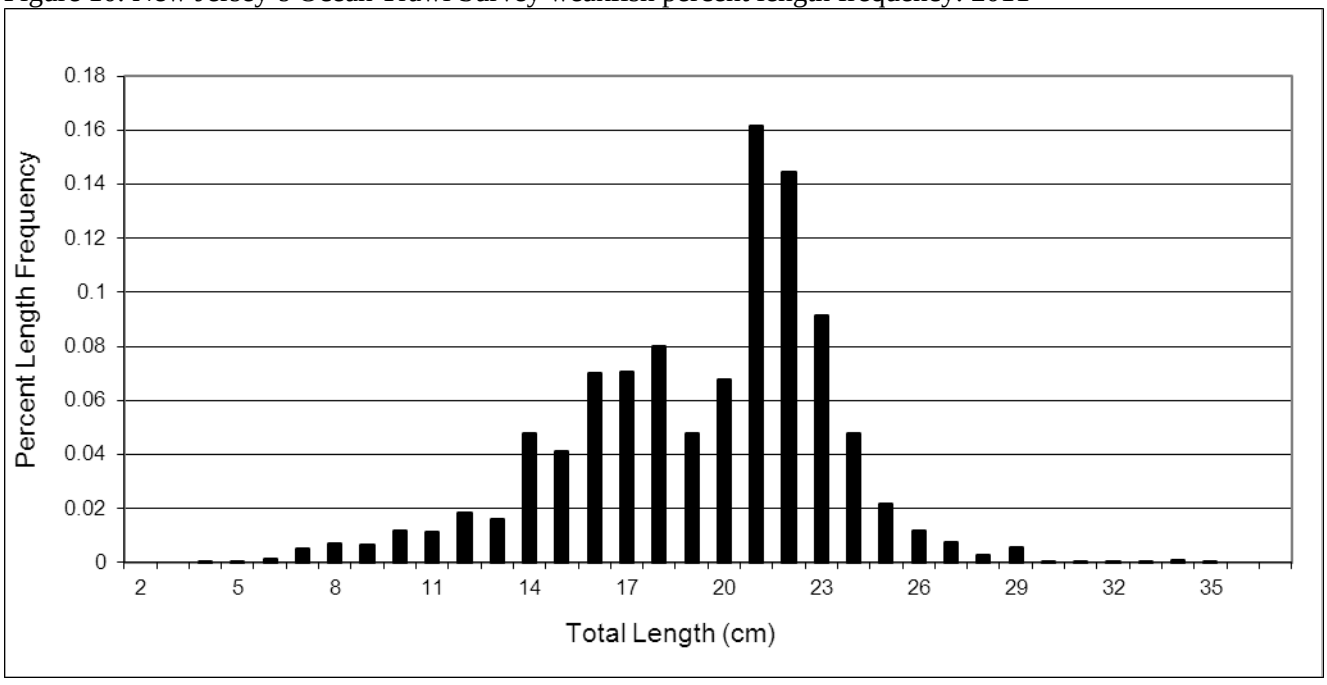
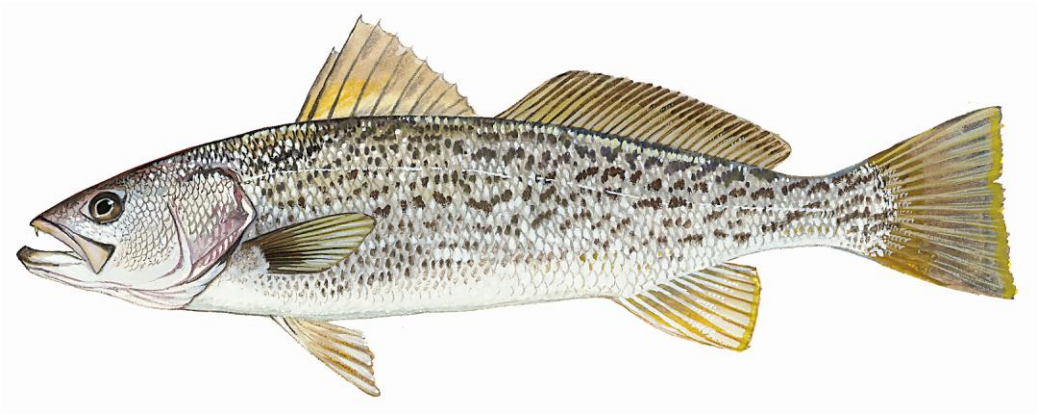


Figure 10. New Jersey's Ocean Trawl Survey weakfish percent length frequency: 2011



Annual Weakfish Report for the State of Delaware: Harvest, Monitoring and Conservation for 2011 and Management Program for 2012



Report to the
Atlantic States Marine Fisheries Commission.

By Michael Greco
Delaware Division of Fish and Wildlife
Dover DE
August 2012

I. Introduction

Both recreational and commercial weakfish landings remained extremely low in 2011. The Marine Recreational Information Program (MRIP) estimate of the number of weakfish landed by the Delaware recreational fishery was 27 fish with an estimated total weight of approximately 21 lbs; both decreases from the 2010 estimates. The MRIP estimate of the total number caught, including those released, was 6,595 fish. Delaware Commercial landings continued to decline with a total of 1,100 lbs to the lowest level on record since mandatory reporting began in 1985.

Average weight of weakfish caught by the recreational fishery was estimated to be 0.78 lbs., a decrease from the 2010 estimate of 1.49 lbs. For the third consecutive year, there were no citation weakfish entered in the Division's Sport Fishing Tournament (nine pound minimum qualifying weight).

The number of weakfish caught per nautical mile in the adult fish research trawl survey in Delaware Bay increased in 2011 relative to the previous year and was above the time-series mean for the first time 2006. The age structure remained confined to ages 0 - 3. The young-of-year index of recruitment from the juvenile fish research trawl survey in Delaware Bay decreased in 2010, falling below the time-series mean.

II. Request for *de minimus,* where applicable

The State of Delaware does not wish to apply for *de minimus* status.

III. Previous calendar year's fishery and management program

A. Activity and results of fishery dependent monitoring.

Historically, Delaware has monitored the commercial fishery by intercepting fishermen at local fish houses and age samples were obtained by purchasing 50-lb. boxes of weakfish. Several attempts were made to meet fishermen and obtain the needed data. Diminishing landings continue to hinder sampling efforts. However, Division staff was able to measure 11 fish and obtain otoliths samples from those fish. Of the eleven (11) fish were aged, nine (9) were age-3 and two (2) were age-2 fish.

Delaware relied on the MRIP online data query for estimates of the recreational fishery in 2011.

B. Activity and result of fishery independent monitoring.

Annual relative abundance estimates (number/nautical mile) of weakfish in Delaware are monitored through the Division's adult ground fish bottom trawl survey. This survey has been conducted annually since 1990; prior surveys were conducted from 1966-1971 and 1979-1984. Weakfish ranked first in abundance by number and second by weight in the 2011 sampling (Greco and Michels 2012). The relative abundance of weakfish increased to 142.30 (#/nm), a 76% increase over the 2010 index, and was above the time-series mean for the first time since

2006 (Figure 1). A total of 645 weakfish from the trawl survey were aged via otoliths in 2011. The age structure for weakfish in the survey remained truncated in 2011, with a maximum age of three (Table 1).

The Division monitors juvenile fish abundance through a 16-ft bottom trawl survey which has been conducted annually since 1980. Separate weakfish young of the year (YOY) indices are generated for the Delaware Estuary (Bay and River) and Delaware's "Inland Bays" (Indian River and Rehoboth). YOY weakfish recruitment, 7.89 per tow (geometric mean), decreased in 2011 relative to 2010 for the Delaware Estuary and dropped below the time series mean and median (Table 2 and Figure 2). The Inland Bays YOY index decreased to 3.30 per tow, but remained above the time series average for the third consecutive year (Table 2, Figure 3).

C. Copy of regulations that were in effect (Attachment – 1).

1. Commercial Fishery

In April 2010, as required under Weakfish Addendum IV to Amendment 4 of the ASMFC Weakfish Management Plan, Delaware implemented the following management measures for the commercial fishery. Existing regulations were amended that would make it illegal to possess more than 100 pounds of weakfish per vessel per day or trip whichever is the longer period of time. This limit will apply to all commercial fishing gear permits including hook & line. The minimum size will remain at 12 inches or greater; 13 or greater for commercial hook and line. All previous restrictions placed on the commercial fishery to conserve weakfish and reduce by-catch will remain in place.

2. Recreational Fishery

In April 2010, as required under Weakfish Addendum IV to Amendment 4 of the ASMFC Weakfish Management Plan, Delaware implemented the following management measures for the recreational fishery. Existing regulations were amended to reduce the daily possession limit from six (6) fish to one (1) fish. The minimum size will remain at 13 inches or greater.

D. Harvest broken down by commercial and recreational.

Commercial Fishery

Weakfish commercial landings declined again to 1,100 lbs., the lowest level since mandatory reporting began in 1985 (Table 3, Figure 4). As in previous years, gill net gear dominated landings accounting for 72% of commercial landings. Drift nets remained the dominant gear for the fifth year in a row. Commercial hook and line gear comprised 27% of the landings with 301 lbs (Table 4). Landings peaked in August (Table 5).

Recreational Fishery

The 2011 recreational landings were estimated at 27 fish and 21 lbs. by the MRIP. These landings were the lowest estimated from the survey (Table 6, Figure 5). The estimate of the total number caught (including those released) of 6,595 fish was the lowest since recreational estimates began in 1981 (Table 6). The mean weight of harvested weakfish was 0.78 lbs, based on MRIP estimates (Table 6, Figure 6).

E. Review of progress in implementing habitat recommendations.

N/A

IV. Planned management programs for the current calendar year

A. Summary of regulations for current year (Attachment – 1).

3. Commercial Fishery

Delaware will continue to manage weakfish under the current requirements of Weakfish Addendum IV to Amendment 4 of the ASMFC Weakfish Management Plan (see Attachment – 1). Delaware implemented the following management measures for the commercial fishery. Existing regulations were amended that would make it illegal to possess more than 100 pounds of weakfish per vessel per day or trip whichever is the longer period of time. This limit will apply to all commercial fishing gear permits including hook & line. The minimum size will remain at 12 inches or greater; 13 or greater for commercial hook and line. All previous restrictions placed on the commercial fishery to conserve weakfish and reduce by-catch will remain in place.

4. Recreational Fishery

In April 2010, as required under Weakfish Addendum IV to Amendment 4 of the ASMFC Weakfish Management Plan, Delaware implemented the following management measures for the recreational fishery. Existing regulations were amended to reduce the daily possession limit from six (6) fish to one (1) fish. The minimum size will remain at 13 inches or greater. These regulations will remain in effect.

B. Summary of monitoring programs.

1. Commercial Fishery

   The Division intends on collecting weakfish caught commercially in 2012, dependent upon availability of landings, to obtain the required lengths and ages based on the requirements of Addendum 1 to Amendment 4 of the Weakfish FMP.

2. Recreational Fishery

   Delaware will rely on the Marine Recreational Information Program for the collection of data characterizing weakfish caught recreationally in Delaware waters.

3. Research Trawl Survey Samples

   Delaware will continue to obtain age-length data by removing otoliths from a subsample of the weakfish caught in our research trawl survey. This age-length data will be used to convert length frequencies from recreational, commercial and survey samples into age frequencies.

REFERENCE CITED

Michels, S. F., and M. J. Greco. 2012. Coastal Finfish Assessment Survey, Federal Aid in Fisheries Restoration Project F-42-R-23. Annual Report. Delaware Division of Fish and Wildlife, Dover.

Table 1. Weakfish catch-at-age (expressed as number per nautical mile) from 30-foot trawl sampling in the Delaware Bay.

	Age Class									
Year	**0**	**I**	**II**	**III**	**IV**	**V**	**VI**	**VII**	**VIII**	**Total**
1991	22.76	27.16	3.63	0.64	0.00	0.00	0.00	0.00	0.00	54.19
1992	24.77	21.15	2.61	0.04	0.03	0.00	0.00	0.00	0.00	48.60
1993	21.40	50.30	25.40	3.90	0.50	0.00	0.00	0.00	0.00	101.50
1994	8.60	113.50	68.50	23.60	0.90	0.00	0.00	0.00	0.00	214.20
1995	41.10	75.30	53.50	15.70	5.40	0.10	0.00	0.00	0.00	191.10
1996	77.30	44.00	48.30	111.20	23.80	6.40	0.10	0.00	0.00	311.10
1997	36.44	33.41	25.00	13.87	34.60	2.96	0.47	0.00	0.00	146.75
1998	31.83	23.38	24.64	20.39	11.61	20.72	1.27	0.06	0.00	133.90
1999	50.85	42.07	20.17	17.03	6.74	2.59	3.66	0.30	0.06	143.47
2000	35.13	97.85	50.38	23.64	5.74	0.66	0.38	0.47	0.09	214.34
2001	21.58	13.11	42.63	18.77	5.53	0.57	0.09	0.00	0.00	102.28
2002	35.14	89.35	23.32	27.97	3.94	0.40	0.00	0.00	0.00	180.02
2003	20.23	50.16	13.98	1.22	0.42	0.00	0.00	0.00	0.00	86.02
2004	14.34	26.36	22.41	0.11	0.00	0.00	0.00	0.00	0.00	63.22
2005	10.16	12.07	14.54	2.39	0.00	0.00	0.00	0.00	0.00	39.15
2006	20.41	58.38	37.13	10.02	0.78	0.00	0.00	0.00	0.00	126.72
2007	35.10	23.47	17.43	2.10	0.16	0.00	0.00	0.00	0.00	78.26
2008	8.52	40.98	4.40	0.56	0.00	0.00	0.00	0.00	0.00	54.46
2009	25.41	31.20	4.59	0.04	0.00	0.00	0.00	0.00	0.00	61.24
2010	37.14	40.70	2.79	0.08	0.00	0.00	0.00	0.00	0.00	80.71
2011	53.08	74.42	14.69	0.11	0.00	0.00	0.00	0.00	0.00	142.30

Table 2. Annual YOY indices, expressed as the geometric mean of the catch per tow, for weakfish collected in Delaware Division of Fish & Wildlife 16 ft. trawl surveys, 1980-2011.

	YOY Indices	
Year	**Delaware Bay**	**Inland Bays**
1980	4.27	-
1981	5.98	-
1982	11.49	-
1983	4.47	-
1984	6.67	-
1985	9.35	-
1986	12.94	1.14
1987	5.98	1.26
1988	4.73	0.81
1989	11.11	2.2
1990	8.73	2.95
1991	20.07	5.87
1992	14.72	2.51
1993	14.79	0.63
1994	11.47	1.47
1995	13.49	4.24
1996	11.93	1.18
1997	15.4	2.07
1998	11.35	1.35
1999	13.51	1.99
2000	14.16	1.64
2001	7.57	1.53
2002	5.96	1.31
2003	10.44	2.44
2004	8.39	3.32
2005	16.84	3.84
2006	5.35	1.6
2007	13.7	2.98
2008	6.74	1.02
2009	8.56	5.91
2010	11.98	3.49
2011	7.89	3.30
Mean 1980-2009	10.39	2.35
Median 1980-2009	11.11	1.99

Table 3. Reported commercial landings for weakfish caught in Delaware waters, 1985-2011.

Year	Pounds
1985	990,817
1986	723,444
1987	577,735
1988	530,603
1989	543,741
1990	625,006
1991	503,289
1992	362,042
1993	195,216
1994	262,263
1995	291,010
1996	317,317
1997	558,919
1998	552,947
1999	441,176
2000	328,269
2001	190,093
2002	165,191
2003	91,460
2004	48,399
2005	70,788
2006	34,401
2007	24,750
2008	11,185
2009	2,976
2010	2,339
2011	1,100

Table 4. Reported commercial landings, by month, for weakfish caught in Delaware waters, 2011.

Month	Landings (lbs)	Percent
January	0	0.00%
February	0	0.00%
March	1	0.09%
April	153	13.91%
May	108	9.82%
June	39	3.55%
July	95	8.64%
August	487	44.27%
September	171	15.55%
October	40	3.64%
November	5	0.45%
December	1	0.09%
TOTAL	1,100	100.00%

Table 5. Reported commercial landings, by gear, for weakfish caught in Delaware waters, 2011.

Gear	Landings (Lbs.)	Percent
Fixed Gill Net	44	4.00%
Drift Gill Net	755	68.64%
Hook & Line	301	27.36%
Total	1,100	100%

Table 6. Recreational harvest, total catch and hook and release mortality for Delaware 1981-2011. Source: MRFSS, NMFS. Catch includes both landed and released fish. Hook and release mortality is estimated to be 10% of released fish. Total loss is the sum of harvest and fish killed by hook and release mortality.

Year	Harvest Number	PSE (%)	Harvest Pounds	PSE (%)	Mean Weight (lbs)	Total Catch	PSE (%)	Number Released	Estimated Catch & Release Mortality	Total Loss
1981	122,744	18.8	382,000	22.6	3.11	127,406	18.4	4,662	466	123,210
1982	217,821	33.1	1,330,769	44.2	6.11	230,532	31.7	12,712	1,271	219,092
1983	1,009,899	19.1	2,205,140	19.4	2.18	1,018,810	18.9	8,912	891	1,010,790
1984	593,107	26	1,279,594	25.6	2.16	594,271	26	1,163	116	593,223
1985	365,693	19.2	1,102,095	20.4	3.01	367,778	19.1	2,085	209	365,902
1986	914,489	23.4	1,598,932	22.1	1.75	924,127	23.2	9,637	964	915,453
1987	638,342	17.8	1,072,198	18.3	1.68	684,407	16.8	46,064	4,606	642,948
1988	974,712	12.1	1,664,477	11.8	1.71	1,034,692	11.4	59,980	5,998	980,710
1989	254,170	15.7	521,648	15.1	2.05	268,094	15	13,924	1,392	255,562
1990	179,837	11.4	207,131	12	1.15	221,602	9.8	41,765	4,177	184,014
1991	366,464	13.1	427,783	13	1.17	432,149	11.4	65,685	6,569	373,033
1992	100,561	16.6	232,206	20.1	2.31	162,447	12.6	61,886	6,189	106,750
1993	235,312	15.1	291,630	15.4	1.24	491,280	11.3	255,968	25,597	260,909
1994	300,211	14.5	319,493	14.7	1.06	861,210	11.5	560,999	56,100	356,311
1995	406,730	12.3	419,527	12.6	1.03	1,495,083	10.2	1,088,353	108,835	515,565
1996	633,920	10.8	690,120	10.6	1.09	2,200,966	10.3	1,567,046	156,705	790,625
1997	647,529	9.7	734,800	96	1.13	1,545,154	7.8	897,625	89,763	737,292
1998	455,603	10.8	616,422	11.2	1.35	1,069,146	8.1	316,543	31,654	487,257
1999	224,307	13.1	484,156	15.5	2.16	596,787	8.3	372,479	37,248	261,555
2000	311,553	13.9	635,339	14.6	2.04	777,049	9.7	465,496	46,550	358,103
2001	72,451	27	172,969	20.4	2.39	299,666	11.4	227,214	22,721	95,172
2002	121,884	15	243,157	15.7	1.99	223,166	10.6	101,282	10,128	132,012
2003	20,124	21.6	57,867	29.5	2.88	59,437	16.3	39,314	3,931	24,055
2004	4,499	45.4	3,942	42.3	0.88	77,055	24.8	72,556	7,256	11,755
2005	19,533	29.2	36,422	45	1.86	124,488	22.4	104,955	10,496	30,029
2006	10,457	36.2	18,616	29.7	1.78	106,258	24.4	95,802	9,580	20,037
2007	3,782	38.8	3,455	36.7	0.91	26,895	30.3	23,113	2,311	6,093
2008	4,032	50.7	4,478	48.4	1.11	65,502	35.5	61,470	6,147	10,179
2009	5,995	100.9	10,172	100.9	1.70	10,425	59.5	4,431	443	6,438
2010	88	62.2	131	73.7	1.49	12,771	40.8	12,682	1,268	1,356
2011	27	92.6	21	92.6	0.78	6,595	34.5	6,588	659	686
Average	**297,286**	**27**	**540,861**	**31**	**2**	**519,847**	**19**	**212,980**	**21,298**	**318,584**

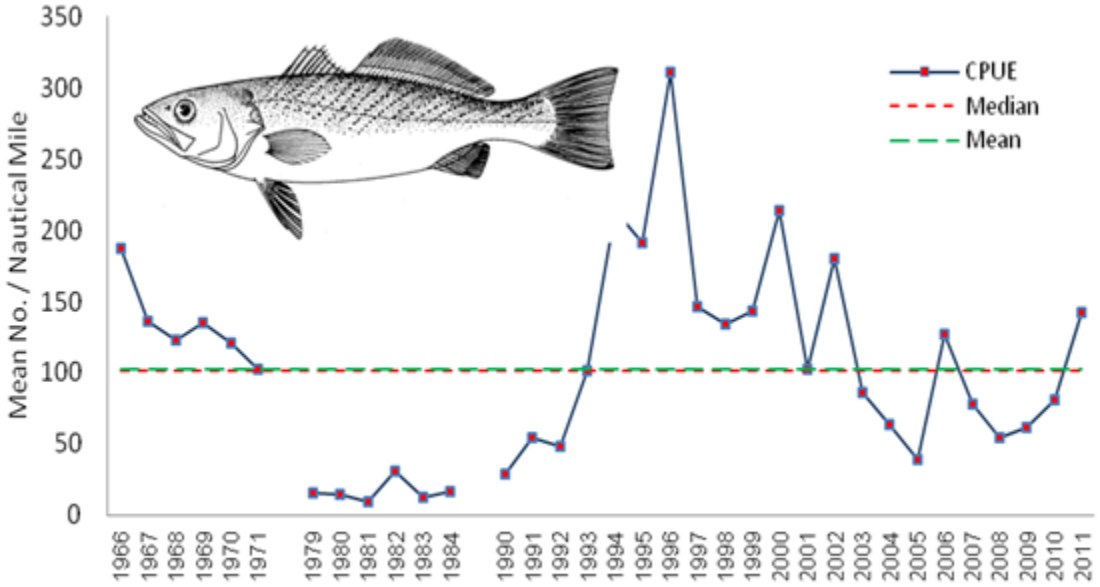


Figure 1. Weakfish relative abundance (mean number per nautical mile), time series (1966 – 2010) mean and median as measured in 30-foot trawl sampling in the Delaware Bay.

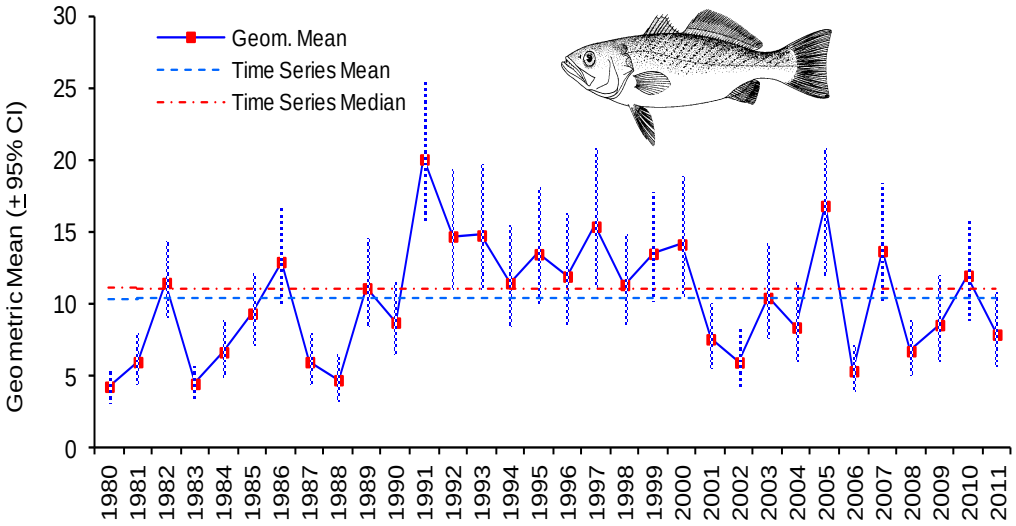


Figure 2. Index of young-of-the-year weakfish abundance, time series mean (1990 – 2010) and time series median as measured by 16-foot trawl sampling in the Delaware estuary.

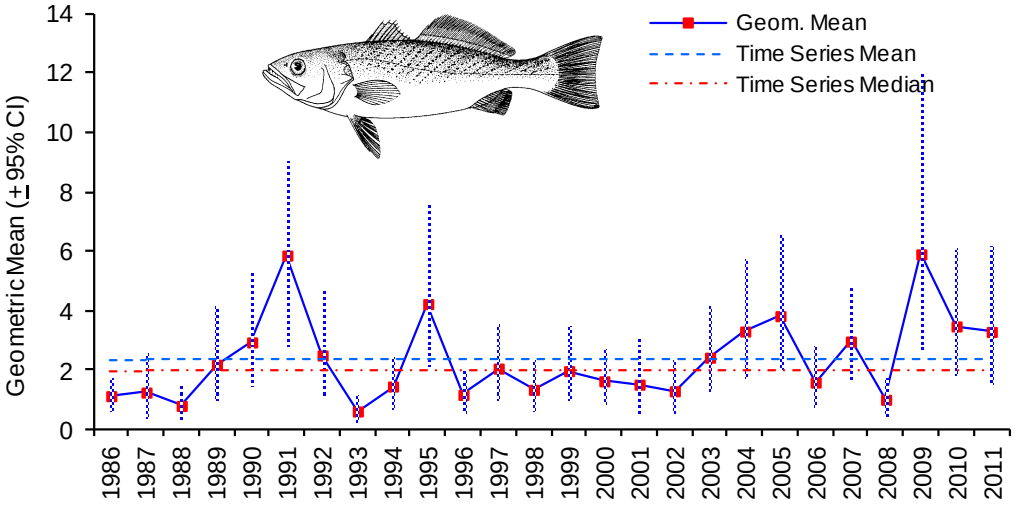


Figure 3. Index of young-of-the-year weakfish abundance, time series mean (1986 – 2010) and time series median as measured by 16-foot trawl sampling in Delaware's Inland Bays.

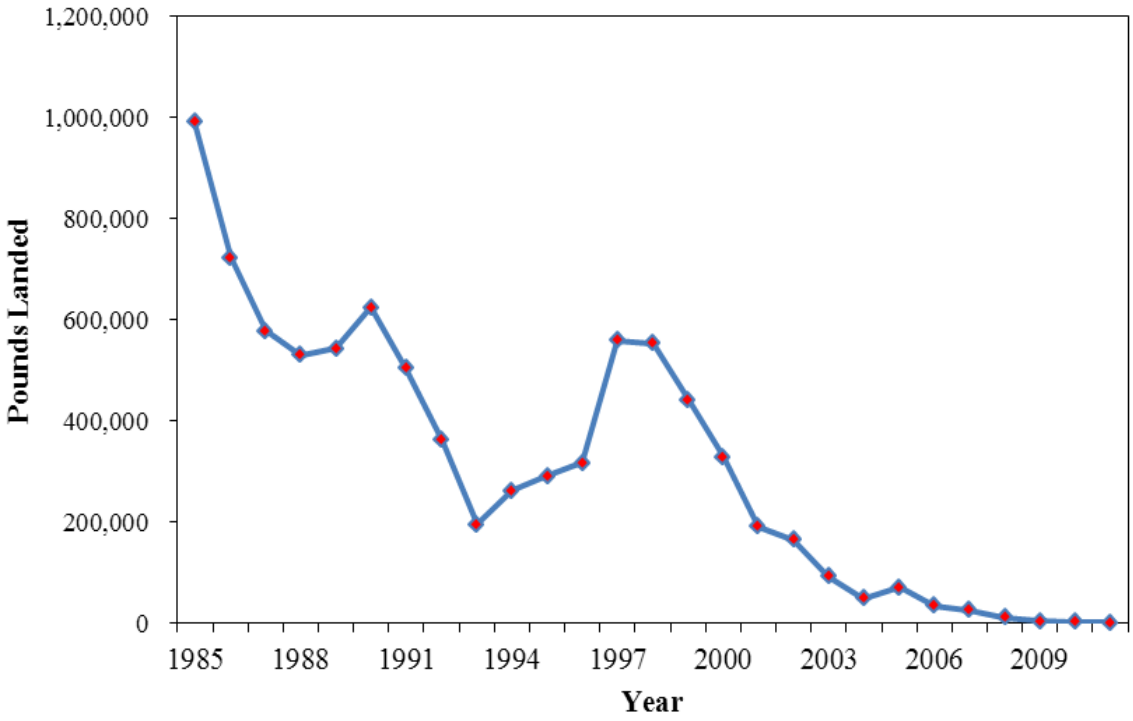


Figure 4. Delaware's commercial weakfish landings, 1985-2011.

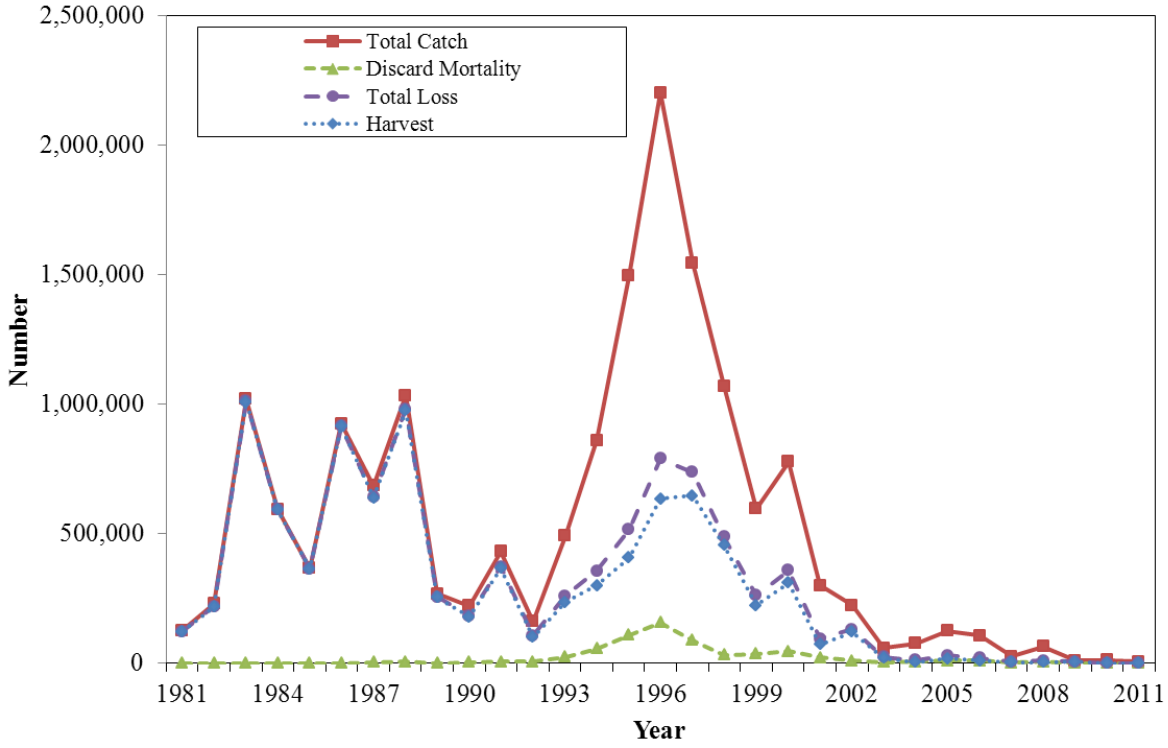


Figure 5. Delaware recreational weakfish estimates, 1990-2011.

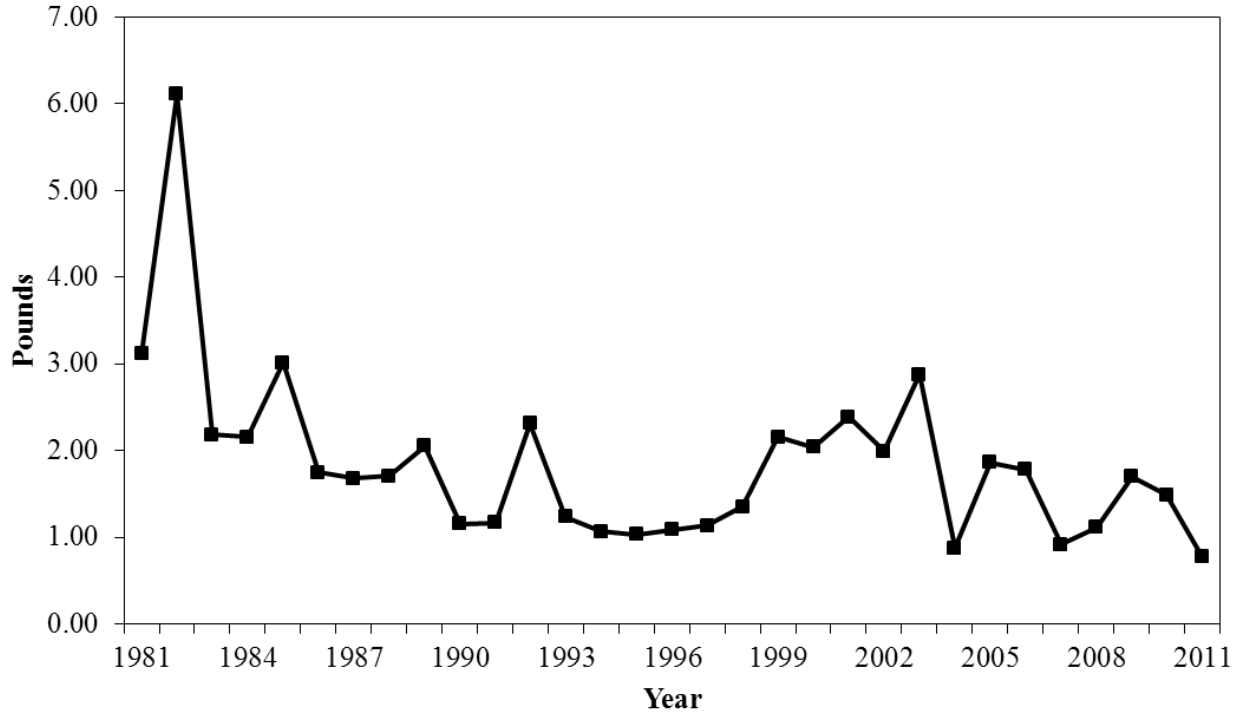


Figure 6. Average weight of weakfish harvested in the Delaware recreational fishery, 1990-2011.

Attachment – 1

Copy of the weakfish regulations in effect for the 2011 & 2012 fishing seasons.

3500 Tidal Finfish

3500 Tidal Finfish

Authenticated PDF Version

Weakfish and Spotted Sea Trout

3521 Weakfish Size Limits; Possession Limits; Seasons.

(Penalty Section 7 Del.C. §936(b)(2))

1.0 It shall be unlawful for any person to possess weakfish, *Cynoscion regalis*, taken with a hook and line, that measure less than thirteen (13) inches, total length.

2.0 It shall be unlawful for any person to whom the Department has issued a commercial food fishing license and a food fishing equipment permit for hook and line to have more than one (1) weakfish in possession during the period beginning at 12:01 AM on May 1 and ending at midnight on October 31 except on four specific days of the week as indicated by the Department on said person's food fishing equipment permit for hook and line.

3.0 It shall be unlawful for any person, who has been issued a valid commercial food fishing license and a valid food fishing equipment permit for fishing equipment other than a hook and line to possess weakfish, lawfully taken by use of such permitted food fishing equipment, that measure less than twelve (12) inches, total length.

3.1 It shall be unlawful for any person, who has been issued a valid commercial food fishing license and a valid food fishing equipment permit to possess more than one hundred pounds (100 lbs) of weakfish per vessel per day (a day being 24 hours) or trip, whichever is the longer period of time.

13 DE Reg. 1354 (04/01/10)

4.0 It shall be unlawful for any person, except a person with a valid commercial food fishing license, to have in possession more than one (1) weakfish, not to include weakfish in one's personal abode or temporary or transient place of lodging. A person may have weakfish in possession that measure no less than twelve (12) inches, total length, and in excess of one (1) if said person has a valid bill-of-sale or receipt for said weakfish that indicates the date said weakfish were received, the number of said weakfish received and the name, address and signature of the commercial food fisherman who legally caught said weakfish or a bill-of-sale or receipt from a person who is a licensed retailer and legally obtained said weakfish for resale.

11 DE Reg. 514 (10/01/07)

13 DE Reg. 1354 (04/01/10)

5.0 It shall be unlawful for any person to fish with any gill net in the Delaware Bay or Atlantic Ocean or to take and reduce to possession any weakfish from the Delaware Bay or the Atlantic Ocean with any fishing equipment other than a hook and line during the following periods of time:

Every weekend day (defined as 12:01 AM on Friday through midnight Sunday) in both May and June, plus contiguous weekdays (defined as 12:01 AM Monday through midnight Thursday) at the beginning of May and the end of June, such that the total number of closure days add up to thirty four (34) days. The exact dates of closures each year shall be mailed in advance to the affected public and published annually in the Delaware Fishing Guide.

6.0 The Department shall indicate on a person's food fishing equipment permit for hook and line four (4) specific days of the week during the period May 1 through October 31, selected by said person when applying for said permit, as to when said permit is valid to take in excess of one (1) weakfish but not more than 100 pounds per day. These four days of the week shall not be changed at any time during the remainder of the calendar year.

11 DE Reg. 514 (10/01/07)

13 DE Reg. 1354 (04/01/10)

7.0 It shall be unlawful for any person with a food fishing equipment permit for hook and line to possess more than one (1) weakfish while on the same vessel with another person who also has a food fishing equipment permit for hook and line unless each person's food fishing equipment permit for hook and line specifies the same day of the week in question for taking in excess of one (1) weakfish.

1 DE Reg 1770 (5/1/98)

2 DE Reg 1904 (4/1/99)

3 DE Reg 1088 (2/1/00)

4 DE Reg 1552 (3/1/01)

5 DE Reg. 2142 (5/1/02)

6 DE Reg. 1512 (5/1/03)

11 DE Reg. 514 (10/01/07)

13 DE Reg. 1354 (04/01/10)

MARYLAND DEPARTMENT OF NATURAL RESOURCES

Martin O'Malley, Governor
Anthony G. Brown, Lt. Governor
John R. Griffin, Secretary
Joseph P. Gill, Deputy Secretary

Maryland Weakfish (*Cynoscion regalis*) Compliance Report to The Atlantic States Marine Fisheries Commission – 2011

Prepared by

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August 2012

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I. Introduction

Weakfish (*Cynoscion regalis*) are found in Maryland's offshore waters, throughout the coastal bays, and in Chesapeake Bay. Adult weakfish are most frequently encountered along Maryland's Atlantic coast (within 10 miles) and in the southern reaches of Chesapeake Bay. Maryland's coastal bays and Chesapeake Bay provide extensive juvenile weakfish habitat.

In 2010 Maryland adopted new regulations to comply with the requirements of Addendum 4 of Amendment 4 to the weakfish management plan. Maryland reduced the recreational bag limit to one fish and set commercial bycatch limits of 100 and 50 pounds per trip or day (whichever is longer) for the Atlantic Ocean and Chesapeake Bay fisheries, respectively. The commercial hook and line fishery is limited to keeping the 50 pounds per trip or day limit during August 1 through September 30 in the Chesapeake Bay and its tributaries, and is not allowed to harvest bycatch the remainder of the year. Hook-and-line harvest is not allowed at any time in the Atlantic Ocean or its Coastal Bays and their tributaries.

In 2011, Maryland's total commercial landings decreased to the time series low of 423 pounds. This was less than 0.1% of the 1929 – 2010 mean annual harvest of 635,665 pounds. Maryland's estimated 2011 recreational harvest was 237 weakfish, the lowest in the 1981 – 2011 time series.

II. Request for *de minimis* status

N/A

III. 2011 Fishery and Management Programs.

a. Fishery dependent monitoring

MD DNR fisheries service biologists sampled commercial pound nets bi-weekly in Maryland's portion of the Chesapeake Bay from May 24 through September 07, 2011. All weakfish captured were measured to the nearest millimeter total length (TL). Otolith samples were taken from a sub-sample of weakfish collected from the onboard sampling project and each fish was measured to the nearest mm TL, weighed to the nearest gram and sex was determined.

A total of 26 weakfish were sampled during the onboard pound net sampling in 2011, and otoliths were extracted from 25 of those fish. The mean length of weakfish in Chesapeake Bay pound nets during 2011 was 236 mm TL. This mean was the lowest of the 19 year time series (Table 1). None of the 26 sampled fish in 2011 were of legal size (305 mm TL). The mean weight of the 25 sub-sampled fish was 137 g. Three of the 25 aged weakfish were age two, and the remaining 22 were age one.

In previous years biological samples were also collected from ocean trawl and or gill net fisheries. No weakfish were sampled from Atlantic Ocean fisheries in 2011, due to the low level of harvest associated with the bycatch limits and continued extremely low stock abundance.

Addendum I to Amendment IV of the Weakfish FMP enacted sampling requirements of 6 lengths per metric ton of commercial landings and 3 ages per metric ton of combined commercial and recreational landings. Maryland's 2011 preliminary landings are 0.19 metric tons commercial and 0.25 metric tons combined, requiring 1 length and 1 age sample to be taken in 2011. MD DNR collected 26 lengths and 25 otoliths from weakfish in 2011.

b. **Fishery independent monitoring**

A 4.9-m semi-balloon otter trawl, comprised of a 25 mm stretch mesh body with a 13 mm stretch mesh cod end liner, has been used to sample for juvenile weakfish in Maryland's Atlantic coastal bays since 1972 (Bolinger et al. 2007). Since 1989, 20 fixed stations have been trawled for six minutes at monthly intervals from April-October. Prior to 1989, monthly effort and locations sampled varied considerably, although some of the fixed stations were sampled during all years.

The geometric mean (GM) catch per hectare was used as a standardized index of juvenile abundance for the coastal bays survey, and was only calculated for the standardized years, 1989-2011. The 2011 GM from the coastal bays was 1.90 juvenile weakfish per hectare, a slight decrease from the 2009 abundance estimate of 2.16 (Figure 1), and was bellow the time series mean of 2.41 fish per hectare.

The Maryland Fisheries Service surveys blue crabs and finfish in areas of Chesapeake Bay with an otter trawl with the same dimensions and construction as the coastal bays trawl. However, the body of the netting was changed from nylon to sapphire twine in 2007. Comparison tows have been made, but analysis comparing catch composition between gears has not been completed. In this survey six fixed stations in Chesapeake Bay tributaries were sampled once a month from May through October: the Chester River, Eastern Bay, Choptank River and Patuxent River (six stations each), Tangier Sound (five stations) and Pocomoke Sound (eight stations). The trawl was towed for 6 minutes at 2.0-3.0 knots at each site. Juvenile finfish data was collected by this survey since 1980 (Davis et al.1995). There were some inconsistencies in recording fish in the electronic data base prior to 1989 and only years after 1988 were included for juvenile weakfish analysis.

Chesapeake Bay juvenile weakfish indices were calculated as the GM catch per tow. Since juvenile weakfish have been consistently caught only in Tangier Sound and Pocomoke Sound, only these areas were analyzed to minimize zero hauls that may represent unsuitable habitat rather than trends in abundance. The 2011 GM of 2.04 was the third consecutive year of increasing values, but was still below of the time series mean of 3.20 weakfish per tow (Figure 2).

c. Weakfish regulations:

Maryland's weakfish and spotted sea trout regulation are combined in state regulations, hence the inclusion of spotted sea trout in the following text.

From the Code of Maryland Regulations: 08.02.05.13.13 Weakfish and Spotted Sea Trout.

A. Minimum Size.

(1) A recreational angler may not catch or possess spotted sea trout less than 14 inches in total length.

(2) A recreational angler may not catch or possess weakfish less than 13 inches in total length.

(3) A person licensed to catch fish for commercial purposes may not catch or possess weakfish or spotted sea trout less than 12 inches in total length.

B. Recreational Catch Limits. Except for a person licensed to catch finfish for sale, a person may not catch or possess more than one weakfish and ten spotted sea trout per day.

C. Commercial.

(1) Atlantic Ocean, Its Coastal Bays, and Their Tidal Tributaries.

(a) A person may not catch, possess, or land more than 100 pounds of weakfish per day or trip, whichever is longer;

(b) The weight of the weakfish may not exceed the weight of the catch of the other species on board the vessel; and

(c) Harvest of weakfish with hook and line is prohibited.

(2) Chesapeake Bay and Its Tidal Tributaries.

(a) Hook and Line.

(i) The open commercial season for harvesting weakfish with hook and line is August 1 through September 30.

(ii) A person may not catch, possess, or land more than 50 pounds of weakfish per day or trip, whichever is longer.

(iii) No bycatch of weakfish is permitted outside of the open commercial season.

(b) All Other Gears.

(i) A person may not catch, possess, or land more than 50 pounds of weakfish per day or trip, whichever is longer.

D. Net Mesh Size Restrictions.

(1) Trawls. A person may not use a trawl with mesh less than 3-3/8 inches square or 3-3/4 inches diamond stretched mesh size to catch weakfish or spotted sea trout.

(2) Gill Nets. A person may not use a gill net with stretched mesh size less than 3 inches to catch weakfish or spotted sea trout.

E. Public Notice. The Secretary:

(1) May modify, open, or close a season by publishing notice in a daily newspaper of general circulation at least 48 hours in advance, stating the effective hour and date; and

(2) Shall make a reasonable effort to disseminate public notice through various other media so that an affected person has reasonable opportunity to be informed.

d. **Commercial and Recreational Harvest**

Commercial Harvest

Commercial harvest records submitted to MD DNR, as of July 27, 2012, indicated 423 pounds of weakfish were harvested statewide in 2011 (Table 2). These landings were 80% lower than those of 2010, and were the lowest in the 1929-2010 time-series (Figure 3). The 2011 harvest was only 0.06% of the time series mean of 635,665 pounds. More restrictive regulation were put in place in 2010 that most likely impacted total landings. However, only 3.7% of weakfish harvest reports met or exceeded the current bycatch limits, and the total number of trips reporting weakfish declined by 67%. Suggesting a decrease in landings may have occurred even if more liberal regulation had been in place. Sixty-six percent of the 2011 weakfish harvest was taken using gill nets, and the remaining 34% was from otter. Ninety-four percent of the 2011 commercial landings were from the Atlantic Ocean or coastal bays, and 6% were from Maryland's portion of Chesapeake Bay.

Beginning in 2006, all Maryland commercial fishers were required to report their catch daily by species in pounds. Weakfish bycatch was calculated for each fisher by area and day. The daily bycatch was compared to the 100 pound per day maximum bycath limit in the Atlantic Ocean and coastal bays and 50 pound per day maximum bycath limit in the Chesapeake Bay. One violation of the bycatch regulations occurred in 2011 in the ocean trawl fishery. The single trip exceeded the bycatch limit by 144 pounds. The total disallowed bycatch in 2011 accounted for 34% of total landings by weight

(Table 3). There were 27 weakfish harvest reports in 2011; therefore, 3.7% of trips were not in compliance with Maryland's bycatch limits.

Recreational Harvest

All NMFS estimates referred to below were acquired on August 8, 2012. Maryland recreational anglers harvested an estimated 237 weakfish (PSE = 91%) during 2011 totaling 134 pounds (PSE = 89%; NMFS Fisheries Statistics and Economics Division 2012, Figure 4). The 2011 estimate decreased compared to the past two years, and was the lowest of the 31 year time series. However, the high PSE values of these estimates indicate very high uncertainty in the estimated values. Maryland anglers released an estimated 18,500 weakfish (PSE = 57%) in 2011, an 89% decrease compared to 2010 (162,733, PSE = 50%).

Maryland issued sport-fishing citations for weakfish caught in Chesapeake Bay exceeding 10 pounds from 1965 through 1995 (Figure 5). During the 31 year period, citations rose steadily from 1965 through 1980 but then declined dramatically. No citations were issued between 1991 and 1997, indicating an absence of trophy-sized fish during this period (Figure 5). After 1995, the program was modified to award citations based on length rather than weight. A length-weight conversion was used to estimate whether the fish registered would have weighed ten pounds or more (740 mm or 29 in. TL) if a weight was not submitted. A total of 16 such citations were issued in 2003, but dropped to only six in 2004 and two in 2005. The number of citation issued in 2006 increased to seven but has been zero since 2007.

Since 1993, Maryland has required charter boat captains to submit log books indicating the number of trips, number of anglers per trip and number of fish harvested and released by species. Trips in which a species was targeted but not caught could not be distinguished in the log books, since no indication of target species is given. A Chesapeake Bay charter boat geometric mean harvest per angler index was derived for weakfish from 1993-2011. Maryland charter boat captains reported harvesting between 2,042 and 75,154 weakfish per year from 1993 – 2011 (Figure 6), with a catch declining dramatically in 2003. The charter boat harvest has remained below the 2003 level, with 2011 harvest being the lowest of the time series. The reported charter boat harvest was significantly correlated to both the reported commercial harvest ($R^2 = 0.54$, $P < 0.001$) and the statewide MRFSS estimate ($R^2 = 0.49$, $P < 0.001$). The geometric mean catch per angler has declined significantly from 1993 – 2011 (Figure 7), but has been fairly stable at a low level in recent years.

e. **Habitat requirements**

There were no habitat requirements in Amendment 4.

IV. Planned Management for 2012.

MD DNR will continue all monitoring projects in 2012, and does not anticipate any changes to our sampling plan.

No regulation changes are planned for 2012.

V. Plan Specific Requirements

None

VI. Law enforcement requirements

None.

References

Bolinger, A., S. Doctor, A. Luettel, M. Luisi, and G. Tyler. 2007. Investigation of Maryland's CoastalBays and Atlantic Ocean Finfish Stocks. Federal Aid Project Report No. F-50-R-15. Maryland Department of Natural Resources. Annapolis, Maryland.

Davis, G. R., B. K. Daugherty, and J. F. Casey. 1995. Analysis of blue crab, *Callinectes sapidus*, stocks in the Maryland portion of the Chesapeake Bay from summer trawl data. Maryland Department of Natural Resources, Annapolis, Maryland.

Table 1. Mean length (mm TL) and number of weakfish measured from Chesapeake Bay commercial onboard pound net sampling, 1993 – 2011.

Year	Mean Length (mm)	Number Measured
1993	278	496
1994	291	642
1995	306	565
1996	293	1432
1997	297	755
1998	337	1234
1999	333	851
2000	360	333
2001	334	77
2002	324	196
2003	325	129
2004	273	326
2005	278	304
2006	290	62
2007	275	61
2008	276	41
2009	262	23
2010	253	47
2011	236	26

Table 2. Maryland's 2011 commercial weakfish landings by area, gear and month.

Gear	Month	Landings (Pounds)	Total Landings By Gear (pounds)
Gill Net	**10**	24	24
Total			24

Atlantic Ocean weakfish landings

Gear	Month	Landings (Pounds)	Total Landings By Gear (pounds)
Gill Net	**4**	3	
Gill Net	**8**	39	
Gill Net	**9**	14	
Gill Net	**10**	18	
Gill Net	**12**	16	90
Trawl	**1**	58	
Trawl	**3**	251	309
Total			399

Chesapeake and Ocean combined Total **423**

Table 3. Pounds and percent of Maryland weakfish bycatch landed in 2011.

	Pounds Landed	**Percent of Total Landings**
Allowable bycatch	1,948	90.7%
Disallowed bycatch	200	9.3%
Total bycatch	2,148	

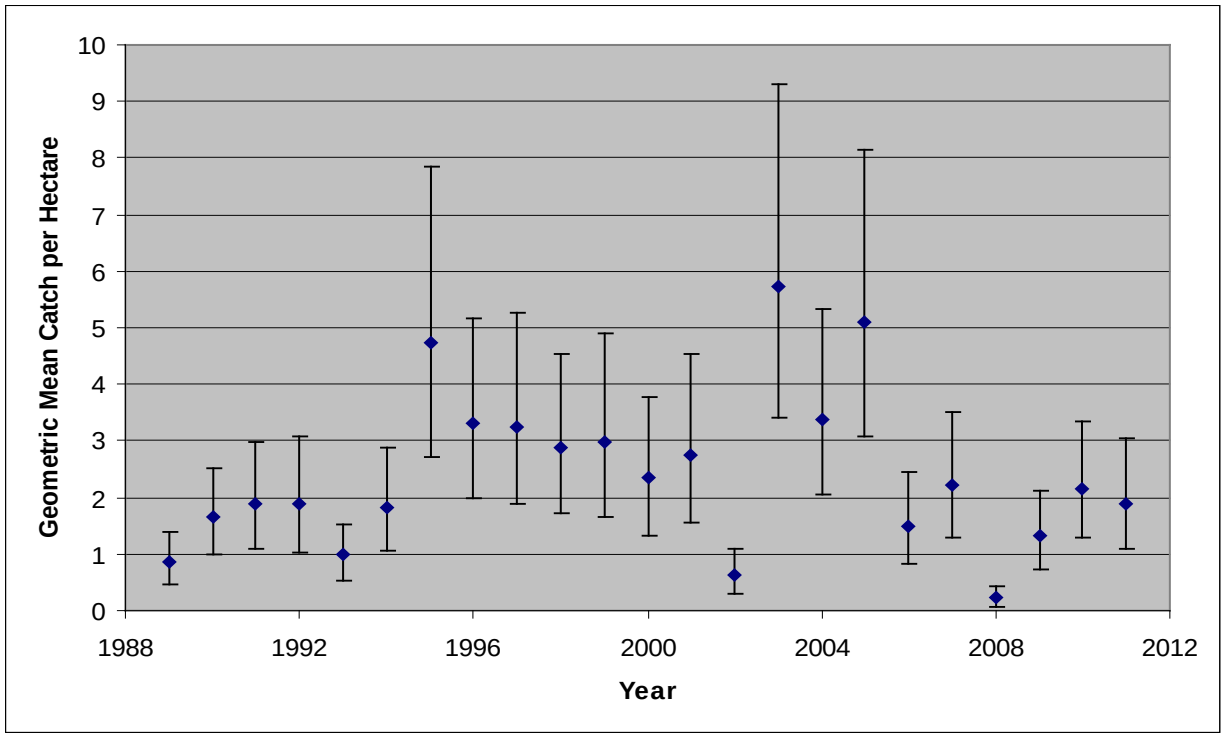

Figure 1. Maryland juvenile weakfish geometric mean catch per hectare and 95% confidence intervals for Atlantic coastal bays, 1989-2011.

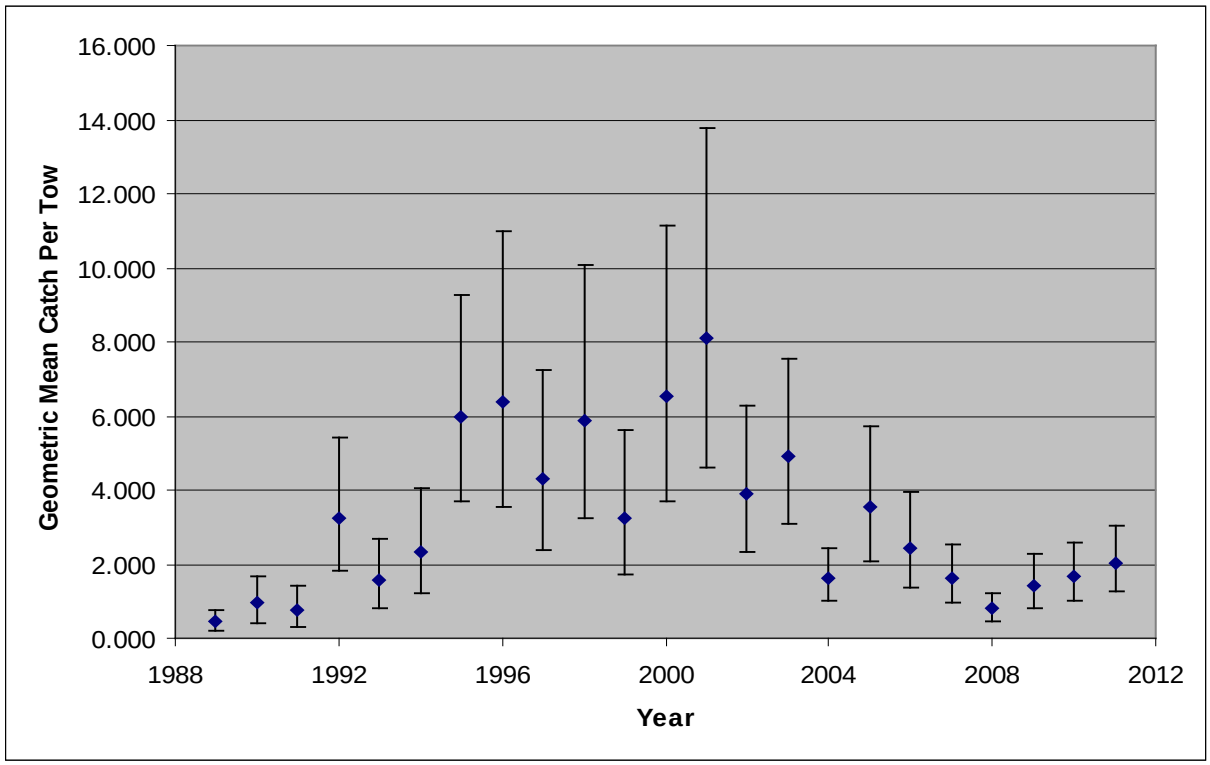

Figure 2. Maryland juvenile weakfish geometric mean catch per trawl and 95% confidence intervals for Maryland's lower Chesapeake Bay, 1989 – 2011.

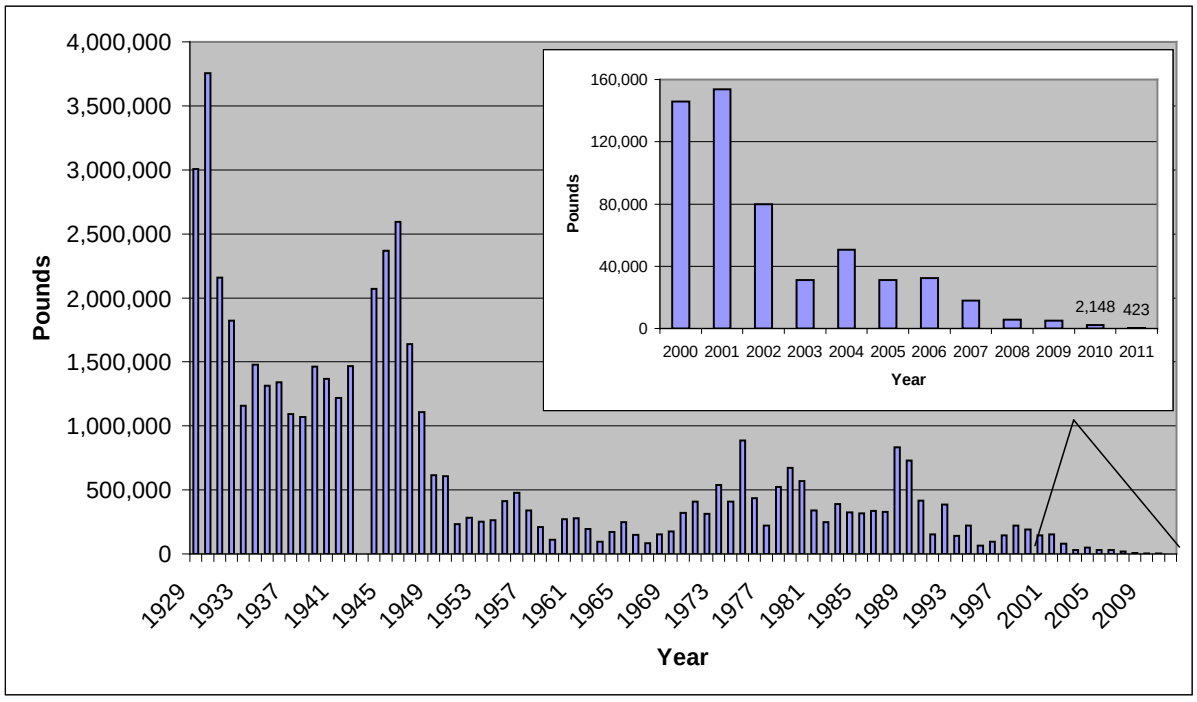

Figure 3. Maryland total commercial weakfish landings 1929-2011. Inset provides detail of landings since 2000.

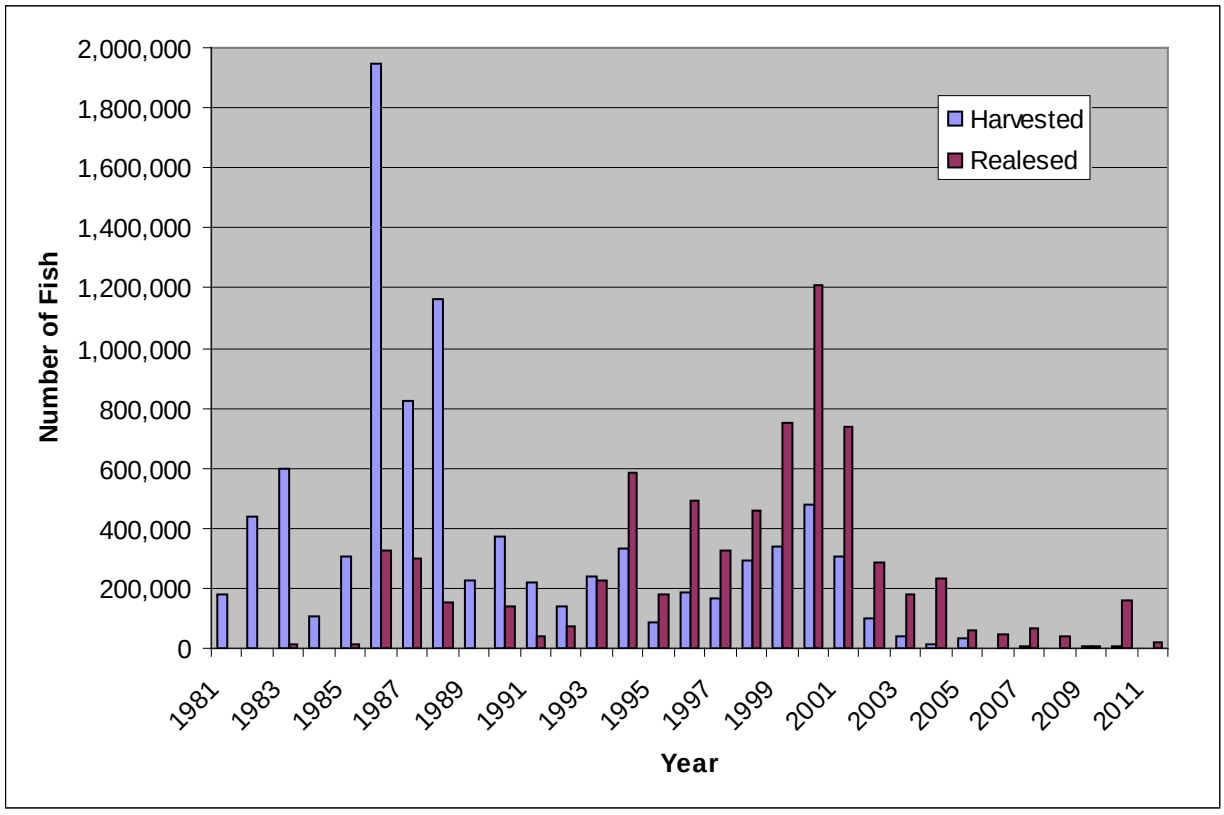

Figure 4. Maryland's recreational weakfish harvest and releases in numbers, 1981-2011.

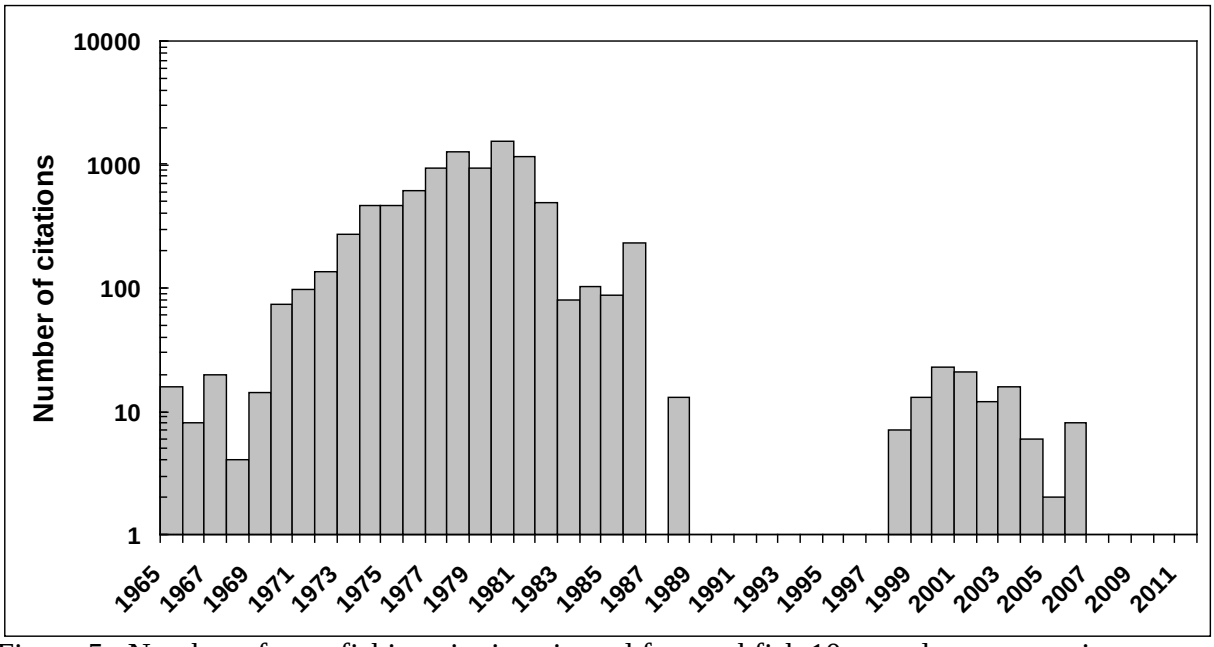

Figure 5. Number of sportfishing citations issued for weakfish 10 pounds or greater in Chesapeake Bay (1965-1994) or 29 inches or greater (1995-2011). Data for 1987 and 1989 are missing. Note log scale. Blanks indicate citation-sized weakfish were not present.

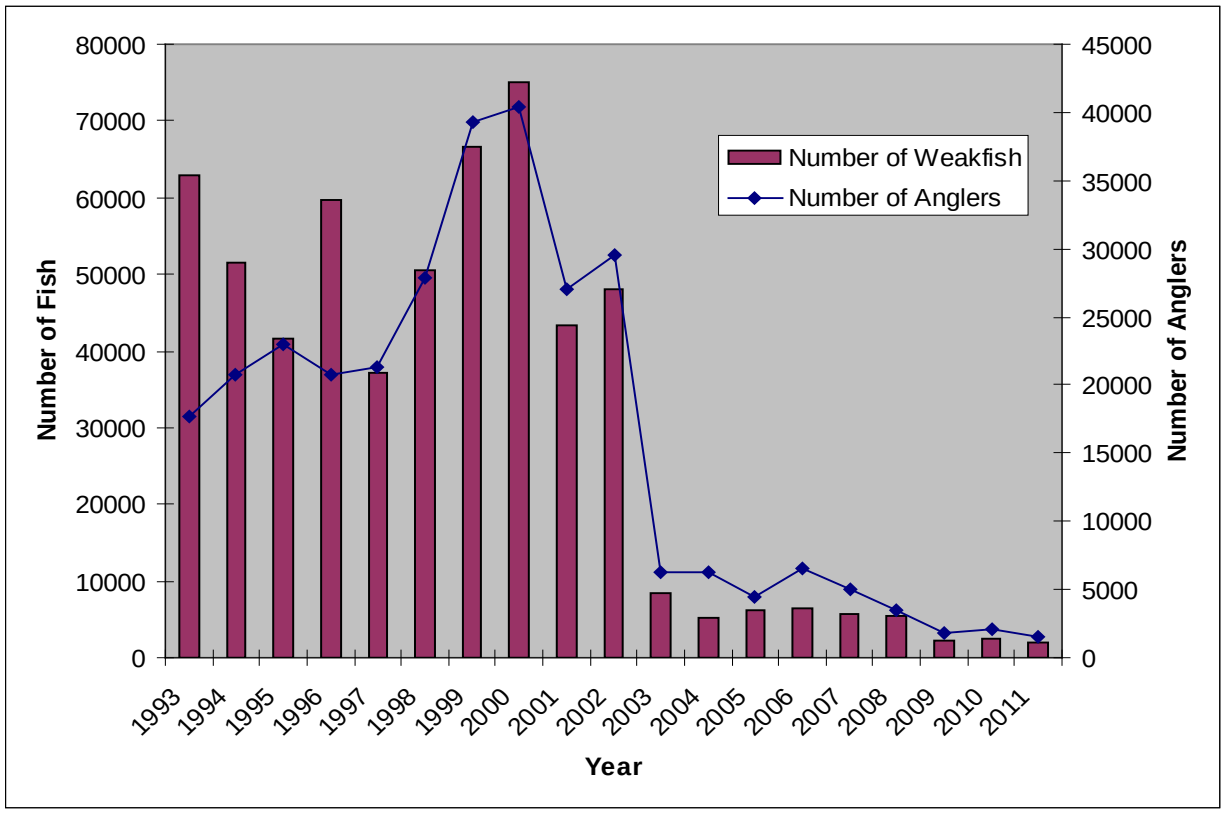

Figure 6. Logbook reports of number of weakfish harvested and number of angler trips for charter boats in Maryland, 1993-2011.

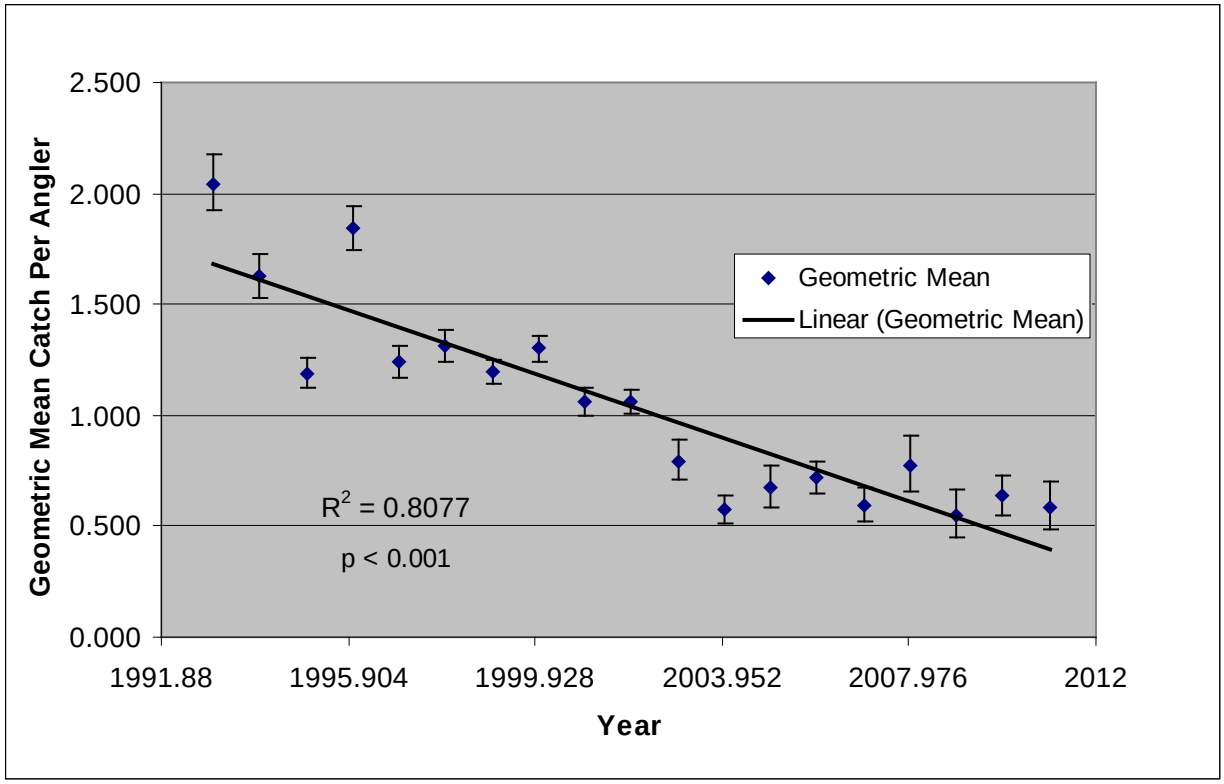

Figure 7. Geometric mean harvest per angler trip and 95% confidence intervals from Maryland charter boat logs, 1993-2011.

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Weakfish
2011 Annual State Report
June 1, 2012

I. Introduction

A. Summary of the year -
The commercial harvest of weakfish from the Potomac River remained at a very low level in 2011, much like the 2009 value, which was the lowest reported harvest since our records began in 1964.

II. Request *de minimis*, where applicable - N/A

III. Previous calendar year's fishery and management program

A. Fishery Dependent Monitoring
Pound nets are the primary commercial gear for weakfish. Haul seines, hook and line, and several miscellaneous gear types can occasionally contribute to the total weakfish harvest.

B. Fishery Independent Monitoring - None

C. Regulations in Effect
The minimum commercial size limit was 12 inches with an open season of July 28 through December 31.

New regulation effective January 1, 2011 – all pound nets in the Potomac River must have at least six PRFC approved fish cull panels properly installed in each pound net to help release undersize fish. These fish cull panels were being used by some pound netters on a voluntary basis prior to 2011. As a conservation measure, these fish cull panels allow the release of small weakfish before the nets are fished, and tests have demonstrated that the panels may allow escapement of at least 68 percent of sub-legal weakfish.

Pound netters who installed PRFC approved fish cull panels in the prescribed manner and had the net certified by the PRFC, could possess, as by-catch, up to 50 pounds (one bushel) of legal size weakfish from February 15 through July 27. The allowance must be less than or equal to the poundage of other lawfully harvested species.

The recreational and charter boat weakfish regulations included a season of January 1 through December 31, a 12" minimum size limit, and a one fish per person per day creel limit.

D. Harvest

Weakfish commercial harvest in 2011 totaled 45 pounds. This estimate is from the PRFC's mandatory commercial daily harvest reporting system. The haul seine fishery effort is expressed as "hauls" and is one fishing of the haul seine. The pound net fishery effort is expressed as "PN fished days", which is one pound net fished one time.

Harvest (lbs.)	Gear	Effort
39	Haul Seine	9 hauls
6	Pound net	4 PN fished days

During this reporting year, no undersized weakfish were reported as discarded or released in the commercial fishery.

For the private recreational fishery, the PRFC 'adds-on' to the MRFSS phone survey. Results are reported and included as either MD or VA landings. Contact information is supplied to the NOAA For Hire Survey for all charter boats licensed to operate in the Potomac.

Tables and Figures:

Table 1 shows the Potomac River commercial harvest of weakfish from1964 through the reporting year.
Table 2 shows the Potomac River commercial weakfish discards from 1999 through the reporting year.
Table 3 shows the annual Potomac River Charter Boat Weakfish Catches – 1993 through the reporting year.

Figure 1 illustrates the Potomac River commercial weakfish harvest (1964 – 2011).
Figure 2 illustrates the Potomac River commercial weakfish harvest and pound net CPUE.

IV. Planned management programs for the current year

A. Summarize Regulations that will be in Effect

The pound net fishery is a limited entry fishery, with a maximum of 100 licenses on a total riverwide basis. A pound net is defined as a fixed fishing device with one head, trap or pound measuring not less than 20 feet square at the surface of the water on the channel end and only one leader or hedging not less than 300 feet in length.

B. Summarize Monitoring Programs that will be Performed

We will continue the mandatory harvest reporting program.

C. Highlight any Changes from the Previous Year - None

Table 1

Potomac River Commercial Harvest (lbs) for WEAKFISH by gear type

							LBS LANDED IN		
YEAR	HAUL SEINE	POUND NET	FYKE NET	GILL NET	H & L	MISC.	MARYLAND	VIRGINIA	TOTAL
1964	-	-	-	-	-	22,451	31	22,420	22,451
1965	-	-	-	-	-	35,475	205	35,270	35,475
1966	-	-	-	-	-	19,252	-	19,252	19,252
1967	-	-	-	-	-	13,949	936	13,013	13,949
1968	-	-	-	-	-	12,233	-	12,233	12,233
1969	-	-	-	-	-	4,417	178	4,239	4,417
1970	-	-	-	-	-	60,676	1,290	59,386	60,676
1971	-	-	-	-	-	46,055	2,017	44,038	46,055
1972	-	-	-	-	-	35,232	1,934	33,298	35,232
1973	-	-	-	-	-	111,304	2,559	108,745	111,304
1974	-	-	-	-	-	160,146	5,461	154,685	160,146
1975	-	-	-	-	-	181,560	3,741	177,819	181,560
1976	54	334,130	-	2,951	-	6,010	11,416	331,729	343,145
1977	3,769	569,178	-	1,988	-	463	9,236	566,162	575,398
1978	-	339,287	-	1,221	-	83,641	34,896	389,253	424,149
1979	17,933	368,792	-	4,658	-	1,091	18,485	373,989	392,474
1980	66,471	633,218	-	6,445	-	-	40,137	665,997	706,134
1981	-	495,361	-	23,868	-	-	20,278	498,951	519,229
1982	5,691	266,487	-	35,052	-	-	14,950	292,280	307,230
1983	2,007	97,373	-	18,342	-	1,672	10,271	109,123	119,394
1984	750	89,010	-	406	-	-	3,289	86,877	90,166
1985	-	71,923	-	401	-	342	4,856	67,810	72,666
1986	583	115,061	535	18	-	-	8,351	107,846	116,197
1987	20,711	244,610	-	125	-	496	25,583	240,359	265,942
1988	-	96,737	-	28	-	-	6,783	89,982	96,765
1989	162	28,483	-	-	8	-	4,777	23,876	28,653
1990	-	18,493	-	4	13	13	3,271	15,239	18,510
1991	-	13,796	-	-	2	2	1,225	12,573	13,798
1992	-	19,961	-	-	0	-	2,482	17,479	19,961
1993	-	37,828	-	-	0	-	1,959	35,869	37,828
1994	-	28,958	-	-	0	-	348	28,610	28,958
1995	-	38,138	-	-	0	-	2,034	36,104	38,138
1996	93	99,400	-	-	0	-	8,902	90,591	99,493

Table 1 continued

Potomac River Commercial Harvest (lbs) for WEAKFISH by gear type

							LBS LANDED IN		
YEAR	HAUL SEINE	POUND NET	FYKE NET	GILL NET	H & L	MISC.	MARYLAND	VIRGINIA	TOTAL
1997	5	35,203	27	-	4	4	936	34,303	35,239
1998	50	81,694	-	-	0	-	8,870	72,874	81,744
1999	27	68,286	5	104	327	327	5,918	62,831	68,749
2000	393	67,840	62	-	247	279	8,016	60,558	68,574
2001	261	43,635	32	42	235	249	4,627	39,592	44,219
2002	197	57,565	-	-	55	1	3,073	54,745	57,818
2003	-	5,273	-	-	-	-	982	4,291	5,273
2004	-	1,984	-	-	-	2	18	1,968	1,986
2005	-	1,004	-	-	-	-	171	833	1,004
2006	-	689	-	-	-	-	-	689	689
2007	-	15	-	-	5	-	3	17	20
2008	-	38	-	-	36	-	5	69	74
2009	15	2	-	-	-	-	-	17	17
2010	54	26	-	-	-	-	-	80	80
2011	39	6	-	-	-	-	-	45	45

Table 2

Potomac River
Commercial Weakfish Discards (pounds)

Year	# Reports	No Market	Closed Season	Undersized	Total
1999	33	10	1,905	706	2,621
2000	18	-	-	1,385	1,385
2001	4	95	-	3	98
2002	12	-	-	95	95
2003	1	-	-	5	5
2004	-	-	-	-	-
2005	-	-	-	-	-
2006	-	-	-	-	-
2007	-	-	-	-	-
2008	-	-	-	-	-
2009	-	-	-	-	-
2010	-	-	-	-	-
2011	-	-	-	-	-

Table 3

Potomac River
Charter Boat Weakfish Catches

		HARVEST		RELEASED	
Year	# Trips	# Fish	Pounds	# Fish	Avg. Size (in.)
1993	12	15	21	10	6
1994	8	56	70	14	9
1995	27	284	376	39	12
1996	87	2,203	3,313	714	12
1997	33	293	470	51	12
1998	28	413	486	31	13
1999	22	104	183	45	10
2000	24	131	299	36	13
2001	19	232	458	20	13
2002	24	76	147	50	12
2003	-	-	-	-	-
2004	-	-	-	-	-

2005 - 2011 NOAA FOR HIRE SURVEY

Figure 1

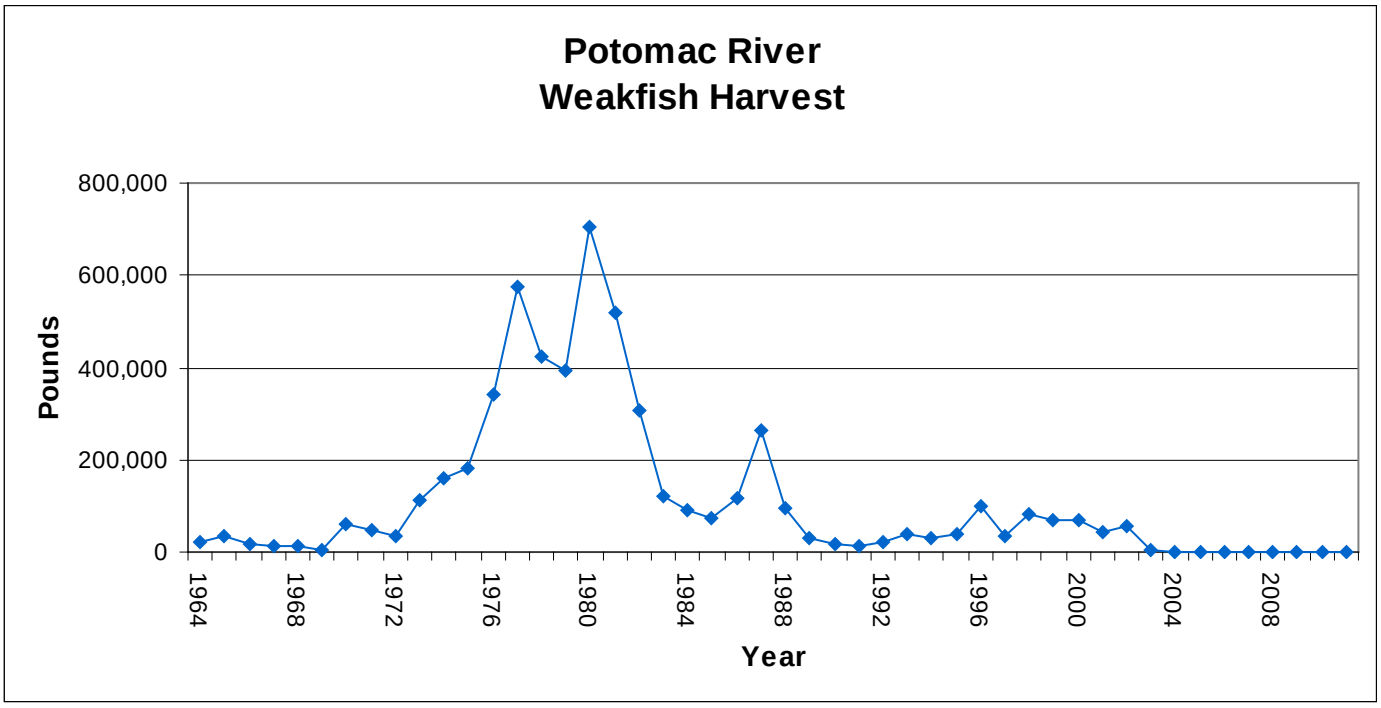
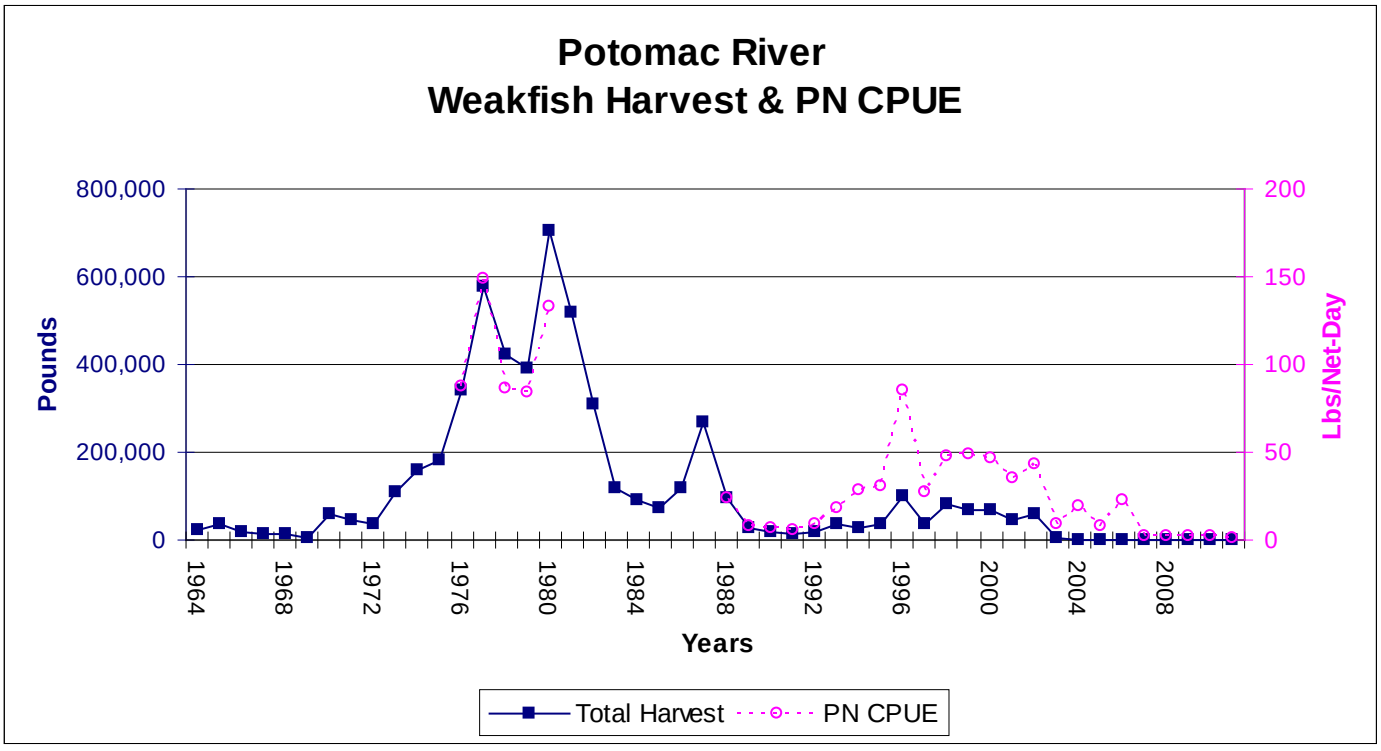


Figure 2



COMMONWEALTH of VIRGINIA

Marine Resources Commission

2600 Washington Avenue
Third Floor
Newport News, Virginia 23607

Douglas W. Domenech
Secretary of Natural Resources

Jack G. Travelstead
Commissioner

September 1, 2012

MEMORANDUM

TO: **Mike Waine, Weakfish FMP Coordinator**
Atlantic States Marine Fisheries Commission

FROM: **Joe Cimino, Virginia Technical Committee Representative**
Virginia Marine Resources Commission

SUBJECT: **Virginia's Report on the 2010/2011 Weakfish Fisheries Management Program**

I. Introduction

This report summarizes the 2011 Virginia weakfish landings from the commercial and recreational fisheries. Additionally, this report outlines regulatory management measures, required by the Atlantic States Marine Fisheries Commission (ASMFC) Interstate Fishery Management Plan (FMP) for weakfish that were implemented by the Virginia Marine Resources Commission (VMRC). Changes to the weakfish regulation were made effective May 1, 2010 to comply with requirements established in Addendum IV to the FMP and remained in effect for 2011. Commercial landings of 26,014 pounds in 2011 were the lowest in recorded history (since 1929), with the previous five years of 2006 through 2010 rounding out the six lowest years in commercial landings. Recreational harvest estimates for 2011 were 5,208 pounds, the second lowest estimate by weight and the lowest by numbers (8,723 fish) recorded by the Marine Recreational Fisheries Statistical Survey (MRFSS) for Virginia. The years 2007 through 2011 comprise the five lowest years of estimated harvest in numbers for the MRFSS, since 1981. The Marine Recreational Information Program (MRIP), which only have estimates for 2004 through 2011, also has 2010 and 2011 as the lowest and second lowest harvest years, respectively. The 2011 MRIP harvest (A + B1) estimate was 2,635 pounds (4,373 fish).

In accordance with Addendum I to Amendment 4 in the weakfish FMP, Virginia is required to collect six individual fish lengths for each metric ton of weakfish landed commercially, and three individual fish ages for each metric ton of total (recreational and commercial) weakfish landed, with a maximum of 1,000 ages annually per state. Virginia was required to collect 71 lengths based on the 11.8 metric tons of weakfish landed commercially. A total of 1,147 lengths were collected from the commercial fishery in 2011. Based on the total weakfish landed, 27.5 metric tons, Virginia was required to collect 83 ages. In 2011, 324 otoliths were collected, with 271 processed for ageing. Both sampling requirements were exceeded for 2011, as has been the case since 2006 when this mandatory sampling was initiated.

II. Request for *de minimis*, if applicable.

Not applicable.

III. Previous calendar year's fishery and management program

A. Activity and results of fishery-dependent monitoring (provide general results and references to technical documentation).

As set forth in Addendum I to Amendment 4 to the ASMFC FMP for Weakfish, Virginia committed to the required biological sampling, for 2012. The sampling will exceed the required six fish lengths per metric ton of weakfish landed commercially and three fish ages per metric ton for weakfish landed by either fishery (recreational or commercial). In 2011 the VMRC collected 1,147 lengths. From January through June (early period), a total of 195 lengths were collected and 952 lengths were collected the remaining six months of 2011 (late period; Table 2a). There were 324 otoliths collected for 2011 (144 for the early period, 180 for the late period). All samples collected by the VMRC were from the commercial fishery and were either sampled at a fish processing house, at a dock, or at the gear itself. Of the 324 otolith samples collected by the VMRC, a total of 271 were processed and aged by Old Dominion University's Age & Growth Laboratory at the Center for Quantitative Fisheries Ecology (Table 2b). The remaining otoliths were not processed since they represented size categories that were adequately sampled. However, otoliths were collected to ensure Virginia would meet the sampling requirements once the final MRFSS estimates were known. Table 3 summarizes the total samples collected by gear and season in 2011. Also included are the required number of samples per Addendum 1 (using most up-to-date 2011 data from Virginia's mandatory reporting database and MRIP website).

B. Activity and results of fishery-independent monitoring (provide general results and references to technical documentation).

The Virginia Institute of Marine Science (VIMS) conducts an annual juvenile trawl survey in the Chesapeake Bay and its tributaries. The 2011 young of the year index was 5.23, as a weighted geometric mean. This index has shown variability from year to year, but suggests steady recruitment is occurring (see Table 17 and Figure 20 in the attached annual report for the survey, "TrawlAnnualReport_2012.pdf"). The 2010 value was the highest in over a 20 year period.

In 2002, the VIMS began the Chesapeake Bay Multispecies Monitoring and Assessment Program (ChesMMAP)—a large-mesh bottom trawl survey conducted within the main-stem of the Chesapeake Bay. The 2011 Annual Progress Report for the program provides minimum trawlable abundance estimates in numbers and biomass for weakfish age-1+ and older, as well as site specific abundance estimates for the years 2002 through 2011 (see pages 152–166). Minimum trawlable abundance

estimates are defined in page six of the report as estimates that represent the smallest number (or biomass) of fish present within the sampling area that are susceptible to the sampling gear. The report also provides length-frequency and age-frequency distributions and diet composition for the Chesapeake Bay, for the same time period. It is important to note that the otolith ages for ChesMMAP are processed by the VIMS.

C. Copy of regulations that were in effect, including a reference to the specific compliance criteria as mandated in the FMP.

New regulations went into place effective May 1, 2010 to maintain compliance with Addendum IV to Amendment 4 of the weakfish FMP. The changes were as follows:

- Implementation of a 100-pound landing limit, per vessel, per day or trip (whichever is the longer period of time), for directed fisheries, with all other regulations (e.g. size limits, gear restrictions, season restrictions) maintained.
- Reduction of the bycatch limit to 100 pounds, per vessel, per day or trip (whichever is the longer period of time), for all non-directed fisheries (those harvesting weakfish during closed seasons, from closed areas, or not meeting gear restrictions. All other requirements, for landing weakfish as bycatch shall remain in effect (e.g. there must be an equal amount of other species as there is weakfish, on board any vessel, for any landing; the commercial hook and line fishery shall not be allowed a bycatch of weakfish allowance, under non-directed conditions, a 12-inch minimum size limit shall continue).
- Reduction of the finfish trawl fishery's allowance for undersized fish (less than 12 inches total length) to 100 fish.
- For the recreational fishery, the possession limit is one fish, the minimum size (12 inches) and no closed season will remain in place.

Commercial harvesters in Virginia waters are required to have a commercial license and report harvest on a monthly basis with trip level information. Licensed commercial harvesters and licensed commercial seafood buyers are required to allow biological sampling of their harvest. Below is a summary of the regulations in place, for weakfish, for 2011.

For the recreational fishery, the minimum size limit was 12 inches and possession limit was one fish as of May 1, 2010. The season is open year-round.

A copy of the regulation is attached.

D. Harvest broken down by commercial (by gear type where applicable) and recreational, and non-harvest losses (when available).

Virginia's commercial landings, in 2011, were 26,041 pounds. That is a reduction of more than 97% from the 2000 through 2004 base period average landings of 936,421 pounds, the Virginia cap established by Addendum II (Table 1). The 2011 commercial landings are the lowest on record (with landings dating back to 1929); however' it is the first full year of the 100 pound trip limit. Table 1 and Figure 1 characterize the commercial landings of weakfish since 1998 forward. Gill net, pound net and trawl are the three major gear types for weakfish landings, taking 49%, 48% and 2% of the 2011 total commercial landings respectively. Gill net has remained the dominant gear type for landings since 2006.

The MRFSS estimated Virginia harvest (A+B1) was the second lowest estimate by weight and by number of fish for Virginia in the survey's history. The estimated harvest for weakfish for 2011 was 3,267 pounds (5,325 fish; Table 3, Figure 3.). For the sixth straight year, harvest weight is below 100,000 pounds, and for the first time ever it is below 10,000 pounds.

No estimates regarding non-harvest losses are available.

IV. Planned management programs for the current calendar year.

Summarize regulations that will be in effect (copy of current regulations if different from III c). Summarize monitoring programs that will be performed.

Commercial harvest and landings of weakfish in Virginia will continue to be monitored through the VMRC mandatory reporting system. The VMRC will continue to collect biological samples as set forth in the 2011 sampling plan.

Table 1
Virginia commercial weakfish landings in 2011, compared to the 2000-2004 average landings (in pounds).

+Appendix 5 to Addendum II has the 5 year average as 871,346 pounds.

Gear Type	2011	Average (2000 - 2004)	Percent Difference
Pound net	12,432	477,572	-97.4%
Gill net	12,788	377,757	-96.6%
Haul seine	212	55,643	-99.6%
Other*	84	8,971	-93.4%
Otter trawl	588	16,478	-99.5%
Totals	26,014	936,421+	-97.2%

*****Other includes, hand line and dredge.

Table 2a. Number of total lengths (in 1-inch intervals) collected from the 2011 Virginia commercial weakfish fisheries, by season and gear type.(Note 20 fish measure under 8 in from Pound net)

Season	Gear	Inches 8	9	10	11	12	13	14	15	16	17	18	21	22	27	Totals
Early	Pound net	7	19	36	31	11	8	4	3	1	1			1		122
	Trawl												1			1
	Gill net			1	1	4	2	6	1	4	1				1	21
Late	Pound net	53	93	84	43	27	9	5	4							318
	Trawl					2										2
	Haul seine	6	3	2	1		1									13
	Gill net				7	56	85	51	28	15	5	2				249
Total by inch interval		66	115	123	83	100	105	66	36	20	7	2	1	1	1	726

Table 2b. Number of aged weakfish collected from the 2011 Virginia commercial fisheries, by season and gear type.

		Ages				
Season	**Gear**	**1**	**2**	**3**	**4**	**Total**
Early	**Pound net**	5	87	13		**105**
	Trawl			1		**1**
	Gill net		13	4	2	**19**
Late	**Pound net**	19	76	5		**100**
	Haul seine	1	3			**4**
	Gill net	13	23	6		**42**
Totals by age		**38**	**29**		**2**	**271**

Note the total represents aged otoliths only, 324 otoliths were collected in 2011

Table 3. Virginia recreational landings (A + B1)and release (B2) estimates 2004-2011,

From MRIP website (query run on 8/8/2012)

Year	HARVEST (N)	PSE	HARVEST (lbs)	PSE	RELEASES (N)	PSE
2004	158,111	50.2	218,745	64.2	544,776	31.4
2005	44,088	33.4	28,432	36.6	355,792	33.1
2006	43,081	68.3	36,653	62.2	556,763	45.2
2007	87,470	62.4	99,346	60.2	229,453	34.8
2008	27,929	25	29,474	28.6	427,616	22.8
2009	15,523	56.8	16,658	48.3	84,700	51
2010	4,303	46	1,579	57.7	177,395	21
2011	4,374	64.6	2,635	68.6	288,304	32.2

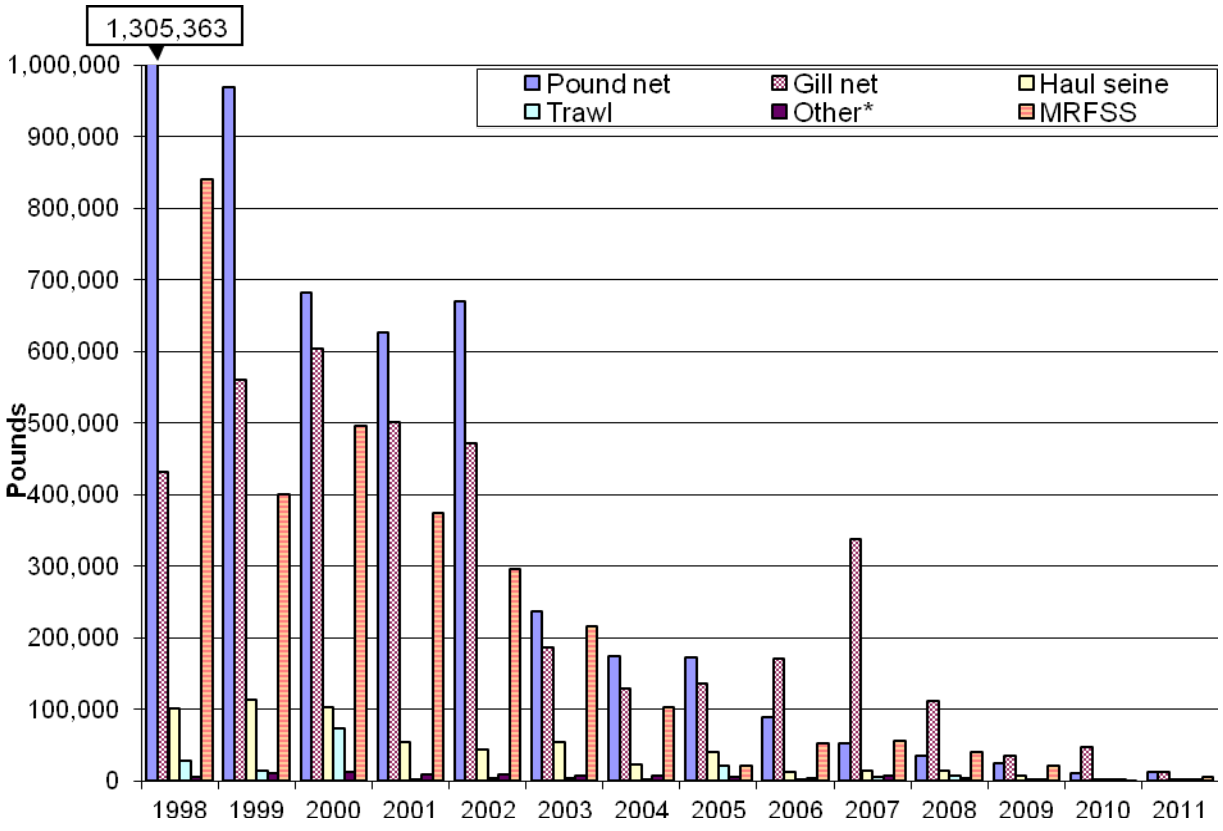


Figure 1. 2011 Virginia weakfish landings (*other includes hand line, and dredge).

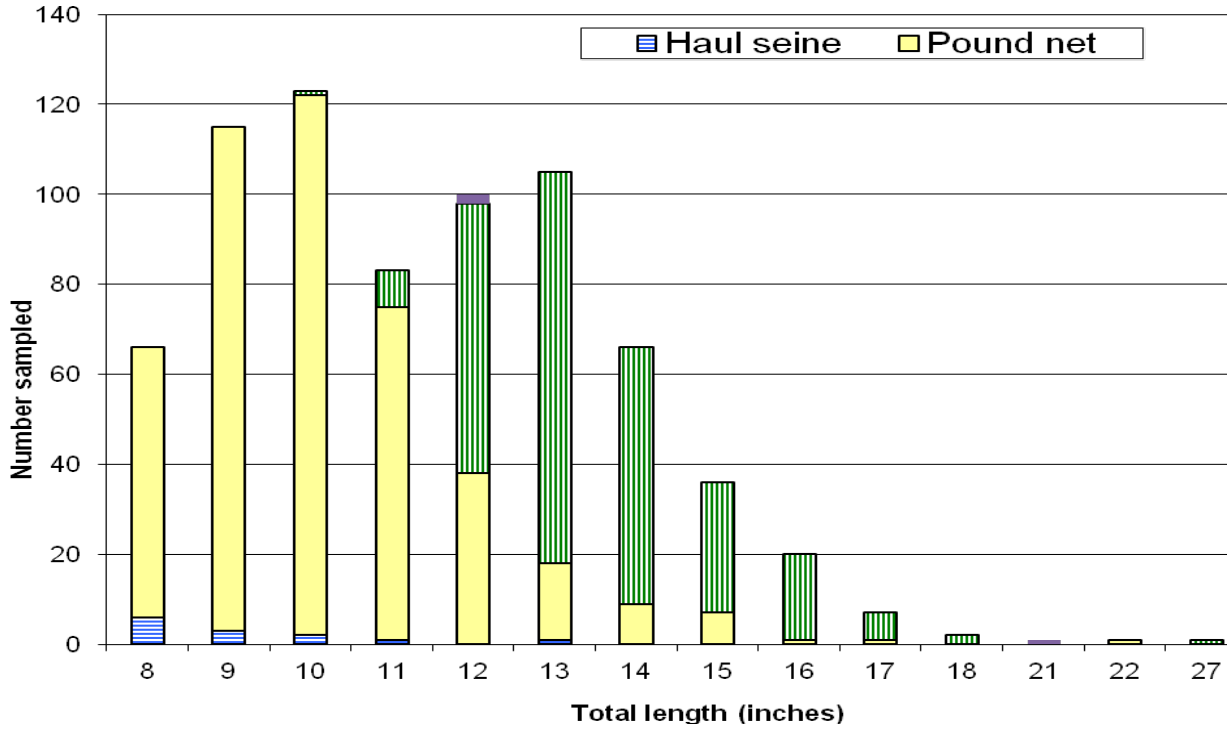


Figure 2. Weakfish length frequency, from 2011 Virginia commercial fisheries sampling.

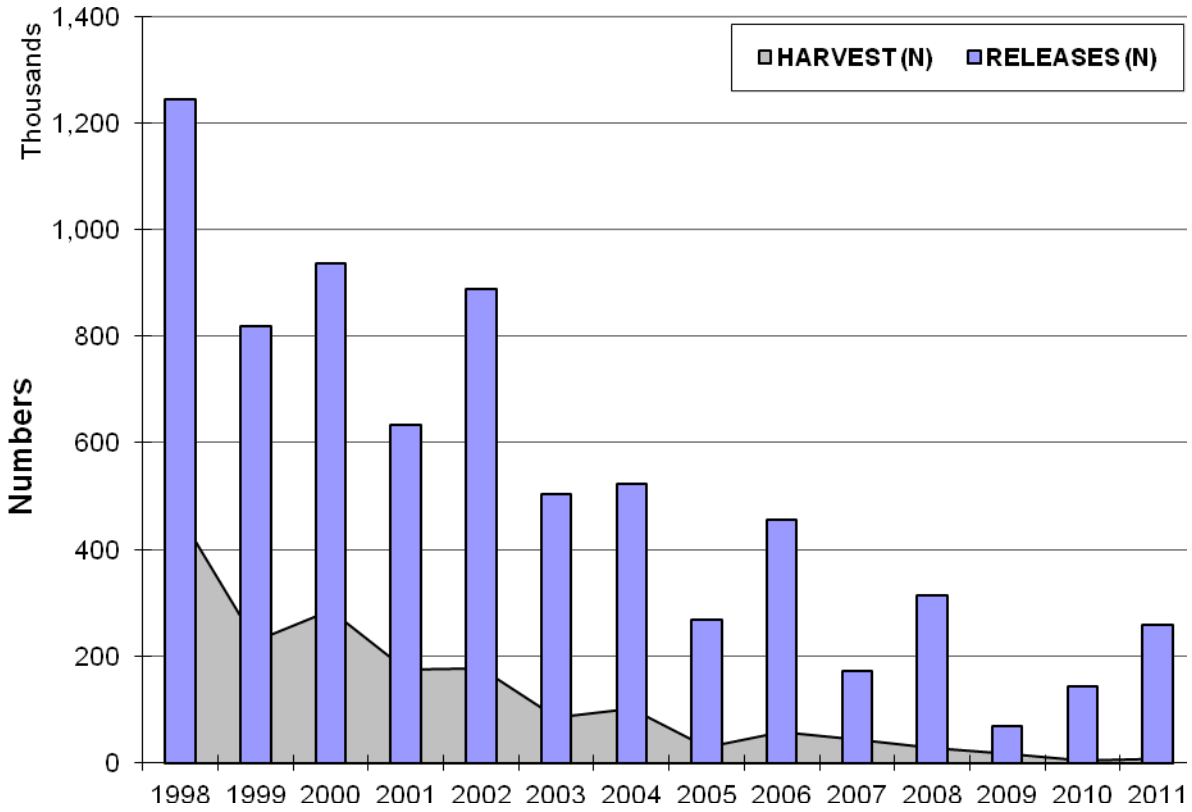


Figure 3. MRFSS estimates of weakfish recreational harvest and releases (in numbers), in Virginia, 1998-2011.

"PERTAINING TO GREY TROUT (WEAKFISH)"

CHAPTER 4VAC20-380-10 ET SEQ.

PREAMBLE

This chapter establishes limitations on the commercial and recreational harvest of grey trout in order to reduce the fishing mortality rate and to rebuild the depleted stock of grey trout. The limitations include minimum size limits, gear restrictions and season limits for the commercial fishery and minimum size and possession limits for the recreational fishery.

This chapter is promulgated pursuant to authority contained in §§28.2-201 of the Code of Virginia. This chapter amends and re-adopts, as amended, previous Chapter 4 VAC 20-380-10 et seq. which was promulgated May 22, 2007 and made effective on October 1, 2007. The effective date of this chapter, as amended, is May 1, 2010.

4VAC20-380-10. PURPOSE.

The purpose of this chapter is to maintain the target fishing mortality rate for grey trout in order to maintain a sustainable grey trout population. This chapter is designed to be consistent with federal and interstate management measures.

4VAC20-380-20. DEFINITIONS.

The following words and terms when used in this chapter shall have the following meanings unless the context clearly indicates otherwise:

"Fishing season" means the time period of April 1 through March 31.

"Grey Trout" means any fish of the species *Cynoscion regalis*.

4VAC20-380-30. COMMERCIAL MINIMUM SIZE LIMITS.

A. For any person fishing with pound net or haul seine, there shall be no minimum size limit on grey trout.

B. It shall be unlawful for any person fishing with gill nets to possess any grey trout less than 12 inches in length.

C. It shall be unlawful for any trawl boat to land any grey trout in Virginia that are less than 12 inches in length, except that up to 100 grey trout less than 12 inches in length may be landed by trawl but shall not be sold.

D. It shall be unlawful for any person fishing with commercial hook and line to possess any grey trout less than 12 inches in length.

E. It shall be unlawful for any person using any gear type not specified in subsection A, B, C or D of this section to possess any grey trout less than nine inches in length.

F. During a closed season it shall be unlawful for any person using any gear type which is regulated by a closed season to possess any grey trout less than 12 inches in length.

G. Length is measured in a straight line from the tip of the nose to the tip of the tail.

4VAC20-380-40. GEAR RESTRICTIONS.

It shall be unlawful for any trawl boat to land grey trout in Virginia while possessing on board any trawl net having a cod-end mesh less than three inches, stretched measure.

4VAC20-380-50. COMMERCIAL FISHING SEASON.

A. The open seasons on grey trout harvested by pound net shall be April 1 through April 30 and May 23 through September 12. The closed seasons on grey trout harvested by pound net shall be May 1 through May 22, and September 13 through March 31 except as provided in subdivision 1 of this subsection.

1. Any pound net fisherman who holds 2 or 3 pound net licenses in accordance with the provisions of 4 VAC 20-600-10 et seq. may forfeit only one of those licenses to be exempt from the closed seasons as established in this subsection. Any pound net fisherman who holds 4, 5, or 6 pound net licenses in accordance with the provisions of 4 VAC 20-600-10 et seq. may forfeit only two of those licenses to be exempt from the closed seasons as established in this subsection. Any pound net fisherman who holds 7, 8, or 9 pound net licenses in accordance with the provisions of 4 VAC 20-600-10 et seq. may forfeit only three of those licenses to be exempt from the closed seasons as established in this subsection. Forfeiture of any license shall be through March 31, of each fishing season, and shall occur prior to May 1 of each fishing season.

2. Any pound net licensee who forfeits a license pursuant to subdivision 1 of this subsection shall retain his priority rights to such locations for future licensing until April 1 of the following fishing season. Any pound net fisherman who forfeits one or more pound net licenses may reclaim such licenses during the period of March 15 of the current fishing season through April 1 of the following fishing season, but shall not set or fish any pound nets provided for by such licenses prior to April 1.

3. Those pound net licensees who hold multiple gear licenses and satisfy the requirement of subdivision 1 of this subsection may transfer an unused license to a licensee who holds a single pound net license.

B. The open seasons on grey trout harvested by gill net shall be April 1 through May 13; October 21 through December 30; and, March 16 through March 31.The closed seasons on grey trout harvested by gill net shall be May 14 through October 20, and December 31 through March 15.

C. The open seasons on grey trout harvested by haul seine shall be April 16 through June 10 and August 21 through September 24. The closed seasons on grey trout harvested by haul seine shall be April 1 through April 15; June 11 through August 20; and September 25 through March 31.

D. The open season on landing grey trout harvested by trawl shall be April 1 through September 25. The closed season on landing grey trout harvested by trawl shall be September 26 through March 31.

E. During any open season described in subsections A, B, C and D of this section, the boat or vessel possession limit, for grey trout, shall be 100 pounds per day or trip, whichever is the longer period of time.

F. During any closed season described in subsections A, B, C, and D of this section, the boat or vessel possession limit, for grey trout taken as bycatch in other directed fisheries, shall be 100 pounds per day or trip, whichever is the longer period of time. Further, during any closed season described in subsections A, B, C and D of this section, it shall be unlawful for any person to do any of the following:

1. Possess any grey trout less than 12 inches in total length.

2. Possess, aboard any vessel, or land any quantity of grey trout that is more than the total weight of species other than grey trout on board the vessel.

G. For any gear type not subject to a closed season, nor described in subsections A, B, C or D of this section, the vessel possession limit shall be 100 pounds per day or trip, whichever is the longer period of time.

4VAC20-380-60. RECREATIONAL FISHING SEASONS, MINIMUM SIZE LIMITS, AND POSSESSION LIMITS.

A. It shall be unlawful for any person fishing with hook and line, rod and reel or hand line to possess more than one grey trout and the minimum size limit shall be 12 inches in length.

B. When fishing from a boat or vessel where the entire catch is held in a common hold or container, the possession limit shall be for the boat or vessel and shall be equal to the number of persons on board legally eligible to fish multiplied by one. The captain or operator of the boat or vessel shall be responsible for any boat or vessel possession limit. Any grey trout taken after the possession limit has been reached shall be returned to the water immediately.

4VAC20-380-70. PENALTY.

As set forth in ə28.2-903 of the Code of Virginia, any person violating any provision of this chapter shall be guilty of a Class 3 misdemeanor and a second or subsequent violation of any provision of this chapter committed by the same person within 12 months of a prior violation is a Class 1 misdemeanor.

* * * * * * * * * *

This is to certify that the foregoing is a true and accurate copy of the chapter passed by the Marine Resources Commission, pursuant to authority vested in the Commission by ə28.2-201 of the Code of Virginia, duly advertised according to statute, and recorded in the Commission's minute book, at meeting held in Newport News, Virginia on February 23, 2010.

COMMONWEALTH OF VIRGINIA
MARINE RESOURCES COMMISSION

By:_____
STEVEN G. BOWMAN
COMMISSIONER

Subscribed and sworn to before me this 1st day of March, 2010.

_____
Notary Public

North Carolina's Weakfish Compliance Report for Fishing Year 2011

September 1, 2012

1. Introduction

During 2011, North Carolina's weakfish management measures were unchanged. Under Addendum IV of Amendment 4 to the Weakfish FMP, states were required to implement strict harvest measures to aid in the recovery of the severely depleted weakfish stocks. These measures include a one fish recreational creel limit, 100 pound commercial trip limit, 100 pound commercial bycatch limit, and 100 undersized fish per trip allowance for the finfish trawl fishery. Measures of Addendum IV were required to be implemented by May 1, 2010. North Carolina initially failed to implement these measures by May 1 and was temporarily found out of compliance. On May 16, 2010, North Carolina implemented the measures through proclamation authority. In August of 2010, North Carolina requested that the ASMFC Weakfish Management Board consider a conservationally equivalent management measure in lieu of the 100 pound commercial trip limit. The proposed alternative would allow North Carolina to harvest weakfish strictly as a bycatch, where weakfish could not exceed 10% of the landings of all finfish landed on a trip up to 1,000 pounds. The Board approved North Carolina's request as a conservationally equivalent management strategy and the measure was implemented August 20, 2010. These measures remained in effect for all of 2011 and remain in effect to date.

2. Current/Previous Years Management Program

a. Activity and results of fishery dependent monitoring.

The 2011 recreational weakfish fishery in North Carolina was monitored through the Marine Recreational Fishery Statistics Survey.

The 2011 commercial weakfish landings were monitored through the North Carolina trip ticket program. Under this program licensed fishermen can only sell commercial catch to licensed NCDMF commercial fish dealers. The dealer is required to complete a trip ticket every time a licensed fishermen lands fish. Trip tickets specify gear type, area fished, species harvested and total weights of the individual species harvested. Commercial fishing activity is monitored through fishery dependent sampling conducted under Title III of the Interjurisdictional Fisheries Act and has been ongoing since 1982. Data collected in this program allow the size distribution of weakfish to be characterized by gear/fishery (Assessment of North Carolina Commercial Finfisheries, Completion Reports 1984-2011, North Carolina Department of Environment and Natural Resources, Division of Marine Fisheries). Further sub-sampling is conducted to procure samples for age determination (sectioned otoliths), sex ratio, reproductive condition and weight (Survey of Population Parameters of Marine Recreational Fishes in North Carolina. Annual Progress Report

Project F-42, (1992-2011). North Carolina Department of Environment and Natural Resources, Division of Marine Fisheries).

During 2011, a total of 1,857 weakfish lengths were acquired from the North Carolina commercial fishery through dependent sampling. Weakfish sampled from commercial gears included long hauls (n=588), ocean sink gill nets (n=352), winter trawls (n=4), estuarine gill nets (n=754), pound nets (n=157), and beach seines (n=2). The gears sampled accounted for >99% of North Carolina's commercial weakfish landings. Additionally, North Carolina collected 379 otoliths from various gears in the commercial and recreational fisheries, as well as, from independent sources.

b. Activity and results of fishery independent monitoring.

The Pamlico Sound Trawl Survey is a stratified random trawl survey conducted annually in the Pamlico Sound. The survey is conducted twice annually (June and September). Results of the study provide indices of juvenile abundance for weakfish in the Pamlico Sound (Pamlico Sound Cruise Reports (1990-2011). North Carolina Department of Environment and Natural Resources, Division of Marine Fisheries). The 2011 juvenile abundance index was 33.69 individuals per tow and was below the long term average of the survey (44.63 individuals per tow; Figure 1).

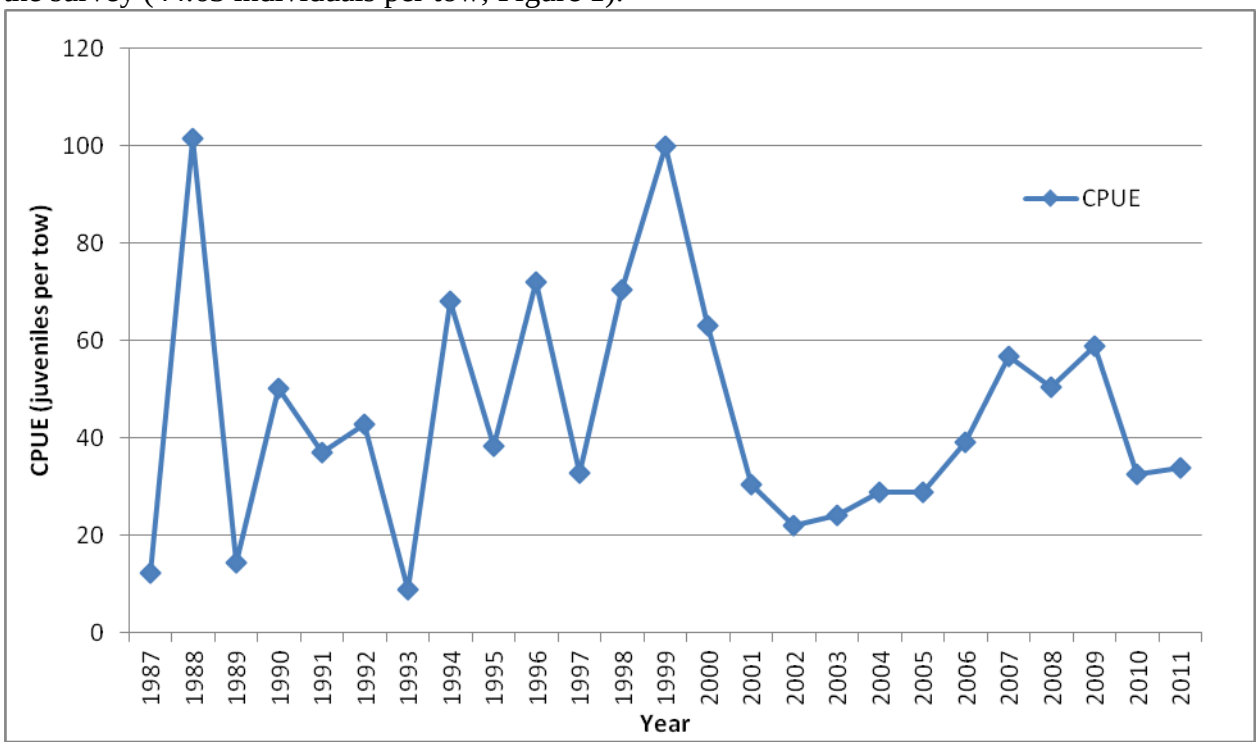


Figure 1. Juvenile index (number individuals per tow) for the Pamlico Sound Trawl Survey from 1987 to 2011.

A fishery independent gill net survey was initiated by NCDMF in May of 2001 (Pamlico Sound Independent Gill Net Survey, Annual Progress Reports for Grant F-70 (2001-

2011), North Carolina Department of Environment and Natural Resources, Division of Marine Fisheries). The survey utilizes a stratified random sampling scheme designed to characterize the size and age distribution for key estuarine species in Pamlico Sound. Data from the survey will be available to generate indices of abundance and age composition for weakfish in Pamlico Sound. During 2011, the weakfish annual weighted CPUE was 0.36 individuals per set and was near the time series low (Figure 2). Weakfish captured totaled 133 individuals, ranging in size from 144 to 506 mm FL with the average size fish being 298 mm FL.

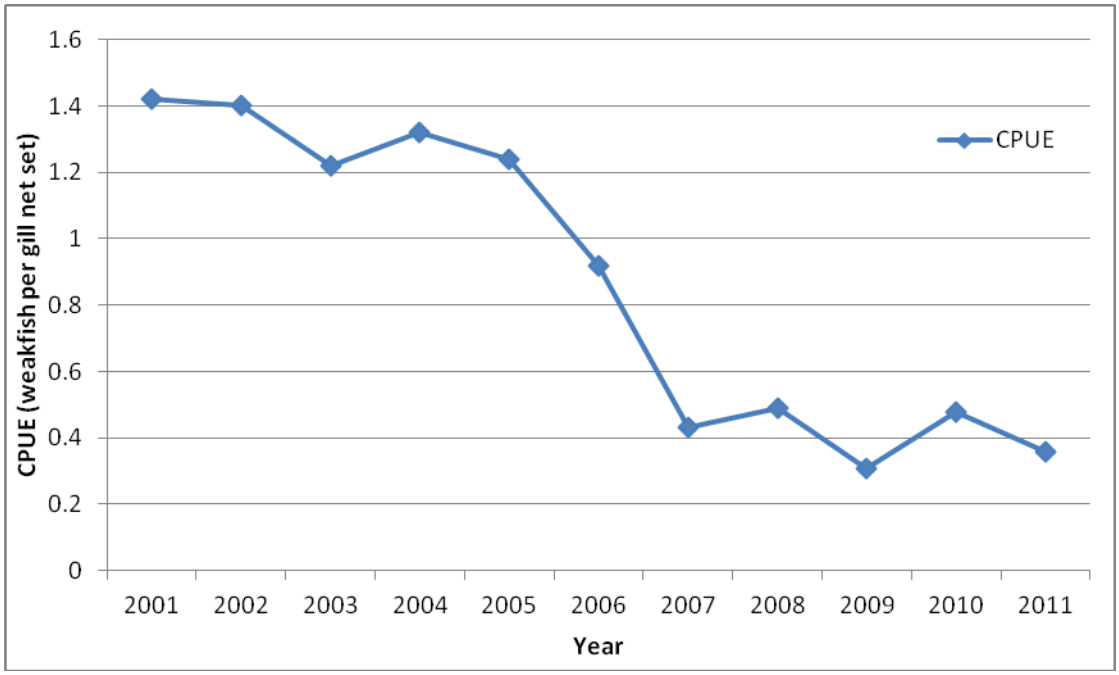


Figure 2. CPUE (number of individuals weakfish captured per set) from the Pamlico Sound Independent Gill Net Survey in North Carolina from 2001 to 2011.

c. Current Regulations in effect for North Carolina.

15A NCAC 03M .0512 COMPLIANCE WITH FISHERY MANAGEMENT PLANS

(a) In order to comply with management requirements incorporated in Federal Fishery Management Council
Management Plans or Atlantic States Marine Fisheries Commission Management Plans or to implement state
management measures, the Fisheries Director may, by proclamation, take any or all of the following actions for species
listed in the Interjurisdictional Fisheries Management Plan:
(1) Specify size;
(2) Specify seasons;
(3) Specify areas:
(4) Specify quantity;
(5) Specify means and methods; and
(6) Require submission of statistical and biological data.

(b) Proclamations issued under this Rule shall be subject to approval, cancellation, or modification by the Marine
Fisheries Commission at its next regularly scheduled meeting or an emergency meeting held pursuant to G.S. 113-221.1.
History Note: Authority G.S. 113-134; 113-182; 113-221; 113-221.1; 143B-289.4;
Eff. March 1, 1996;
AMENDED EFF. OCTOBER 1, 2008.

Current harvest restrictions for weakfish have been issued under the proclamation authority stated above. These measures were put in place on August 20, 2010 and were in effect for all of 2011 and remain in effect to date.

Current regulations are:

Proclamation FF-54-2010 (Attachment 1)

Restrictions to the taking of weakfish for recreational purposes or by hook-and-line:

- No person may possess weakfish less than 12" total length.
- No person may possess more than one weakfish per day.

Proclamation FF-66-2010 (Attachment 2)

Restriction to commercial fishing operations, excluding hook-and-line:

- No person may take, possess, transport, buy, sell, or offer for sale weakfish less than 12 inches in length from state waters or within 200 miles of shore in the Atlantic Ocean.
- Sets an exemption allowing a 10 inch minimum size for weakfish taken in internal waters from April 1 through November 15 in long haul seines and pound nets.
- Requires that weakfish make up no more than 10% of the total weight of the combined catch for any day or trip (whichever is longer) and makes it unlawful to possess more than 1,000 lb of weakfish per day or trip (whichever is longer).
- Requires that gill nets and flynets that do not meet specified mesh requirements can only take weakfish as a bycatch provided that the weight of the weakfish shall not exceed 10% of the total weight of the combined catch up to 100 lb.
- Prohibits the possession of more than 100 pounds of weakfish taken in a shrimp or crab trawl. The weight of the weakfish shall not exceed 50% of the total weight of the combined catch up to 100 pounds.
- Prohibits the possession of more than 100 undersized weakfish per day or trip (whichever is longer) in ocean flynets or flounder trawls. No sale of undersized weakfish is allowed.

d. Harvest by commercial (gear type), recreational, and non-harvest losses

The North Carolina commercial weakfish harvest was 65,897 pounds in 2011. This is 38% lower than landings in 2009, and is well below the 10-year average of 482,076 pounds. North Carolina's recreational landings were 17,621 pounds in 2011 and were below the 10-year average of 114,116 pounds. The total 2011 North Carolina weakfish harvest was 83,158 pounds and was 79% commercial and 21% recreational.

The following landings summary is broken down into commercial (ocean, estuarine and bycatch) and recreational fisheries.

Atlantic Ocean Commercial Fisheries
Ocean commercial fisheries landed 33,164 pounds of weakfish in 2011 (50% of NC commercial total). The sink gill net fishery dominated the ocean catches accounting for 49% of the overall commercial catch and 97% of the ocean commercial catch. All other ocean fisheries (i.e. winter trawl, beach seine, shrimp trawl, hook and line) accounted for 1,017 pounds combined.

Estuarine Commercial Fisheries
Estuarine fisheries landed 32,732 pounds of weakfish in 2011 (50% of NC commercial total). Landings from estuarine gill nets accounted for 64% of the overall estuarine commercial landings followed by long haul seines at 33%. Pound nets harvested 1,088 pounds. "Other" fisheries (crab trawl, hook and line, and shrimp trawl) accounted for 144 pounds. Table 1 presents a summary of the 2011 commercial weakfish landings.

Recreational Fishery
During the 2011 calendar year, recreational harvest of weakfish totaled 17,621 pounds. This is well below the 10-year average of 114,116 lb.

Non-Harvest Losses
Non-harvest losses continue to be difficult to quantify with minimum size limits in place. Additionally, strict bycatch allowances and trip limits further create the potential for at-sea discards. While minimum sizes and associated mesh restrictions certainly reduce the incidence of under-sized fish in the catch, they do not eliminate bycatch mortality. As these fish are lost at sea, it is difficult to describe or estimate non-harvest losses. North Carolina has made significant advances in reducing bycatch by developing methods to actively cull live, undersized fish during fishing operations.

2012 MANAGEMENT STRATEGY

a. All regulatory changes necessary for compliance have been approved by the ASMFC Weakfish Management Board and have been implemented by NCDMF.

Current regulations are:

Recreational

- No person may possess more than one weakfish per day taken recreationally or by hook and line.
- No person may possess weakfish less than 12” total length.

Commercial

- No person may take, possess, transport, buy, sell, or offer for sale weakfish less than 12 inches in length from state waters or within 200 miles of shore in the Atlantic Ocean.
- Sets an exemption allowing a 10 inch minimum size for weakfish taken in internal waters from April 1 through November 15 in long haul seines and pound nets.
- Makes it unlawful to possess more than 1,000 lb of weakfish per day or trip (whichever is longer) and requires that weakfish make up no more than 10% of the total weight of the combined catch.
- Requires that gill nets and flynets that do not meet specified mesh requirements can only take weakfish as a bycatch provided that the weight of the weakfish shall not exceed 10% of the total weight of the combined catch up to 100 lb.
- Prohibits the possession of more than 100 pounds of weakfish taken in a shrimp or crab trawl. The weight of the weakfish shall not exceed 50% of the total weight of the combined catch up to 100 pounds.
- Prohibits the possession of more than 100 undersized weakfish per day or trip (whichever is longer) in ocean flynets or flounder trawls. No sale of undersized weakfish is allowed.

There are currently no further proposed changes to the management strategy in NC for 2012.

b. Current monitoring programs as outlined in Section 2a,b will be continued in 2012.

Table 1. Summary of all North Carolina commercial weakfish landings by gear with contribution to overall 2011 landings. Individual lengths represent biological samples taken through dependent sampling program.

	Pounds Landed (metric tons)	PERCENTAGE	Individual Lengths	Lengths per metric ton
OCEAN FISHERIES				
SINK NET	32,147 (15)	49%	352	24
WINTER TRAWL	517 (<1)	<1%	4	17
BEACH HAUL SEINE	500 (<1)	<1%	2	9
OTHER (OCEAN)	0 (<1)	<1%	0	0
ESTUARINE FISHERIES				
ESTUARINE GILL NET	20,814 (9)	32%	754	81
LONG HAUL SEINE	10,686 (5)	16%	588	122

POUND NET	1,088 (<1)	2%	157	321
OTHER (ESTUARINE)	144 (<1)	<1%	0	0
ALL FISHERIES	65,896 (30)	100%	1,857	63

Attachment 1

FF-54-2010

PROCLAMATION

RE: WEAKFISH – RECREATIONAL

Dr. Louis B. Daniel III, Director, Division of Marine Fisheries, hereby announces that effective at 9:00 A.M., Sunday, May 16, 2010 the following restrictions will apply to the recreational weakfish fishery in coastal fishing waters:

I. SIZE AND CREEL LIMITS

A. It is unlawful to possess weakfish for recreational purposes less than 12 inches in total length.

B. It is unlawful to possess more than one (1) weakfish per person per day taken for recreational purposes.

III. GENERAL INFORMATION

A. This proclamation is issued under the authority of N.C.G.S. 113-170.4; 113-170.5; 113-182; 113-221.1; 143B-289.52; and N.C. Marine Fisheries Rules 15A NCAC 03H .0103 and 03M.0512.

B. It is unlawful to violate the provisions of any proclamation issued by the Director under his delegated authority pursuant to N.C. Fisheries Rule 15A NCAC 03H .0103.

C. The intent of this proclamation is to allow North Carolina to comply with the requirements of the Addendum IV to Amendment 4 of the Atlantic States Marine Fisheries Commission's Interstate Management Plan for Weakfish.

D. This proclamation supersedes Proclamation FF-8-2009, dated January 14, 2009. The bag limit has changed to one (1) fish per person per day.

May 14, 2010
9:00 A.M.
FF-54-2010

Attachment 2

FF-66-2010

PROCLAMATION

RE: WEAKFISH COMMERCIAL FISHING OPERATIONS

Dr. Louis B. Daniel III, Director, Division of Marine Fisheries, hereby announces that effective at **12:01 A.M. Friday, August 20, 2010**, the following restrictions will apply to the commercial weakfish fishery:

I. SIZE LIMITS

A. No person may take, possess, buy, sell, or offer for sale weakfish less than 12 inches total length in state waters or within 200 miles of shore in the Atlantic Ocean except:

1. From April 1 through November 15, weakfish 10 inches total length or more may lawfully be taken in North Carolina internal waters by use of long haul seines or pound nets only and possessed, transported, bought, sold, or offered for sale, and
2. Commercial flounder trawl and flynet operations are allowed to land a tolerance of no more than 100 undersized weakfish (< 12 inches) per day or trip, whichever is longer. It is unlawful to sell undersized weakfish.

II. HARVEST LIMITS

It is unlawful to take or possess more than 1000 pounds of weakfish per day or trip (whichever is longer) in state waters or within 200 miles of the shore in the Atlantic Ocean, except as specified in Section III below.
It is unlawful for the amount of commercially-caught weakfish to weigh more than 10% of the total combined finfish weight per day or trip (whichever is longer).

III. GEAR RESTRICTIONS

A. GILL NETS:
No person may possess aboard or land from, any vessel using or having on board a gill net with a mesh length less than 2 7/8 inches stretched mesh, more than 100 pounds of weakfish during any one day or on any trip, whichever is longer, in state waters or within 200 miles of the shore in the Atlantic Ocean. The weight of weakfish possessed shall not exceed 10% of the total weight of the combined catch up to 100 pounds of weakfish.

B. FLYNETS:
No person may possess aboard or land from any vessel using a flynet more than 100 pounds of weakfish during any one day or trip, whichever is longer, in state waters or within 200 miles of the shore in the Atlantic Ocean. The weight of the weakfish possessed shall not exceed 10% of the combined catch up to 100 pounds of weakfish. All flynets on board shall meet the following requirements:

1. The flynet is constructed with large mesh in the wings that measure not less than 8 inches or more than 64 inches (inside stretched mesh length);
2. The first body section (belly) of the net has 35 or more meshes that are at least 8 inches (inside stretched mesh length);
3. The mesh decreases in size throughout the body of the net to a tailbag with a minimum length of 15 feet with a minimum inside stretched mesh length of 3 1/2 inches hung on the square or 3 3/4 inches hung on a diamond; and
4. Extensions must be a minimum of 20 feet in length and constructed of webbing with a minimum inside stretched mesh length of 3 inches hung on a square, except that when the tailbag is 25 feet or greater in length, extensions may be constructed of either square or diamond meshes.

C. SHRIMP/CRAB TRAWLS:
No person may possess more than 100 pounds of weakfish (12 inches or more in total length) taken with a shrimp or crab trawl. The weight of the weakfish shall not exceed 50% of the total weight of the combined catch up to 100 pounds of weakfish. This limit does not apply to a Recreational Commercial Gear License shrimp trawl.

IV. GENERAL INFORMATION

A. This proclamation is issued under the authority of N.C.G.S. 113-170.4; 113-170.5; 113-182; 113-221.1; 143B-289.52; and N.C. Marine Fisheries Rules 15A NCAC 03H .0103 and 03M .0512.

B. It is unlawful to violate the provisions of any proclamation issued by the Fisheries Director under his delegated authority pursuant to N.C. Marine Fisheries Rule15A NCAC 03H .0103.

C. It is unlawful to use flynets south of Cape Hatteras to the North Carolina/South Carolina line according to N.C. Fisheries Rule 15A NCAC 03J .0202.

D. The intent of this proclamation is to allow North Carolina to implement a conservation equivalency measure in order to comply with Addendum IV to Amendment 4 of the Atlantic States Marine Fisheries Commission's (ASMFC) Weakfish Management Plan.

E. This proclamation supersedes Proclamation FF-55-2010(Revised), dated May 21, 2010.

August 17, 2010
1:30 P.M.
FF-66-2010

South Carolina
Weakfish Fishery and Management Program
Compliance Report for the Year 2011

23 August 2011

Prepared by: Erin Levesque
Marine Resources Research Institute
Marine Resources Division
South Carolina Department of Natural Resources

I. INTRODUCTION

South Carolina's fishery for weakfish occurs mainly from late summer through mid-fall. Although the species is widely distributed throughout the state's estuaries and coastal bays, recreational anglers fishing from small, private boats in coastal waters harvest most weakfish. The areas where weakfish congregate, especially in the fall, are the inshore live-bottom reefs[1]. The fishery in South Carolina occurs primarily in fall months, and to a lesser extent during summer months, in nearshore waters associated with live bottom and artificial reef habitat. This occurs in depths from 15 to 60 feet from locales just beyond the breakers to further offshore in the EEZ.

In the past, South Carolina has had continuous *de minimis* status for this fishery, which excused the state from instituting management and sampling plans for weakfish. However, in 2004 and 2005, then again in 2007 and 2008, the MRFSS survey of NMFS estimated dramatic increases in the number and weight of weakfish landed in SC (Table 1). These data placed South Carolina's request for *de minimis* status in doubt; therefore in 2009, South Carolina decided not to continue a request for *de minimis*. In order to become compliant with current management regulations as a non-de minimis state, a new bag limit of 1 fish per person per day was passed and signed into law. This took effect on July 1, 2010, and was a significant reduction from the previous 10 fish per angler per day bag limit (established in 2007). The minimum size for weakfish remains at 12 inches total length.

II. REQUEST FOR *de minimis* – Not Applicable

III. CURRENT WEAKFISH FISHERY AND MANAGEMENT IN SOUTH CAROLINA

Historically, recreational catch statistics were reported by the National Marine Fisheries Service (NMFS) through the Marine Recreational Fishing Statistical Survey (MRFSS). Through an effort to better capture catch statistics by reducing bias, while increasing accuracy, timeliness and spatial resolution, the Marine Recreational Information Program (MRIP) was created. Details about the new program and its development can be found in the document Marine Recreational Information Program, Implementation Plan, Revision 3:2011-2012 Update, December 2011 (http://www.countmyfish.noaa.gov/aboutus/organization/downloads/2011_Implementation_Plan_FINAL.pdf). Catch estimates for both programs have recently become available for comparison. In this report, data are included for weakfish catches in South Carolina since 1981 from MRFSS to include historical data, and since 2004 from MRIP to reflect the new sampling program.

1 "live bottom is a term given to patch reefs that are scattered throughout the South Atlantic Bight. These are formed when currents scour away the thin veneer of sand and expose the basement rock, largely limestone marl. Colonial invertebrates, such as sponges, bryozoans, tunicates, attach to the substrate and produce a 'reef', which attracts fishes and decapod crustaceans."

Table 1. Catch data for weakfish, *Cynoscion regalis*, harvested in South Carolina's recreational fishery. Data are from the Marine Recreational Fishing Statistical Survey (MRFSS) and the Marine Recreational Information Program (MRIP) of the National Marine Fisheries Service (http://www.st.nmfs.noaa.gov/st1/recreational/queries/index.html). No catch data were reported for SC weakfish by the NMFS for 2001. PSE = percent standard error, a measure of precision.

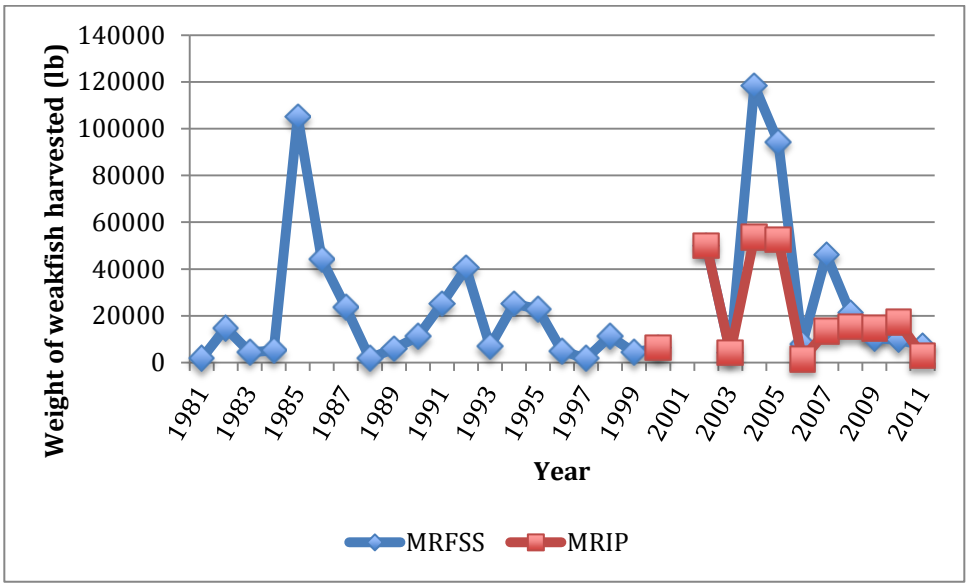
	MRFSS				***MRIP***			
Year	***Harvest***		***Weight***		***Harvest***		***Weight***	
	Num	PSE	Lbs	PSE	Num	PSE	Lbs	PSE
1981	2580	41.4	1772	52.8				
1982	17342	38.5	14786	47.3				
1983	6807	75.9	4515	71.7				
1984	7836	48.7	5150	51.7				
1985	61788	37.5	105151	61.8				
1986	78315	35.3	44185	27				
1987	18841	37	23781	43.7				
1988	1834	56	1841	60.5				
1989	6810	25.2	5963	25.7				
1990	8027	44.6	11186	49.9				
1991	19616	64.1	25210	81.9				
1992	23501	31.2	40459	32.5				
1993	7360	44.8	6929	48				
1994	46858	77.4	25163	77				
1995	29897	46.9	22875	47.4				
1996	5695	99.5	4980	99.5				
1997	2039	65.6	1728	66.7				
1998	15838	47.9	11288	46.5				
1999	3941	43.9	4383	49.5				
2000	5585	86	6312	85.2				
2001	No data	No data	No data	No data				
2002	90245	82.5	50141	81.9				
2003	4162	92.9	4306	92.6				
2004	153589	44.9	118352	50.8	97019	70.1	53581	69.4
2005	129575	34.5	94205	35.6	76299	44.7	52540	44.9
2006	6846	56.3	8014	59.6	2086	51.7	1480	52.2
2007	68376	32.9	46103	32.7	19891	36.9	13526	37.7
2008	25603	43.5	21296	45.8	22930	49.9	15398	48.7
2009	10952	46.5	10375	50.9	15699	42.6	14645	41.3
2010	9198	50.9	9739	48.2	11599	53.1	17299	52.2
2011	9258		7217		4107	49.7	3089	53.6
mean	**29277**		**24580**		**31204**		**21445**	

Examination of the MRFSS data showed that the estimated long-term mean annual harvest for weakfish in the South Carolina recreational fishery was 24,580 pounds (Table 1; Fig. 1a); the 2011 reported recreational landings fell shy of this long-term average by approximately 17,000

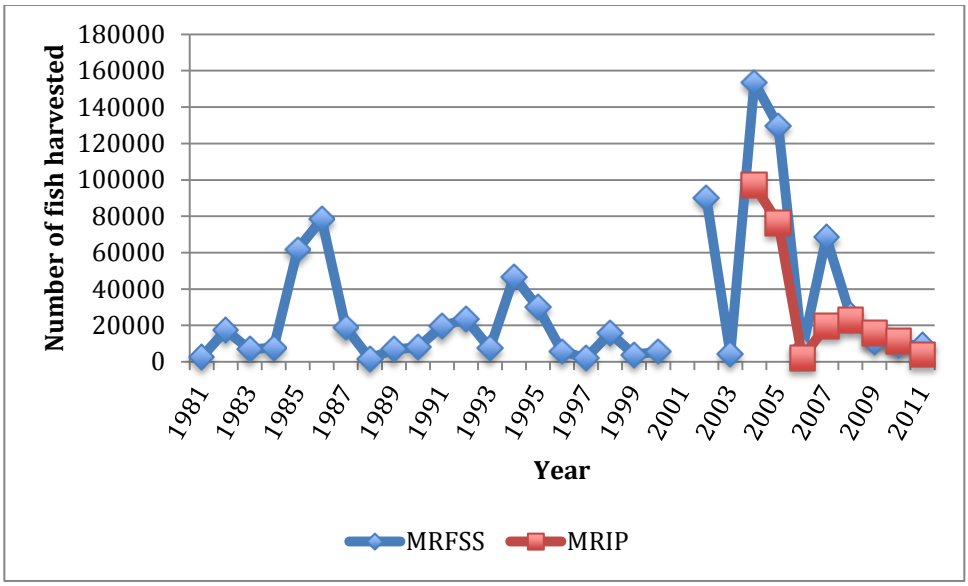
pounds. The only patterns or trends in these data are the very high percent standard error values (PSE) that range from a minimum of 27.0% in 1986 to a maximum of 99.5% in 1996. The average is 56.0%, indicating that the precision of the estimates is very low. The 2011 MRIP estimate of harvest by weight was 3,089 pounds, approximately 18,000 pounds shy of the long-term mean of 21,445 pounds (Table 1; Fig. 1a). The MRIP estimations have similarly high PSE values when compared to MRFSS with an average of 50%. The numbers of weakfish harvested reflect the same trend as weight (Table 1;Fig. 1b).

Figure 1. Weakfish harvested recreationally in South Carolina by weight (a) and number (b) according to MRFSS (1981-2011) and MRIP (2004-2011). Data are from the Marine Recreational Fishing Statistical Survey (MRFSS) and the Marine Recreational Information Program (MRIP) of the National Marine Fisheries Service (http://www.st.nmfs.noaa.gov/st1/recreational/queries/index.html).

a)



b)



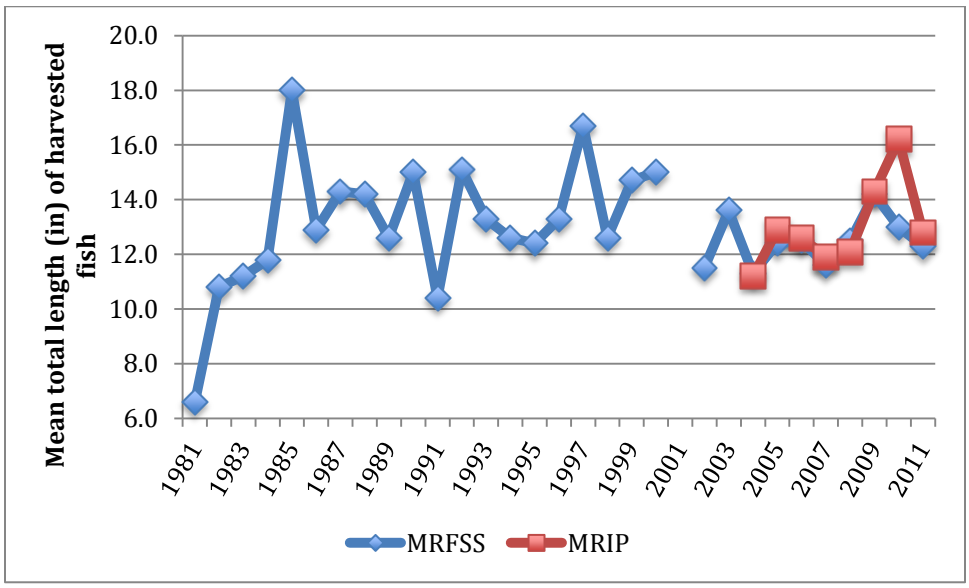
MRIP data since 2004 indicated that weakfish 15 inches and larger were rare in the inspected creels, until 2009 when approximately 15% of the harvested were fish 15 - 16 inches FL (Table 2), and 2010 when approximately 70% of the weakfish were 17 - 18 inches FL. It should be noted that these length frequency data have very high PSE values, with only four of the categories having a PSE less than 50% (Table 2). If these length data are correct, increases in lengths of harvested weakfish may be explained by habitats where the weakfish were caught. For example, if there was a shift from sampling a portion of the population caught on piers versus on artificial reefs that could explain some of the increase in size distribution. Also, due to a drastic drop in bag limit from 10 fish/angler/day to 1 fish/angler/day in 2010, anglers may be more likely to retain larger weakfish and release smaller fish. The mean length of weakfish harvested according to the MRFSS between 2004 and 2011 was 11.3 – 14.2 FL, while the MRIP reported mean lengths of 11.2 – 16.2 (Figure 2). Both surveys have a long-term mean length of 13.0 inches.

Table 2. Percent frequency distribution of harvested (MRIP categories A+B1) weakfish in the South Carolina recreational fishery since 2004. Categories with * indicate a PSE of less than 50%; most of these data have very high PSE values. Data from the MRIP of the National Marine Fisheries Service (http://www.st.nmfs.noaa.gov/st1/recreational/queries/index.html).

Inch Group (FL)	Year							
	2004	2005	2006	2007	2008	2009	2010	2011
8	1.96	2.66		3.66				
9	18.46	5.63		1.59				

10	3.33			6.38*	0.10			
11	40.72	0.89	63.92	61.52*	69.37			32.80
12	27.79	7.88		18.59*	25.59		22.04	27.00
13	7.23	82.86*	21.20	2.43	0.68	52.81		39.72
14	0.51	0.03	14.88	2.16		31.88	8.86	
15				0.01	4.27	7.66		0.48
16		0.04		3.66		7.66		
17							50.3	
18							19.07	
19								
20								
Mean FL	11.2	12.9	12.6	11.9	12.1	14.3	16.2	12.8

Figure 2. Mean fork length (FL) of weakfish harvested in South Carolina by year according to MRFSS (1981-2011) and MRIP (2004-2011). Data are from the Marine Recreational Fishing Statistical Survey (MRFSS) and the Marine Recreational Information Program (MRIP) of the National Marine Fisheries Service (http://www.st.nmfs.noaa.gov/st1/recreational/queries/index.html).



From 2007 - 2010, the annual total contribution for South Carolina's weakfish fishery has been above the 1% limit to qualify for *de minimis* status (Table 3). In 2010, even though the pounds of weakfish harvested was below the long-term average for the state, the take still constituted greater than 1% of the total catch of the Atlantic coast due to falling catches in the northern part of the range. Although the 2011 commercial catch data were not available for the Atlantic coast at the time of this report, due to the decreasing trends in coastwide catch, South Carolina probably accounts for greater than 1% of the catch in 2011.

Table 3. Commercial and recreational catches of weakfish in pounds for the South Carolina fishery in comparison to Atlantic coast catch by year. Percent SC is the percent of the total coastal harvest by commercial and recreational fishers accounted for by SC landings. The data in bold type are those years during which the SC catch was > 1 % of the Atlantic coast catch. Data from the National Marine Fisheries Service (http://www.st.nmfs.noaa.gov/).

Year	South Carolina			Atlantic Coast Total			Percent SC
	Commercial	Recreational	Annual Sum	Commercial	Recreational	Annual Sum	
1981	0	1772	1772	26363607	16105028	42468635	0.054
1982	443	14786	15229	19478274	8285326	27763600	0.054
1983	0	4515	4515	17475003	11730619	29205622	0.015
1984	0	5140	5140	19773587	7013781	26787368	0.019
1985	0	105151	105151	16953357	5489026	22442383	0.468
1986	0	44185	44185	21187973	10141786	31329759	0.141
1987	0	23781	23781	17072159	6749890	23822049	0.099
1988	0	1841	1841	20526402	6331649	26858051	0.006
1989	113	5693	5806	14163008	2177237	16340245	0.035
1990	0	11186	11186	9438260	1347260	10785520	0.103
1991	0	25210	25210	8692760	2130563	10823323	0.232
1993	0	40459	40459	7453788	1398980	8852768	0.457
1993	0	6929	6929	6853579	1102340	7955919	0.087
1994	0	25163	25163	6190501	1795517	7986018	0.315
1995	0	22875	22875	7098667	1855548	8954215	0.255
1996	0	4980	4980	6940041	2925392	9865433	0.050
1997	0	1728	1728	7297785	3692716	10990501	0.015
1998	0	11288	11288	8423108	4044974	12468082	0.090
1999	0	4383	4383	6905171	3143427	10048598	0.043
2000	0	6312	6312	5400505	4154794	9555299	0.066
2001	0	0	0	4999539	2722630	7722169	0
2002	0	50141	50141	4773119	2192607	6965726	0.719
2003	0	4306	4306	2001271	864962	2866233	0.150
2004	0	118352	118352	1523733	926962	2450695	**4.829**
2005	0	94205	94205	1147082	1587378	2734460	**3.445**
2006	0	8027	8027	1061887	919662	1981549	0.405
2007	0	46103	46103	907980	692392	1600372	**2.881**
2008	0	21296	21296	470630	700862	1171492	**1.818**
2009	0	10375	10375	382637	221800	604437	**1.716**
2010	0	9739	9739	205620	83526	289146	**3.368**
2011	0	7217	7217	NA	37335	NA	**NA**

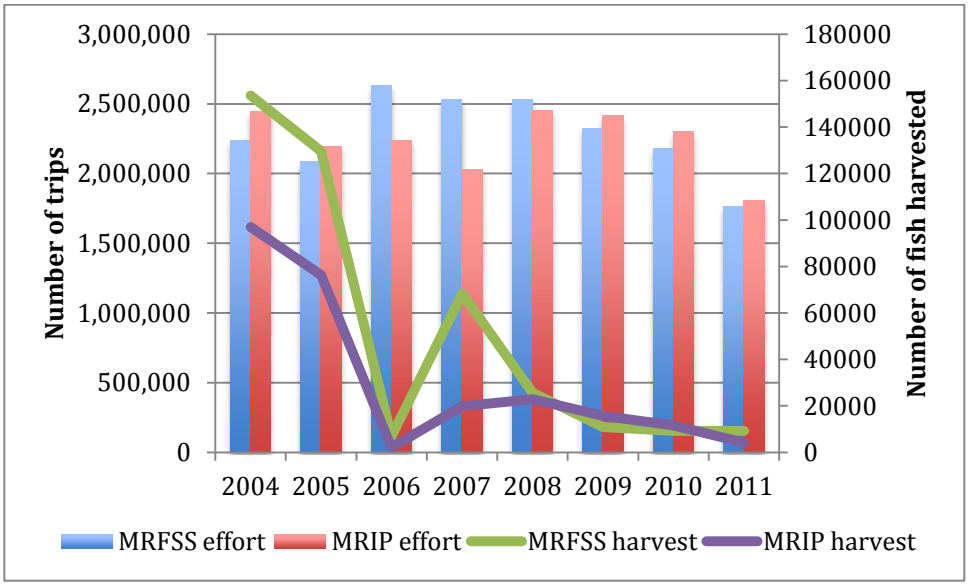
Reported recreational landings in SC increased dramatically in 2004 and 2005; catches then declined in 2006, increased again in 2007, and have continued to decline since 2008. The estimated weakfish harvest in 2004 was two orders of magnitude higher than that for 2003. The catch then declined by about 20% in 2005. Landings in 2006 showed a decline by two orders of magnitude from 2004. Catches since 2004 (with the exception of 2006) excluded South Carolina from the *de minimis* category as defined in the Weakfish Management Plan due to a combination of higher than average harvest for the state and decreased landing for the entire Atlantic coast. The commercial catch coastwide for the Atlantic states was not available at the time of this report, so the percentage of the total harvest (commercial+ recreational) from South Carolina could not be calculated. However, if just the recreational harvest is considered, then 19.3% of the

weakfish harvested in 2011 were landed in South Carolina. South Carolina's recreational harvest for 2011 was 26% less than the 2010 harvest; however, the total recreational harvest for the Atlantic coast decreased by approximately 45%, from 2010 to 2011. Harvests coast-wide appear to be in a precipitous decline, however the South Carolina harvest does not seem to be declining at the same rate when compared to the Atlantic coast as a whole.

Why would South Carolina experience 'a bumper crop' of weakfish during a period when the coast-wide landings declined to the lowest values seen during the previous 20+ years? Did the South Atlantic Bight experience very strong weakfish year classes in 2003 and 2004 and again in 2006 and 2007? Did all the weakfish from more northerly waters move into the South Atlantic Bight during the late summer and early fall? Was there a dramatic increase in fishing effort for this species? Below we attempt to address the viability of these various possible causes for landings in South Carolina to have risen above the *de minimis* threshold.

If a dramatic increase in the fishing effort caused the rise in the estimated harvest of weakfish in South Carolina, the trend should be visible in the MRFSS and MRIP data. However, in 2006 there were more trips than any of the other years and the harvest of weakfish was one to two orders of magnitude lower than those for the two highest years (Fig. 2). The number of trips made from 2007 – 2011 remained fairly consistent, yet catches continued to decrease. There is no correlation between the harvest of weakfish by the recreational fishery and the effort expended in the fishery.

Figure 3. Estimates of the total number of trips made by anglers in South Carolina's recreational fishery 2004 – 2011 by MRFSS and MRIP with corresponding harvest (number of fish). Data from the NMFS (http://www.st.nmfs.noaa.gov/st1/recreational/queries/index.html).



The increase may be the result of an increased abundance of weakfish in the coastal waters of the South Atlantic Bight. If this were the case, a region-wide increase in abundance would be

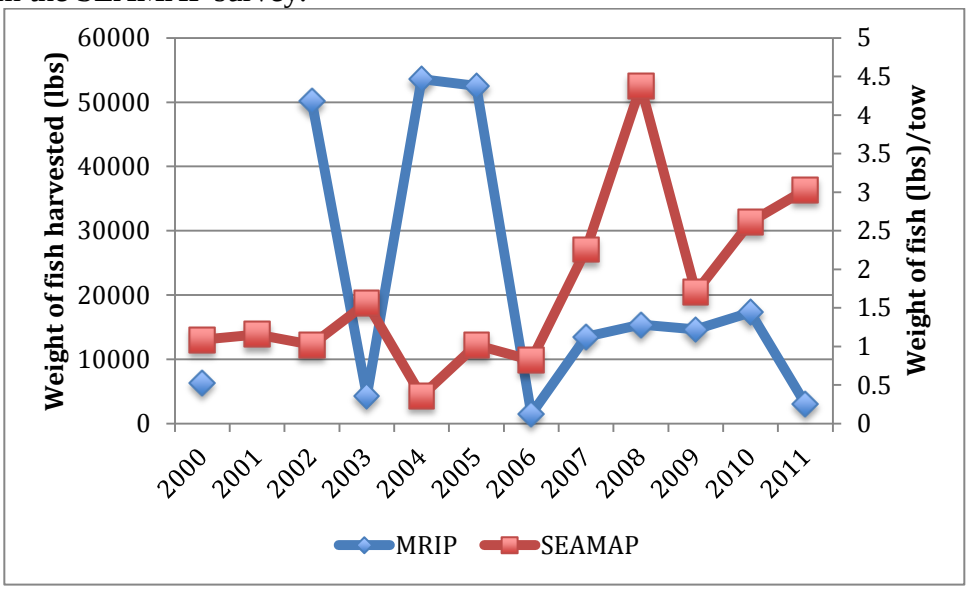
reflected in an upward trend in the recreation harvest from North Carolina to the east coast of Florida. Landings from the southeast did not demonstrate this to be the case (Table 4).

Table 4. Annual total weights (metric tons) of weakfish in the recreational harvest of states along the southeastern U.S. coast. Data from the MRIP NMFS (http://www.st.nmfs.noaa.gov/st1/index.html).

Year	*North Carolina*	*South Carolina*	*Georgia*	*East Florida*
2000	39.9	2.9	1.6	50.4
2001	71.9	0(none reported)	1.4	18.1
2002	37.5	22.7	0.3	26.8
2003	73.2	2.0	0.6	10.1
2004	110.0	24.3	2.8	16.7
2005	64.7	23.8	3.8	25.6
2006	64.3	0.67	0.8	24.8
2007	50.1	6.1	1.6	18.8
2008	51.8	7.0	2.1	20.1
2009	40.5	6.6	2.1	23.8
2010	17.5	7.8	1.2	5.0
2011	8.0	1.4	0.2	4.9

Perhaps weakfish were abundant only in the coastal waters of South Carolina during those years when the recreational landings were high in 2002, 2004, 2005 and moderately high 2007-2010. If increased harvests reflect a greater abundance, fishery independent resource surveys in the depths where weakfish occur in South Carolina should show highly significant increases for the same period. The SEAMAP trawl survey samples along the South Carolina coast during spring, summer and fall each year. Since the MRFSS and MRIP data indicated that the bulk of the harvest of weakfish in South Carolina's fishery occurred in late summer through fall, catch data for tows made in South Carolina's waters during those periods were examined to determine if the fishery independent data followed the same trend as the MRIP 2000 – 2010 (Table 6). These data, however, do not appear to follow similar trends (Fig. 4).

Figure 4. Harvest of weakfish in pounds from the MRIP and mean catch of weakfish in pounds by tow from the SEAMAP survey.



III. 2011 WEAKFISH FISHERY AND MANAGEMENT PROGRAM

A. Fishery Dependent Monitoring:

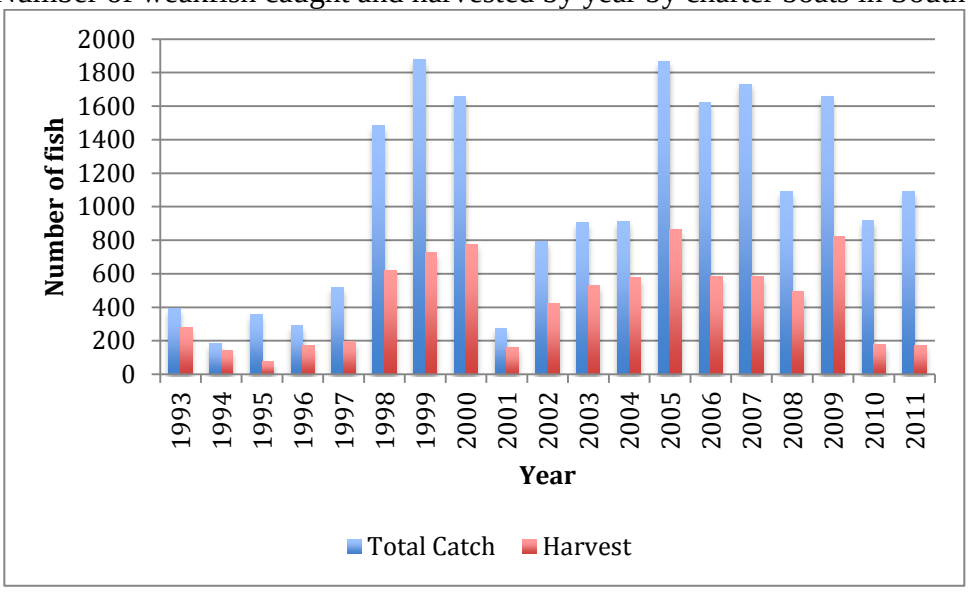
In 2009, SCDNR creel clerks began collecting weakfish otoliths from anglers' weakfish catches at fishing piers, particularly in the northern area of the South Carolina coast. Lengths were also recorded in order to describe the harvested portion of the population. In 2009, when the bag limit for weakfish in South Carolina was still 10/angler/day, eighty pairs of otoliths and corresponding lengths were collected and recorded. When the bag limit was reduced to 1/angler/day in 2010, only sixteen pairs of otoliths and lengths were collected. In 2011, only seven otoliths were collected. Ages and lengths of the sampled portion of the South Carolina recreational weakfish fishery are shown below (Table 5).

Table 5. Number of weakfish sampled by year and age and corresponding total lengths.

	2009		2010		2011	
Age	number	TL range (in)	number	TL range (in)	number	TL range (in)
0	0	-	0	-	1	7.4
1	27	11.7-15.2	4	12.5-14.6	3	7.8-9.1
2	53	12.1-17.9	10	13.2-17.9	3	15.5-17.5
3	0	-	2	19.8-19.9	0	-

Charter captain are obligated by the state of South Carolina to report total catch and harvest by species to the Office of Fisheries Management (South Carolina Department of Natural Resources, Marine Resources Division). Reported catch and harvest by charter boats from 1993 - 2011 is shown in Figure 5.

Figure 5. Number of weakfish caught and harvested by year by charter boats in South Carolina.



In 2011, the South Carolina Marine Game Fish Tagging Program reported that no weakfish were tagged or recaptured by recreational anglers. This program has established weakfish as a priority species to be tagged by its trained, volunteer recreational anglers. (SCDNR POC: WiggersR@dnr.sc.gov).

B. Fishery Independent Monitoring:

SCDNR does not have a specific monitoring program in place for weakfish. However, weakfish data are collected through two of the Department's on-going programs: Southeast Area Monitoring and Assessment Program (SEAMAP) and South Carolina Estuarine and Coastal Assessment Program (SCECAP).

SEAMAP collects seasonal abundance, biomass, and length frequency data for weakfish in nearshore waters. In recent years this program has also begun age/growth and gut content analyses. Sampling for this program is conducted by trawl in from the coastal zone of the South Atlantic Bight between Cape Hatteras, NC and Cape Canaveral, FL (SCDNR POC: BoylanJ@dnr.sc.gov). The SEAMAP's survey data (Table 6) shows numbers of weakfish caught per tow, as well as weight in kilograms for weakfish caught along the coast of South Carolina.

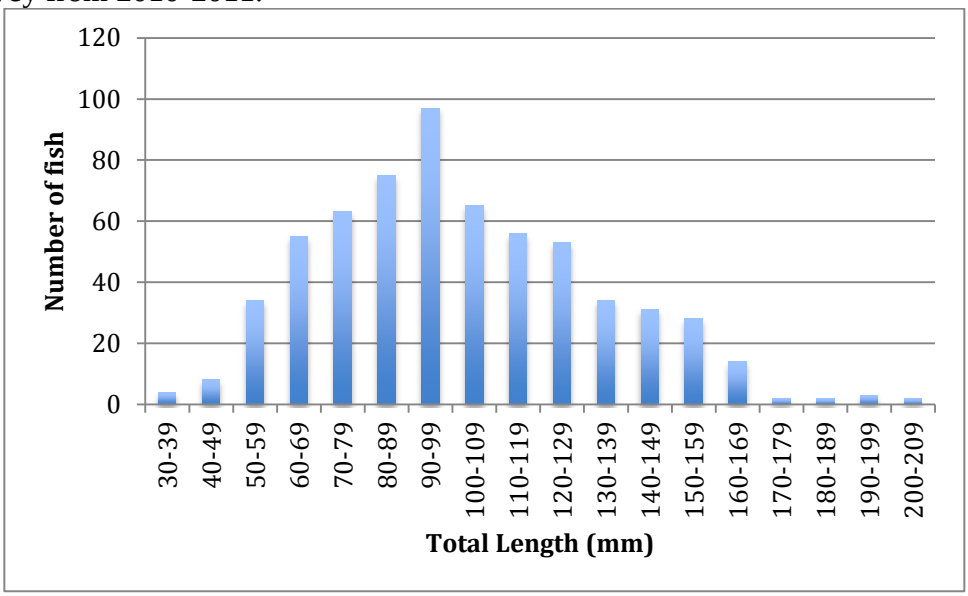
Table 6. Mean catch per tow in numbers and weight (kg) for weakfish off South Carolina by season and year; data from the SEAMAP trawl survey, 2000 through 2011.

Year	*Summer*		*Fall*		*Mean*	
	Number	weight	number	weight	number	Weight
2000	20.3	0.685	5.1	0.300	12.7	0.493
2001	19.2	0.711	5.4	0.338	12.3	0.524
2002	16.2	0.685	2.8	0.240	9.5	0.463
2003	14.2	1.063	3.9	0.359	9.0	0.711
2004	3.1	0.175	3.4	0.151	3.2	0.163
2005	1.8	0.168	9.4	0.755	5.6	0.462
2006	4.1	0.468	3.1	0.275	3.6	0.373
2007	11.4	0.581	18.4	1.464	14.9	1.023
2008	11.3	0.681	65.8	3.288	38.6	1.984
2009	15.3	0.685	11.9	0.860	13.6	0.773
2010	14.8	1.024	14.6	1.349	14.7	1.186
2011	45.6	1.905	13.9	0.844	29.75	1.375

SCECAP collects abundance, biomass, and length frequency data for weakfish in SC estuarine waters. Sampling is done primarily by otter trawls in both open water and tidal creek habitats throughout the state during the summer months (SCDNR POC: VandolahR@dnr.sc.gov).

In addition to the two surveys mentioned above, SCDNR recently (2010) began monitoring the finfish bycatch in its Crustacean Management Trawl Survey, which operates in near-shore state waters. Since weakfish are often captured in the trawls, we anticipate that the survey will be useful for monitoring the species' population once several years of data have been accumulated. In 2010, 91 weakfish were observed in project trawls (weakfish were not counted until late in the season in 2010), while 1289 individuals were observed in 2011. A size distribution of individuals measured can be seen in Fig. 6; this survey should prove to provide valuable data on recruitment. Furthermore, hard copies of fishery-independent trawl data exist for the same sites from a trawl survey that operated over the period 1953-1969. A new electronic database is currently being developed to store and analyze these historical data so that comparisons can be made against our contemporary data.

Figure 6. Size distribution (TL) in mm of weakfish captured in the Crustacean Management Trawl Survey from 2010-2011.



SCDNR staff also process and compile catch, size and age data for weakfish taken during the southern leg of the fall groundfish survey conducted by the NMFS-Woods Hole Laboratory. We also continue to provide assistance in age determinations for the weakfish collected by the state of Maryland each year. (POC: LevesqueE@dnr.sc.gov).

C. Weakfish Regulations in Effect:

In January 2010, Bill H.4444 (see below) was first introduced in the South Carolina House of Representatives and then introduced in the Senate in March 2010. The bill took effect on July 1, 2010. The bill states that only one weakfish may be kept per day per angler, instead of the previous creel limit of 10/day/angler. This new recreational creel limit brings South Carolina into compliance as the state no longer claims *de minimis* status. The size limit remains at a minimum of 12 inches total length.

H.4444 Weakfish Creel Limit Reduction Effective Date 7/01/2010 - Act No.169
It is unlawful for a person to take or have in possession more than one weakfish, *Cynoscion regalis*, in any one day.

SC remains in compliance with shrimp trawl bycatch reduction requirements through the use of approved bycatch reduction devices (BRDs) in any shrimp trawl with a foot-rope length greater than 16 ft. Details of the BRDs required were submitted with the 1999 compliance report.

D. Weakfish Harvest

No directed commercial fishery occurs in South Carolina for this species, and no landings were reported in 2011. Incidental catch does occur in the shrimp trawl fishery. However, the magnitude of weakfish discards taken incidentally by this fishery is unknown. The recreational

weakfish fishery is seasonal, occurring primarily in the late summer and fall. There is a small, directed recreational fishery particularly in the northern part of the state. In general, marine recreational anglers often catch weakfish incidentally when fishing for other species of the drum family (Sciaenidae).

The 2011 recreational landings estimated by the MRFSS and MRIP are well below the long-term average.

E. Habitat Recommendations – Not applicable.

IV. PLANNED WEAKFISH MANAGEMENT PROGRAMS FOR 2010-11

A. Regulations in Effect for 2012-2013:

Bag limit – one (1) fish per angler per day
Minimum Size – 12 inches total length

B. Monitoring programs that will be performed:

The 2012-13 management programs will consist of monitoring weakfish landings and continuation of the mandatory use of BRDs in shrimp trawls fished in state waters. The SEAMAP trawl survey is ageing weakfish and assessing sex and maturity as a part of their sampling protocol. The South Carolina State Fisheries Survey will continue to make an effort in collection of weakfish otoliths for age determination.

C. Changes from the Previous Year:

None.

V. PLAN SPECIFIC REQUIREMENTS – Not applicable.

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
COASTAL RESOURCES DIVISION

MARK WILLIAMS
COMMISSIONER

A.G. "SPUD" WOODWARD
DIRECTOR

Weakfish Interstate Fishery Management Plan
2011 Compliance Report - Georgia

I. Introduction

During 2011, weakfish regulations remained unchanged in Georgia. Legislation to consolidate many of the state's marine fishing regulations under the Department's Board of Natural Resources was initiated in 2011. House Bill 869 was presented to the Georgia General Assembly, approved, and signed by the Governor May 1, 2012. In 2012 and 2013 many of these fishing regulations formerly under legislative authority will be codified under the Natural Resources Board rules.

Bycatch reduction requirements remained in effect for the shrimp trawl fishery, and the industry-based Bycatch Reduction Device (BRD) testing program was continued, although no tests were conducted. Several finfish monitoring programs were continued. Directed commercial and recreational weakfish fisheries were non-existent in Georgia.

II. Request for *de minimis*

Pursuant to Section 3.5.3 of Amendment 3 to the Weakfish Fishery Management Plan, Georgia is requesting a continuation of its *de minimis* status. The 2010-2011 Atlantic coast wide recreational landings averaged 58,169 pounds and the commercial landings for the 2009 - 2010 period averaged 293,286 pounds. At present, commercial landings data from 2011 are not available on the NMFS website. The combined average harvest of both time series was 580,929 pounds in 2010.

In comparison, Georgia's recreational harvest for 2010, as estimated by the NMFS marine recreational fishing surveys, was 2,664 pounds across all harvest modes, with only 430 pounds in 2011. The two-year (2010-2011) recreational harvest average was 1,547 pounds. There was no commercial harvest reported in Georgia in 2010 and only 45 pounds in 2011. Typically commercial landings are very low and confidential because less than three dealers are involved. Combining both Georgia commercial and recreational harvest for 2010 (2664 lbs) results in an approximately 0.9% Georgia contribution of the total harvest along the Atlantic Coast. Georgia's recreational catch estimates in 2011 were 1.15% of the coastwide recreational harvest.

III. Review of 2010 Fishery and Management Program

a. Fishery Dependent Monitoring

Commercial Fishery

Coastal Resources Division (CRD) continued providing observers to conduct characterization of bycatch associated with the whelk trawl fishery and the cannonball jellyfish experimental trawl fishery during 2011. These efforts were funded through CRD's Atlantic Coastal Fisheries Cooperative Management Act (P.L. 103 - 206) project. Observers rode along on one whelk trip in 2011, and recorded bycatch information from a total of seven tows. No weakfish were recorded in these four tows, which totaled 0.93 fishing hours. Staff also performed observer work on a three cannonball jellyfish trawl harvest trip in 2011, where they logged bycatch information from thirty tows. No weakfish were recorded in these tows, which totaled 18.48 fishing hours.

Recreational Fishery

In 2011, CRD continued to monitor the catch and effort of marine recreational anglers in Georgia through participation in the NMFS marine recreational fishing surveys. CRD creel clerks conducted 1,743 intercept interviews from March through December. Sixty-one (61) angler trips caught 46 weakfish of which 39 were released alive (~85%). Three (3) trips retained 7 weakfish. Of the harvested fish, none of the 7 were measured. Of the trips in which fish were harvested, 3 of the 3 trips possessed legal bag limits (100%).

Table 1. NMFS marine recreational fishing surveys expansions of intercept survey for Georgia weakfish using the new MRIP estimates.

Year	Total Catch (# of Fish)	PSE	Total Harvest (# of fish)	PSE
2009	18,226	36.9	8,450	65.1
2010	11,171	39.6	2,840	40.4
2011	15,549	58.1	973	103.1

Throughout 2011, CRD continued its Marine Sportfish Carcass Recovery Project (CRP), optimizing biological data collection from the recreational sector through a partnership with anglers and public marinas. Freezers placed at 16 fishing access points in coastal Georgia collected a total of 2,852 fish carcasses representing nine species. No weakfish were donated to the CRP during 2011.

b. Fishery Independent Monitoring

During 2011, staff continued collecting data on weakfish and other marine organisms as

part of the monthly Ecological Monitoring Trawl Survey conducted onboard the R/V *Anna*. During this time period, 504 tows/observations were conducted, totaling 127.00 hours of tow time. A total of 13,236 weakfish were observed, collectively weighing 246.52 kg (Table 2). Lengths ranged from 30 mm to 299 mm total length, with a mean of 123.94 mm TL (Table 2). Sixty-three percent of the 504 tows had at least a single weakfish. Weakfish abundance varied by month, though the greatest abundance continued to be observed in the summer months (June – September).

Table 2. Weakfish observed during Ecological Monitoring Surveys aboard *R/V Anna* - 2011

Observation Date	**R/V *Anna* Monthly Assessment**
Total Weakfish (num.)	13,236
Total Weight (kg)	246.52
Frequency (Trawls with weakfish)	316
Average length (mmTL)	123.94
Minimum Length	30
Maximum Length	299
Total Trawl Time (hr)	127
CPUE (# per standard 15 min trawl)	26.26
CPUE (kg per standard 15 min trawl)	0.489
CPUE (# per hr)	104.2
Total Catch (all species - #)	325,317
Total Weight (all species - kg)	11,096
Total Trawls	504
Weakfish Percent Composition (num.)	4.07
Weakfish Percent Composition (kg)	2.22

In 2011, entanglement gear surveys were conducted in the Wassaw and Altamaha River Delta estuaries (Table 3).

Table 3. 2011 Gill and Trammel net effort for Wassaw and Altamaha Sounds.

Gear	**GILL**	**TRAMMEL**
Location	Wassaw + Altamaha	Wassaw + Altamaha
Months	Jun - Aug	Sept-Nov
Total Effort (sets)	219	150
N (weakfish caught)	0	0
CPUE (N/Total Effort)	0.0	0
Mean CL (mm)	-	-
Min CL (mm)	-	-
Max CL (mm)	-	-

c. 2010 Regulations

Size and Possession Limits

The recreational bag limit remained at one weakfish per day with a minimum total length remaining at 13 inches. The season is open year round. The same size and possession limits were applicable to commercial fisherman. This size and bag limit is in compliance with Addendum 4 to Amendment 4 of the ASMFC Weakfish Management Plan.

Bycatch Reduction Device (BRD) Requirements

Georgia Board of Natural Resources Rule 391-2-4-.08 requires all food shrimp trawls with a headrope length of greater than 16 feet to have a certified BRD installed. Currently, three fisheye BRDs and the eight-inch and ten-inch expanded mesh funnel BRDs are certified for use in Georgia waters.

Georgia's BRD testing procedures allow the trawl industry the opportunity to test new BRD designs under a master scientific collecting permit held by CRD. To allow the industry time to refine concepts, a two-week prototype test period is implemented prior to the more rigorous certification testing. During the prototype testing phase permittees may test the new devices without on-board observers, but they are required to keep and submit detailed records of prototype test results. During 2011, no requests to prototype test new BRD devices were received.

d. 2011 Harvest

Commercial

There were 45 pounds of reported commercially harvested weakfish in 2011.

Recreational

The NMFS expanded data for Georgia reports 973 (PSE 103.1) weakfish (430 lbs) harvested in 2011 compared to 2,840 in 2010 (PSE 40.4) (2,664 lbs).

Non-Harvest

Non-harvest losses of weakfish are described in the summary of fishery dependent monitoring (Section III a. Commercial). Turtle Excluder Device (TED) and BRD requirements have served to reduce non-harvest losses of finfish, including weakfish, in the Georgia shrimp trawl fishery.

e. Habitat Implementation
N/A

IV. Planned Management Programs for 2011.

a. 2011 Regulations

No additional regulations were implemented in Georgia for weakfish in 2011.

b. Monitoring Programs

Reporting

Reporting requirements for all Georgia seafood dealers and harvesters remains unchanged. Mandatory reporting requirements pursuant to Georgia law (O.C.G.A. Section 27-4-118 and Board of Natural Resources Rule 391-2-4-.09, previously submitted), requires all harvesters landing seafood in Georgia to record their harvest and to submit these records to the Department of Natural Resources.

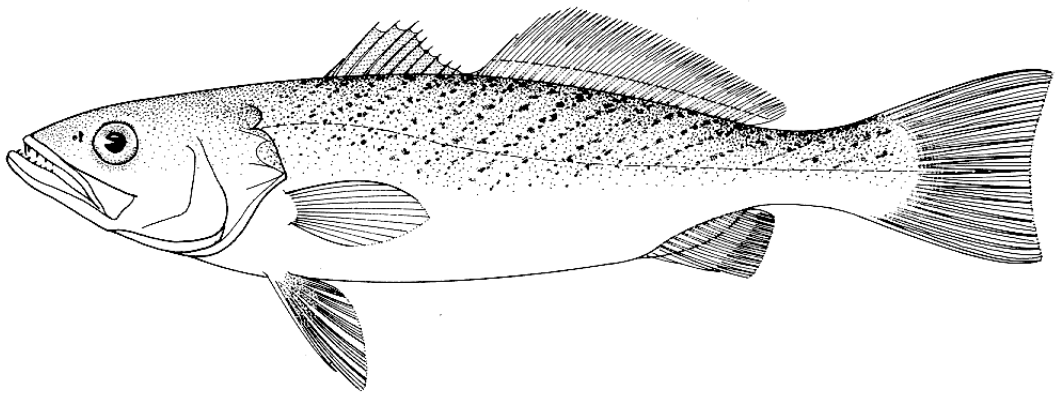
Fishery Dependent and BRD Testing

Fishery dependent monitoring programs as described in Sections III are continuing in 2011. Bycatch characterization in the whelk trawl fisheries is continuing. Further bycatch characterization in the shrimp trawl fishery will occur during any BRD testing operations as described above.

Biological data collection

Biological data collection will continue through the Marine Sportfish Carcass Recovery Project and fishery-independent sampling. NMFS marine recreational fishing surveys interviews could potentially provide biological data if more weakfish were encountered.

The 2012 Atlantic States Marine Fisheries Commission Compliance Report for weakfish, *Cynoscion regalis,* on Florida's East Coast



Joseph Munyandorero
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Fish and Wildlife Research Institute
St. Petersburg, FL 33701

Executive Summary

- In 2011, estimates of Florida's weakfish total landings were 863 pounds, of which 29% came from the recreational fishery.

- Average landings of weakfish in Florida for 2010/2011 represented 0.41% of available 2010/2011 coastwide average landings. Therefore, Florida requests to be granted continued *de minimis* status.

- Commercial landings and effort for weakfish amounted to 608 pounds and 105 trips in 2011. Inland and federal waters contributed for 87% of these landings. Most of weakfish commercial landings (87%) were made by hook-and-lines and gillnets.

- The current status of size compliance in Florida's commercial fishery of weakfish was difficult to ascertain owing to the marginal nature of this fishery since 1995 which made the collection of adequate length measurements problematic, but also because of the difficulty of distinguishing between various members of the Cynoscion complex. In 2011, only 15 weakfish-like fish were measured and 14 of them were >= 12 inches long.

- In 2011, an estimated 225 weakfish weighing 253 pounds were kept by anglers on Florida's east coast. Weakfish recreational harvests in 2011 were the lowest recorded during 1983–2011.

- In 2011, all recreationally landed weakfish-like fish were equal to or above the minimum size limit. Compliance with the 12-inch minimum size has generally been high since 1996.

- During 1995-2011, about 97 % of anglers sampled were complying with the (historical) four-fish bag limit and 74% were complying with a one-fish bag limit.

- Head boat fishery caught 1 pound of weakfish on Florida's Atlantic coast in 2011.

- Fishery-independent indices of abundance for YOY and adult weakfish-like fish trended similarly: they increased during 2001–2004, declined through 2007 or 2008, and rebounded by 2009 before dropping again.

I. INTRODUCTION

A. Distribution of weakfish and fishery management regulations

Weakfish, *Cynoscion regalis,* occur along the Atlantic coast of the United States from southern Florida to Massachusetts, but are most abundant between New York and North Carolina (Mercer, 1989).

The Florida Fish and Wildlife Conservation Commission (FWC) regulates the fishing of weakfish under Chapter 68B-47, Florida Administrative Code (F.A.C), as part of the Atlantic States Marine Fisheries Commission (ASMFC)'s Fishery Management Plan (FMP, Amendment 4) for weakfish. In 1995, a minimum size limit of 12" total length for all weakfish landed in Florida and a recreational bag limit of 4 fish per day was established. Amendment 4 of the ASFMC weakfish FMP requires each member state to implement harvest reduction strategies to reduce fishing mortality on fully-recruited weakfish. Amendment 4 to the management plan was completed in November 2002 and established a target fishing mortality rate of 0.31 and a threshold fishing mortality rate of 0.5 per year and spawning stock biomass threshold of 31.8 million pounds.

On the other hand, the Florida Constitutional amendment (Article X, Section 16) banned in 1995 the use of gill and entangling nets in state waters and restricted the size of other nets, such as trawls and haul seines, to 500 square feet in near-shore and inshore waters. As a result, there has been a large reduction in the commercial landings of weakfish. Since 1995, Florida has been in *de minimis* status as defined by the ASMFC weakfish FMP (Amendment 4). Thus, Florida is not required to implement the recreational or commercial fishing provisions of the weakfish FMP, except for bycatch reduction devices as stipulated under the FMP's section 4.2.8, and for implementing size (i.e., 12" TL) and recreational bag (i.e., 4-fish-per-day) limits. Furthermore, Florida is required to report annual weakfish landings in order to determine if its continued *de minimis* status is warranted. Effective July 27, 2010, Chapter 68B-47:

(1) Applies weakfish management rules only in state waters of Nassau County from the shore out to three miles off Amelia Island and the St. Marys River and its tributaries south to State Highway 200A and the Shave Bridge on the Amelia River, as well as inland waters east of Highway 17 (about 20 miles inland), which is the saltwater demarcation line.

(2) Establishes a 1-fish recreational bag limit and 100 pound commercial trip limit for all weakfish-like fish (i.e., weakfish, sand seatrout, and their hybrids) in the Nassau county weakfish management area.

This report updates the FWC and the ASMFC on the current state of the weakfish fishery and Florida's *de minimis* status. Landings reported are from Nassau and Duval counties and were adjusted using the genetic proportions of "pure" weakfish within the Cynoscion complex, as determined by Tringali et al. (2011), i.e., about 48% and 17%, respectively. For the recreational sector, adjustment also

accounted for the ratio of the number of intercepted trips to the number of (Florida) coast-wide intercepted trips directed to weakfish-like fish.

B. Total Landings

In 2011, Florida's total landings of weakfish, *Cynoscion regalis*, were 863 pounds of which 71% were from the commercial fishery. The relative contributions of recreational harvests in total landings varied without trend prior to 1995, increased sharply since then and formed a plateau averaging 70% annually during 1999-2011 (Fig. 1, Table 1).

Weakfish total landings averaged 20,800 pounds annually between 1985 and 1994, and 2,400 pounds annually from 1995 onwards. The reduction of weakfish total landings during the latter period could be partly attributed to a reduced commercial fishery, as a result of the constitutional amendment banning entangling fishing gears. In 2011, the recreational landings were the lowest so far recorded in during 1983-2011.

II. REQUEST FOR *de Minimis* STATUS

Determining whether the State of Florida met the *de minimis* requirements for the weakfish fishery on the Atlantic coast required the recreational and commercial landings for 2010 and 2011. The recreational harvests in pounds (Type A+B1) came from the National Marine Fisheries Service (NMFS) website http://www.st.nmfs.gov/st1/recreational/queries/index.html.The commercial landings (pounds) for 2010 were obtained from the NMFS website http://www.st.nmfs.gov/st1/commercial/index.html and, for Florida, from the Marine Fisheries Information System or "trip tickets" (TTK) program. State fishery agencies were expected to provide the 2011 commercial landings but only those of Florida and Virginia were obtained.

The time series of commercial and recreational weakfish landings on the Florida Atlantic were from Nassau and Duval Counties. They were estimated based on the genome proportions of weakfish within the Cynoscion-complex found in waters of those counties. Those proportions are 48% in Nassau County and 17% in Duval County (Tringali et al. 2011). Anglers' harvest of weakfish-like fish from waters of Nassau and Duval counties were initially estimated by multiplying the (Florida) coast-wide harvest with the ratios of Nassau and Duval intercepts to coast-wide intercepts as obtained from Type 3 records. The analysis of compliance with the size and bag limits dealt with all "weakfish-like" *Cynoscion* because, in addition, sample sizes for length measurements obtained through the Trip Interview Program were too small, and the creel data have been uninformative to disentangle the genome composition within the Cynoscion complex.

Based on the available data, the 2010-2011 coastwide average harvest of weakfish was 162,233 pounds. The estimate of the 2010-2011 average harvest for weakfish on the east coast of Florida was 673 pounds (Table 2). The harvest of

weakfish on the Florida Atlantic represented 0.41% of the 2010-2011 coastwide average of available landings. This proportion could have been lower if all commercial landings by state had been obtained. Florida therefore requests to be granted continued *de minimis* status for the weakfish fishery on the Atlantic coast.

III. PREVIOUS CALENDER YEAR'S FISHERY AND MANAGEMENT PROGRAM

A. Activities and Results of Fishery Dependent Monitoring Program

Commercial Fishery

Description of 2011 Fishery

The commercial landing data used included all edited (batches 1-1147) and unedited (batches 1148-1152) TTKs received by the FWC through August 6th, 2012.

Preliminary estimates of commercial weakfish total landings and trips for 2011 were 608 pounds and 105 trips (Fig. 2; Tables 3 and 4). The 2011 commercial landings were made in Duval County. They were 8 times greater than the 2010 landings while the 2011 number of trips was about 4 times greater than the 2010 number of trips.

In 2011, 87% of weakfish commercial landings were taken from inland waters, where 75% of commercial trips were made; state territorial waters contributed 8% and 5% of landings and trips, respectively (Table 5). The number of primary fishers (i.e., those that landed more than 100 pounds a year) ranged between 50 and 114 from 1987 to 1995 and between 2 and 17 from 1996 onwards. In 2011, there were 9 primary fishers; they made 63% of trips and 84% of landings. No fishers landed more than 5,000 pounds per year from 1996 onwards.

In 2011, the majority of weakfish (86%; Table 3; Fig. 3) was landed by hook-and-liners (82 %) and gillnetters (4%). Hook-and-lines and gillnets represented 70% and 18% of trips made in 2011, respectively (Table 4; Fig. 4).

Trip limit and Quota compliance

Florida was a *de minimis* state in 2011. As such, the State of Florida was not required to implement the commercial fishing provisions of amendment 4 relative to the interstate FMP for weakfish.

Size limits

The current status of size compliance in Florida's commercial fishery on the Atlantic coast was difficult to ascertain. This was because the commercial fishing activity has become extremely marginal and collecting adequate length measurements problematic. For example, only 15 weakfish-like fish were measured by the trip interview program (TIP) in 2011 and 14 fish were legal (i.e., >= 12 inches long). In

general, the proportion of legal-sized fish in the commercial fishery has increased since 1996, but no consistent length measurements were done since 2002.

Recreational Fishery

Description of 2011 Fishery

The recreational fishery records were extracted from the NMFS website. The ratios of Nassau and Duval County intercepts to coast-wide intercepts (based on Type 3 records, i.e. available catch or catch type A) was assumed to be equivalent to the ratios of Nassau and Duval's weakfish-like fish harvests to coast-wide weakfish-like fish harvests. They therefore served the basis to estimate weakfish-like fish harvested in those counties. The ratios in question were 0.01 and 0.11 in 2011, respectively. The resulting estimates of weakfish-like fish were then multiplied by the county-specific genome proportion of "pure" weakfish.

In 2011, an estimated 225 weakfish weighing 253 lbs (Type A+B1) were landed by anglers on Florida's East coast (Fig. 5; Table 6). Adding 10% of release mortality (i.e., 0.1*Type B2) to the harvest estimates, about 250 fish died due to fishing in 2011 (Fig. 6). In 2011, estimates of weakfish recreational harvests were the lowest during 1983-2011.

The number of directed trips (i.e., trips during which anglers claim to primarily target weakfish) were used as indicator of recreational effort. In Duval and Nassau Counties, the number of directed trips was estimated based on the ratio of Duval and Nassau number of intercepted trips to coast-wide number of intercepted trips. In 2011, there were no trips during which anglers claimed to be primarily targeting weakfish (Table 6). This effort showed multiple peak years. Apart from some outliers observed, e.g., in 1983 and 1984, annual landings and catches generally increased with increase in the number of directed trips. In general, the catch rates (harvests in number or weight and catches in number divided by the number of directed trips) of weakfish on the east coast of Florida varied without trend, but they were low in 2010 because of management restrictions regarding targeting weakfish in Nassau and Duval Counties (Fig. 7).

Size Limits

The recreational length frequencies of landing samples were categorized into numbers of fish less than 12 inches and those greater or equal to 12 inches (Table 7). In 2011, all weakfish-like fish sampled from the recreational landings were equal to or above the minimum size limit. Compliance with the 12-inch minimum size was ≥70 % in most years since 1996. At the same time, the size distribution of weakfish-like fish measured indicated that the introduction of the 12-inch minimum size in 1995 led to slightly increasing the size of fish being landed (Fig. 8). However, like in most years, the number of intercepts where weakfish-like fish were encountered in 2011 was low and the results may not be statistically significant.

Bag Limits

Concomitant to the 12-inch minimum size limit was the implementation by the FWC of a four weakfish (-like) fish per person per day recreational bag limit during 1995–2010. These regulations were applied to the entire east coast of Florida. Beginning in July 2010, the 12-inch minimum size limit and a one-fish per harvester per day recreational bag limit have been applied in a newly-created management area only. Unfortunately, there is no information to disentangle the applicability of such regulations within the new management area alone. Here, Florida's coastwide MRFSS recreational intercepts were grouped into two time periods representing the pre- and post-regulations (i.e., 1982–1994 and 1995–2011) and analysis outcomes were assumed to be valid for the management area. The standard bootstrap simulation was then run on intercepts from each of the periods. The simulation consisted of randomly selecting 200 intercepts from the creel data, calculating the reductions associated with bag limits from one to ten weakfish-like fish, and then repeating the selection and calculations 1000 times.

Tables 8a and 8b summarize the results of the analysis on bag limits. The top-tables show the data categorized by the integer number of weakfish-like fish kept per angler for each trip. For each category, the following were given: the number of years that that category appeared in the data, the total number of fishing trips, the total number of anglers participating in all of that category's trips, the average number of anglers per trip, the cumulative percentage of all anglers that were on fishing trips that had that category's number of "weakfish" kept or less, the number of "weakfish" caught and the number of "weakfish" retained on all the trips within that category, and the cumulative percentage of "weakfish" caught and "weakfish" retained on all trips that had that category's number of weakfish kept per angler or less. The bottom tables show the mean expected reduction in the number of "weakfish" harvested given different bag limits ranging from 1 to 10 "weakfish", as well as the standard deviation, the minimum and maximum of the estimated harvest reduction.

The bag limit analysis for the period prior to the implementation of the four-fish bag limit indicated that the bag limit would be expected to reduce the landings by about 27% (Table 8a). The analysis run on the data from 1995-2011 indicated that a saving of 6% would be gained if everyone complied with the four-fish bag limit (Table 8b). Thus, judging by the difference, the bag limit may have reduced the harvest by about 21% during the period 1995-2011, which represented 78% of the expected reduction. For the period 1995-2011 about 97% of anglers sampled were complying with the four-fish bag limit. If a one-fish bag limit had been applied since 1995, Table 8b indicates that 74% of anglers would have complied with this regulation during 1995-2011.

Head boat fishery

Description of 2011 Fishery

In 2011, head boat catch of weakfish amounted to 1 pound.

Bag limits

NA

B. Activities and Results of the Fishery Independent Monitoring (FIM) Program

The FWC-FWRI' s FIM program initiated sampling activities on estuarine, bay and coastal systems of the Florida Atlantic at northern Indian River Lagoon in 1990, southern Indian River Lagoon in 1997 and northeast Florida (Jacksonville study area) in 2001. The sampling gears commonly used were a 21.3-m center bag seine, a 6.1-m otter trawl, and a 183-m haul seine. These gears were designed to collect, respectively, juvenile and sub-adult fishes (especially young-of-the-year) in shallow areas (< 1.8 m), juvenile, sub-adult and adult fish in deep waters (1 – 7.6 m) and sub-adult and adult fish in shallow waters (< 2.5 m) along shorelines.

FIM Program has collected weakfish-like fish only in northeast Florida and northern Indian River Lagoon. FIM Program lumps *Cynoscion regalis* (weakfish), *Cynoscion arenarius* (sand seatrout) as well as the different degrees of hybrids into one category referred to as collectively "*Cynoscion* complex" or *Cynoscion spp*. Below is an excerpt from the 2011 FIM Annual Report that deals with the hybridization issue.

For the Cynoscion complex YOY indices of abundance (IOA's), only data from Jacksonville trawls were used. The 21.3-m seine only collected very few animals for the 11-year period (both labs combined) after excluding data from zones that were only sampled seasonally; so they were also excluded from the analysis. Looking at trawl data, Indian River only collected few animals for the time period and only trawled regularly in one zone (H) starting in 2003, so that data was also dropped. Jacksonville trawl data were retained because they include only those zones that were sampled for the entire time frame (zones A-D). IOA's were calculated on animals 0-100 mm SL with a recruitment window of May through October.

The adult IOA's used 183-m haul seine data from both Indian River and Jacksonville sampling areas only included zones that were sampled monthly each year during the entire 11-year time period. It includes all weakfish (>100 mm SL) collected in the 183-m haul seine during the entire year (January–December).

FIM analysts are now using the glimmix procedure (binomial distribution) instead of the GLM procedure that has been used in the past. In comparison with the previous GLM calculations, the trends are basically the same for all calculations except the combined Indian River and Jacksonville adult IOA. FIM analysts feel this is most likely due to the fact that the glimmix model better handles the data variability. Note also that analysts are dealing with a relatively low numbers when looking at adults for the entire 11-year period (N=480) and a few of those years

where a greater number of fish is seen; the majority of the fish may have been caught in only 2–3 nets during 1 month (i.e. 2010 where 60/102 fish for the year came from 2 nets in IR during the month of July). So some caution should be used when looking at the adult IOAs as the model is trying to deal with a great many "0" catches.

Relative abundance was calculated as the median annual number of fish per haul (i.e., CPUE). Median values were determined from the least-squares adjusted means by multiplying the standard error by a random normal deviate and adding it to the least-squares mean. These data were then back-transformed. The process was repeated 500 times for each year to create a sampling distribution of back-transformed means. Summary statistics (10, 25, 75, and 90 percentiles) were then calculated.

The IOA's for YOY weakfish-like fish increased steadily on the east coast of Florida during 2001-2004, declined since then through 2007, rebounded until 2009 before declining again (Fig. 9; Table 9). IOA's for adult weakfish-like fish generally trended like IOA's for YOY (Fig. 10; Table 9).

C. Copy of regulations that were in effect, including a reference to the specific compliance criteria as mandated in the FMP

CHAPTER 68B-47, Florida Administrative Code (F.A.C; **http://fac.dos.state.fl.us**) **provides a historical perspective of management regulations for weakfish:**

68B-47.001 Definitions

As used in this chapter:

(1) "Harvest" means the catching or taking of a fish by any means whatsoever, followed by a reduction of such fish to possession. Fish that are caught but immediately returned to the water free, alive, and unharmed are not harvested. In addition, temporary possession of a fish for the purpose of measuring it to determine compliance with the minimum size requirements of this chapter shall not constitute harvesting such fish, provided that it is measured immediately after taking, and immediately returned to the water free, alive and unharmed if undersize.

(2) "Land", when used in connection with the harvest of a fish, means the physical act of bringing the harvested fish ashore.

(3) "Spearing" means the catching or taking of a fish by bow hunting, gigging, spearfishing, or by any device used to capture a fish by piercing the body. Spearing does not include the catching or taking of a fish by a hook with hook and line gear, or by snagging (snatch hooking).

(4) "Total length" means the length of a fish as measured from the tip of the snout to the tip of the tail.

(5) "Weakfish", also known as gray seatrout or yellow-mouth trout, means any fish of the species *Cynoscion regalis*, or any part thereof.

Specific Authority Art. IV, Sec. 9, Fla. Const. Law Implemented Art. IV, Sec. 9, Fla. Const. History-New 7-17-95, Amended 1-1-98, Formerly 46-47.001.

68B-47.002 Size limits

(1) No person shall harvest, with or without the waters of the state, possesses, or land any weakfish with a total length less than 12 inches.
(2) No person shall purchase, sell, or exchange any weakfish with a total length less than 12 inches.
(3) All weakfish shall be landed in whole condition. The possession, while in or on state waters, of weakfish that have been deheaded, sliced, divided, filleted, ground, scaled, or deboned is prohibited. Mere evisceration or "gutting" of weakfish, or mere removal of gills, before landing is not prohibited.

Specific Authority Art. IV, Sec. 9, Fla. Const. Law Implemented Art. IV, Sec. 9, Fla. Const. History-New 7-17-95, Formerly 46-47.002.

68B-47.003 Bag Limits

Except for a person possessing a valid saltwater products license, no person shall harvest or land more than 4 weakfish per day, nor possess more than 4 weakfish at any time while in or on the waters of the state.

Specific Authority Art. IV, Sec. 9, Fla. Const. Law Implemented Art. IV, Sec. 9, Fla. Const. History-New 7-17-95, Formerly 46-47.003.

68B-47.004 Gear Restriction

The harvest or attempted harvest of any weakfish in or from state waters by spearing is prohibited.

Specific Authority Art. IV, Sec. 9, Fla. Const. Law Implemented Art. IV, Sec. 9, Fla. Const. History-New 1-1-98, Formerly 46-47.004.

New weakfish regulations took effect July 27, 2010 (source: http://myfwc.com/fishing/saltwater/recreational/). The FWC created a Weakfish Management Area in part of Nassau County to address difficulty distinguishing between weakfish, sand seatrout, and weakfish-sand seatrout hybrids. Additionally, the FWC decreased the recreational bag limit for weakfish in response to a recent stock assessment by the Atlantic States Marine Fisheries Commission that indicates that the weakfish population along the entire Atlantic coast is severely depleted. The Weakfish Management Area consists of state waters off Amelia Island and the Saint Marys River and its tributaries. This area is where the majority of genetically-pure weakfish occur in Florida. Inside the Weakfish Management Area, recreational

anglers are limited to one weakfish, sand seatrout, OR weakfish-sand seatrout hybrid per person per day with a minimum size limit of 12 inches total length. Outside this area, recreational anglers may harvest up to 100 pounds per person per day of weakfish, sand seatrout, and weakfish-sand seatrout hybrids without size limits.

Miscellaneous Management regulations: THE CONSTITUTIONAL AMENDEMENT TO LIMIT MARINE NET FISHING

ARTICLE X

SECTION 16: Limiting marine net fishing

(a)The marine resources of the State of Florida belong to all of the people of the state and should be conserved and managed for the benefit of the state, its people, and future generations. To this end the people hereby enact limitations on marine net fishing in Florida waters to protect saltwater finfish, shellfish, and other marine animals from unnecessary killing, overfishing and waste.

(b) For the purpose of catching or taking any saltwater finfish, shellfish or other marine animals in Florida waters:

(1) No gill nets or other entangling nets shall be used in any Florida waters; and

(2) In addition to the prohibition set forth in (1), no other type of net containing more than 500 square feet of mesh area shall be used in nearshore and inshore Florida waters. Additionally, no more than two such nets, which shall not be connected, shall be used from any vessel, and no person not on a vessel shall use more than one such net in nearshore and inshore Florida waters.

(c) For purposes of this section:

(1) "Gill net" means one or more walls of netting which captures saltwater finfish by ensnaring or entangling them in the meshes of the net by the gills, and "entangling net" means a drift net, trammel net, stab net, or any other net which captures saltwater finfish, shellfish, or other marine animals by causing all or part of heads, fins, legs, or other body parts to become entangled or ensnared in the meshes of the net, but a hand thrown cast net is not a gill net or an entangling net;

(2) "Mesh area" of a net means the total area of netting with the meshes open to comprise the maximum square footage. The square footage shall be calculated using standard mathematical formulas for geometric shapes. Seines and other rectangular nets shall be calculated using the maximum length and maximum width of the netting. Trawls and other bag type nets shall be calculated as a cone using the maximum circumference of the net mouth to derive the radius, and the maximum length from

the net mouth to the tail end of the net to derive the slant height. Calculations for any other nets or combination type nets shall be based on the shapes of the individual components;

(3) "Coastline" means the territorial sea base line for the State of Florida established pursuant to the laws of the United States of America;

(4) "Florida waters" means the waters of the Atlantic Ocean, the Gulf of Mexico, the Straits of Florida, and any other bodies of water under the jurisdiction of the State of Florida, whether coastal, intracoastal or inland, and any part thereof; and

(5) "Nearshore and inshore Florida waters" means all Florida waters inside a line three miles seaward of the coastline along the Gulf of Mexico and inside a line one mile seaward of the coastline along the Atlantic Ocean.

(d) This section shall not apply to the use of nets for scientific research or governmental purposes.

(e) Persons violating this section shall be prosecuted and punished pursuant to the penalties provided in section 370.021(2) (a), (b), (c)6. and 7., and (e), Florida Statutes (1991), unless and until the legislature enacts more stringent penalties for violations hereof. On and after the effective date of this section, law enforcement officers in the state are authorized to enforce the provisions of this section in the same manner and authority as if a violation of this section constituted a violation of Chapter 370, Florida Statutes (1991).

(f) It is the intent of this section that implementing legislation is not required for enforcing any violations hereof, but nothing in this section prohibits the establishment by law or pursuant to law of more restrictions on the use of nets for the purpose of catching or taking any saltwater finfish, shellfish, or other marine animals.

(g) If any portion of this section is held invalid for any reason, the remaining portion of this section, to the fullest extent possible, shall be severed from the void portion and given the fullest possible force and application.

(h) This section shall take effect on the July 1 next occurring after approval hereof by vote of the electors.

D. Harvest broken down by commercial and recreational and non-harvest losses

See Table 1 for the annual harvests of weakfish on the Atlantic coast of Florida by fishery, Table 2 for available commercial and recreational landings from Atlantic coast states, Table 3 for Florida's Atlantic coast commercial weakfish

landings by gear type, Table 5 for Florida's Atlantic coast commercial weakfish landings by fishing ground, Table 6 for recreational landings /catches in number and weight.

E. Review of Progress in Implementing Habitat Recommendations

N/A

IV. PLANNED MANAGEMENT PROGRAMS FOR THE CURRENT YEAR

No changes to the current management program are planned for the current year.

ACKNOWLEDGENMENT;

Russel Brodie developed the fishery-independent indices of relative abundance for young-of the-year and adult weakfish-like fish on the Atlantic coast of Florida.

V. LITTERATURE CITED

Mercer, L. P. 1989. Species profiles: life histories and environmental requirements of coastal fishes and invertebrates (Mid-Atlantic) - Weakfish. U.S.F.W.S. Biological Report 82 (11.109). U.S Army Corps of Engineers, TR EL-82-4. 17 pp.

Tringali, M.D, Seyoum, S., Higham, and M, Wallace, E.M 2011.A dispersal-dependent zone of introgressive hybridization between weakfish, *Cynoscion regalis*, and sand seatrout, *C. arenarius*, (Sciaenidae) in the Florida Atlantic. Journal of Heredity 102: 416-432.

Table 1 – Estimates of annual weakfish landings (lbs) on the east coast of Florida. Estimates for 2011 are preliminary for commercial, recreational and head boat sectors. All head boat catches are assumed to be true weakfish.

	Comm	Rec	Headboat	Total
1985	7747	894	154	8,795
1986	9162	4,116	35	13,314
1987	11719	1,864	97	13,680
1988	13283	3,634	7	16,924
1989	21376	4,537	28	25,941
1990	17433	2,268		19,701
1991	21344	3,315	6	24,665
1992	24655	2,088	434	27,177
1993	19580	4,485	45	24,110
1994	27835	6,086		33,921
1995	5609	1,773		7,382
1996	387	703		1,090
1997	875	2,682	9	3,566
1998	952	786		1,738
1999	779	4,020		4,799
2000	448	2,943		3,391
2001	1201	1,322		2,524
2002	394	1,577		1,970
2003	288	580		868
2004	192	954		1,146
2005	553	1,534		2,087
2006	337	1,542		1,880
2007	888	845	1	1,734
2008	996	1,188		2,184
2009	453	1,961	19	2,433
2010	73	411		484
2011	608	253	1	863

Table 2 – Annual recreational (Type A+B1) and commercial landings (lbs) used to determine the *de minimis* requirements for the State of Florida. Commercial catches for 2011 were preliminary. White blank cells mean "no landings"; gray blank cells correspond to landings not provided by state agencies.

	2010			2011		
Sates	**Recreational**	**Commercial**	**Total**	**Recreational**	**Commercial**	**Total**
Connecticut		960	960			
Delaware	131	2,261	2,392	21		21
East Florida	411	73	484	253	608	861
Georgia	2,664		2,664	430		430
Maryland	3,501	567	4,068	134		134
Massachusetts	0	58	58			
New Jersey	2,723	12,053	14,776	2,449		2,449
New York	1,509	13,104	14,613	172		172
North Carolina	38,601	106,333	144,934	17,621		17,621
PRFC		80	80			
Rhode Island		5,400	5,400			
Souh Carolina	17,299		17,299	3,089		3,089
Virginia	1,579	61,733	63,312	2,635	26,014	28,649
Total	68,418	202,622	271,040	26,804	26,622	53,426
2010/2011 average coastwide landings (a)			**162,233**			
2010/2011 average landings for East Florida (			**673**	**Ratio (b)/(a)**	**0.41%**	

Table 3 – Estimated commercial landings (lbs) of weakfish by gear type on the east coast of Florida, 1985–2011; landing estimates in 2011 were preliminary.

	Cast net	Gig/Spear	Gillnets	Hook and L	Other	Trammel	Trawl	Unknown	**Total**
1985								7747	**7747**
1986								9162	**9162**
1987								11719	**11719**
1988								13283	**13283**
1989								21376	**21376**
1990								17433	**17433**
1991	9		1913	570	20	2	3282	15548	**21344**
1992	2		13737	870	2174	23	7048	801	**24655**
1993		9	7081	1052	2205	5	9164	65	**19580**
1994		14	12445	442	1313		13268	353	**27835**
1995	6		1584	1079	1609		1314	18	**5609**
1996	1		70	130			185		**387**
1997	5		241	470			158		**875**
1998	1	1	20	831			99		**952**
1999	11		6	556			177	28	**779**
2000	22		1	322	30		71	2	**448**
2001	34			469	10		687		**1201**
2002	51			248			95		**394**
2003		12		108	4		165		**288**
2004	5		9	153			25		**192**
2005	6	2	340	196			7	1	**553**
2006	4		111	218	4		1		**337**
2007	71		10	791	1		15		**888**
2008	2		55	889	2		48		**996**
2009	1		102	343	6		1		**453**
2010			20	43	4		7		**73**
2011			24	496	2		86		**608**

Table 4 – Numbers of commercial trips by gear type reporting weakfish on the east coast of Florida, 1985–2011; trip estimates in 2011 were preliminary.

Years	Cast net	Gig/Spear	Gillnets	Hook and L	Other	Trammel	Trawl	Unknown	**Total**
1985								1,140	**1,140**
1986								1,230	**1,230**
1987								1,345	**1,345**
1988								1,227	**1,227**
1989								1,997	**1,997**
1990								2,171	**2,171**
1991	1		328	86	9	3	406	1540	**2373**
1992	1		1725	137	128	26	800	73	**2890**
1993		3	799	127	74	5	755	11	**1774**
1994		2	1462	77	94		1007	41	**2683**
1995	6		488	128	72		190	4	**888**
1996	1		21	64			50		**136**
1997	6		47	138			45		**236**
1998	2	1	6	85			70		**164**
1999	5		1	146			91	5	**248**
2000	6		1	111	14		39	1	**172**
2001	5			105	2		76		**188**
2002	4			65			18		**87**
2003		1	1	48	3		18		**71**
2004	7		12	41			6		**66**
2005	3	1	206	122	1		4	1	**338**
2006	2		100	81	6		3		**192**
2007	10		13	144	3		7		**177**
2008	2		19	105	3		6		**135**
2009	1		20	84	1		1		**107**
2010			11	12	3		1		**27**
2011			19	73	4		9		**105**

Table 5 – Commercial landings (lbs) and trips for weakfish by fishing ground on the east coast of Florida, 1992-2011; the 2011 estimates were preliminary.

	Fishing Grounds									
	Federal		Inland		State		Unknown		Total	
Years	Landings	Trips	Landings	Trips	Landings	Trips	Landings	Trips	Landings	Trips
1992			2,308	250	174	10	22,172	2630	24,655	2,890
1993			1,028	123	7	2	18,545	1649	19,580	1,774
1994			1,718	179	748	113	25,369	2391	27,835	2,683
1995			2,427	401	2,519	334	663	153	5,609	888
1996	70	41	294	79	23	16			387	136
1997	265	61	567	158	43	17			875	236
1998	611	12	308	138	33	14			952	164
1999	19	5	731	227	29	16			779	248
2000	11	4	380	144	58	24			448	172
2001			1,162	182	39	6			1,201	188
2002			359	86	34	1			394	87
2003	8	3	277	64	4	4			288	71
2004	16	17	174	46	3	3			192	66
2005	347	210	186	108	20	20			553	338
2006	111	103	217	78	9	11			337	192
2007	28	18	854	152	7	7			888	177
2008	60	24	934	109	2	2			996	135
2009	102	20	337	80	14	7			453	107
2010	20	11	50	13	4	3			73	27
2011	27	21	531	79	50	5			608	105

Table 6 – Estimated recreational catches, releases, total harvests and landings in numbers and weight (lbs) for weakfish on Florida's Atlantic coast, 1983-2011. Type A = claimed fish; Type B1 = fish harvested but not seen; Type B2 = released fish alive. The table also shows the number of directed trips and of the catch rates (in number and weight).

	Type A	Type B1	Type B2	Type A + B1		Type A+B1+t	Directed	Landing and catch rates		
	numbers	numbers	numbers	numbers	lbs	(numbers)	Trips	A+B1 (#)	A+B1 (lbs)	A+B1+B2 (#
1983	10,789	1,188	877	11,977	14,217	12,854	10998	1.09	1.29	1.17
1984	19,163	990	274	20,152	15,037	20,427	3641	5.53	4.13	5.61
1985	818	666	328	1,484	894	1,812	4338	0.34	0.21	0.42
1986	4,274	1,005	937	5,279	4,116	6,216	7589	0.70	0.54	0.82
1987	1,990	634	595	2,624	1,864	3,218	6779	0.39	0.27	0.47
1988	3,503	397	26	3,900	3,634	3,926	2716	1.44	1.34	1.45
1989	4,980	813	0	5,793	4,537	5,793	5232	1.11	0.87	1.11
1990	2,238	783	110	3,021	2,268	3,131	3117	0.97	0.73	1.00
1991	1,740	2,964	1,459	4,704	3,315	6,164	4774	0.99	0.69	1.29
1992	1,625	1,191	1,617	2,815	2,088	4,432	6288	0.45	0.33	0.70
1993	4,959	1,124	2,310	6,083	4,485	8,393	8749	0.70	0.51	0.96
1994	6,748	1,611	1,557	8,359	6,086	9,917	10887	0.77	0.56	0.91
1995	1,035	1,228	2,096	2,264	1,773	4,360	5432	0.42	0.33	0.80
1996	1,391	69	1,207	1,460	703	2,667	2185	0.67	0.32	1.22
1997	1,676	1,303	4,577	2,980	2,682	7,556	3050	0.98	0.88	2.48
1998	927	80	1,936	1,008	786	2,944	2655	0.38	0.30	1.11
1999	4,214	647	5,046	4,860	4,020	9,906	9980	0.49	0.40	0.99
2000	3,216	60	5,551	3,276	2,943	8,827	10306	0.32	0.29	0.86
2001	1,418	123	2,541	1,542	1,322	4,083	8863	0.17	0.15	0.46
2002	1,420	422	2,113	1,842	1,577	3,955	6246	0.29	0.25	0.63
2003	756	18	1,556	774	580	2,331	4016	0.19	0.14	0.58
2004	1,104	10	3,395	1,114	954	4,510	5762	0.19	0.17	0.78
2005	1,296	243	2,007	1,539	1,534	3,546	5140	0.30	0.30	0.69
2006	1,348	230	5,132	1,578	1,542	6,709	5402	0.29	0.29	1.24
2007	928	33	949	961	845	1,910	6006	0.16	0.14	0.32
2008	1,460	0	711	1,460	1,188	2,170	2431	0.60	0.49	0.89
2009	2,028	0	285	2,028	1,961	2,313	3869	0.52	0.51	0.60
2010	441	0	34	441	411	475	17659	0.02	0.02	0.03
2011	225	0	248	225	253	474	-			

Table 7 – Percentage of weakfish-like fish sampled from the recreational harvest during 1982–2011, categorized as being less than, equal to or exceeding the size limit (12”). N = sample size.

	Percentage		
	>= 12"	< 12"	N
1982	100	0	2
1983	80	20	127
1984	58	42	19
1985	78	22	9
1986	52	48	82
1987	73	27	26
1988	88	12	74
1989	71	29	52
1990	78	22	37
1991	72	28	32
1992	36	64	25
1993	68	32	95
1994	53	47	120
1995	46	54	26
1996	65	35	23
1997	83	17	30
1998	81	19	26
1999	90	10	167
2000	81	19	104
2001	51	49	41
2002	77	23	52
2003	88	13	24
2004	83	17	29
2005	89	11	38
2006	92	8	50
2007	79	21	38
2008	63	38	16
2009	96	4	53
2010	82	18	11
2011	100	0	6

Table 8a – Bag limits analysis for anglers that landed and kept weakfish-like fish while fishing on Florida's Atlantic coast during 1982-1994 (source: NMFS/MRFSS intercepts). For comparison, key outcomes are presented in green for new bag limit and in red for old bag limit.

Cumlative "weakfish" kept per Angler	Number of Year	Number of trips	Number of Anglers	Average number of anglers per trip	Cumulative percentage of Anglers	**Number of "weakfish"**		**Cumulative percentage of "weakfish"**	
						Caught	Retained	Caught	Retained
0	13	120	180	1.5	26.87	193	20	11.91	1.45
1	13	140	205	1.46	57.46	187	179	23.46	14.43
2	12	72	117	1.63	74.93	245	226	38.58	30.82
3	10	37	54	1.46	82.99	163	155	48.64	42.06
4	11	21	41	1.95	89.1	168	155	59.01	53.3
5	7	15	23	1.53	92.54	110	110	65.8	61.28
6	8	14	20	1.43	95.52	121	120	73.27	69.98
7	5	6	9	1.5	96.87	66	62	77.35	74.47
8	2	2	3	1.5	97.31	23	23	78.77	76.14
10	4	4	5	1.25	98.06	52	50	81.98	79.77
12	1	1	1	1	98.21	12	12	82.72	80.64
15	2	3	3	1	98.66	53	45	85.99	83.9
17	1	1	2	2	98.96	33	33	88.02	86.29
18	1	1	1	1	99.1	18	18	89.14	87.6
20	1	1	1	1	99.25	25	20	90.68	89.05
26	1	1	2	2	99.55	51	51	93.83	92.75
33	1	1	3	3	100	100	100	100	100
Totals		440	670			1620	1379		

Expected Harvest Reductions Associated with Particular Bag Limits

Number of Intercepts per Iteration: 200

Number of Iteration: 1000

	BAG LIMITS									
	1	2	3	4	5	6	7	8	9	10
Mean	66	46	34	27	22	19	16	15	13	12
Std Dev	65.7	6.3	7.5	8	8	7.8	7.6	7.2	6.9	6.7
Min	58	33	18	9	7	5	5	3	2	1
Max	75	58	48	41	36	33	30	28	26	24

Table 8b – Bag limits analysis for anglers that landed and kept weakfish-like fish while fishing on Florida's Atlantic coast during 1995-2011 (source: NMFS/MFRSS intercepts). For comparison, key outcomes are presented in green for new bag limit and in red for old bag limit.

Cumlative "weakfish" kept per Angler	Number of Year	Number of trips	Number of Anglers	Average number of anglers per trip	Cumulative percentage of Anglers	**Number of "weakfish"**		**Cumulative percentage of "weakfish"**	
						Caught	Retained	Caught	Retained
0	17	553	704	1.27	45.77	1365	35	38.09	2.12
1	17	285	438	1.54	74.25	497	364	51.95	24.15
2	15	102	166	1.63	85.05	413	306	63.48	42.68
3	14	54	89	1.65	90.83	319	253	72.38	57.99
4	13	56	93	1.66	96.88	566	362	88.17	79.9
5	7	9	17	1.89	97.98	134	80	91.91	84.75
6	3	3	4	1.33	98.24	24	24	92.58	86.2
7	3	4	11	2.75	98.96	79	76	94.78	90.8
8	2	2	3	1.5	99.15	28	23	95.56	92.19
9	1	1	2	2	99.28	17	17	96.04	93.22
10	4	6	8	1.33	99.8	109	79	99.08	98
11	1	1	2	2	99.93	21	21	99.67	99.27
12	1	1	1	1	100	12	12	100	100
Totals		1077	1538			3584	1652		

Expected Harvest Reductions Associated with Particular Bag Limits

Number of Intercepts per Iteration: 200

Number of Iteration: 1000

	BAG LIMITS									
	1	2	3	4	5	6	7	8	9	10
Mean	49	26	13	6	4	3	2	1	1	0
Std Dev	65.7	4.4	3.6	3.1	2.5	2.1	1.4	1.1	0.7	0.2
Min	38	17	7	1	0	0	0	0	0	0
Max	58	34	21	12	9	7	5	4	2	1

Table 9 - Fishery-independent catch in number, effort (number of sets) and various statistics derived while estimating the YOY (a) and adult (b) indices of relative abundance (i.e., catch rates, expressed here as median annual number of fish per haul) for weakfish-like fish on the east coast of Florida (IR = Indian River; JAX = Jacksonville) during 2001-2011.

East Coast Weakfish (JAX Only) **(a)**

6.1-m Trawls

<100-mm SL

May - October

Year	*No. animals*	*No. sets*	*Median*	*25th*	*75th*	*min*	*max*
2001	279	176	1.6448	1.4097	1.9239	0.7311	3.5982
2002	605	174	2.2817	1.9751	2.6454	1.2891	4.2935
2003	1436	196	5.6145	4.8755	6.4464	3.0926	11.0493
2004	1455	198	8.7380	7.5946	10.0280	3.6594	16.3906
2005	829	198	4.1098	3.5760	4.7960	1.9795	7.4850
2006	364	198	1.4270	1.2347	1.6251	0.8423	2.9581
2007	280	198	1.3705	1.2028	1.5942	0.6509	2.5753
2008	891	198	3.2279	2.8061	3.7488	1.7338	6.1593
2009	1026	198	4.7178	4.1017	5.3639	2.8267	8.4210
2010	265	198	1.0553	0.9142	1.2274	0.5756	1.9037
2011	218	198	0.7722	0.6677	0.8880	0.4143	1.3742
Total	**7648**	**2130**					

East Coast Weakfish (IR and JAX)

183-m Haul Seines **(b)**

>100-mm SL

January - December

Year	*No. animals*	*No. sets*	*Median*	*25th*	*75th*	*min*	*max*
2001	35	346	0.0844	0.0617	0.1147	0.0196	0.3318
2002	35	410	0.0270	0.0204	0.0370	0.0083	0.0979
2003	28	421	0.0251	0.0184	0.0327	0.0078	0.0846
2004	39	422	0.0551	0.0428	0.0731	0.0179	0.1772
2005	56	419	0.0476	0.0389	0.0625	0.0170	0.1519
2006	39	420	0.0339	0.0255	0.0450	0.0096	0.1349
2007	47	422	0.0204	0.0145	0.0264	0.0041	0.0852
2008	21	420	0.0204	0.0155	0.0274	0.0048	0.0731
2009	58	420	0.0671	0.0514	0.0879	0.0241	0.2523
2010	102	420	0.0519	0.0415	0.0671	0.0175	0.1867
2011	20	420	0.0210	0.0149	0.0280	0.0063	0.0664
Total	**480**	**4540**					

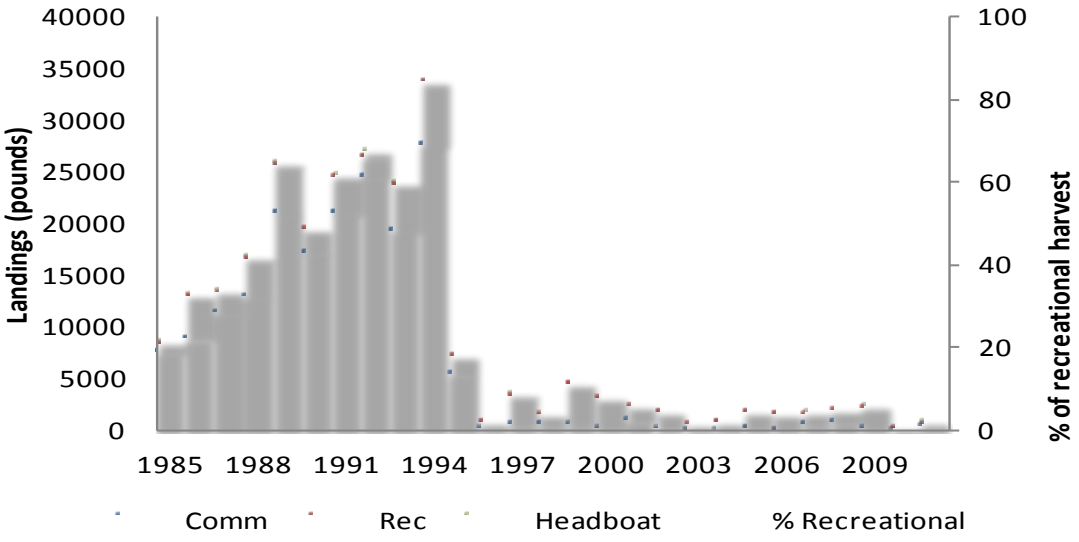

Fig 1 – Commercial, recreational (Type A+B1) and head boat landings of weakfish (lbs) and proportions of recreational harvests in total landings of weakfish on Florida's Atlantic coast, 1985-2011. Landings in 2011 were preliminary. All head boat catches were assumed to be "pure" weakfish.

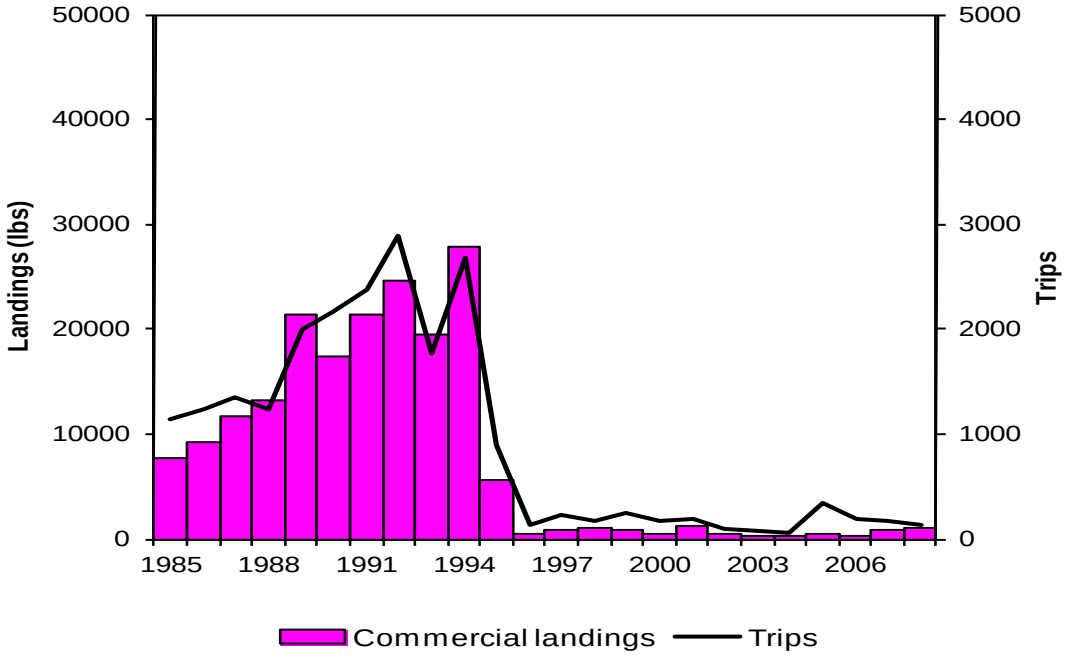

Fig. 2 – Weakfish commercial landings (lbs) and trips on Florida's Atlantic coast, 1985-2011. The 2011 estimates were preliminary.

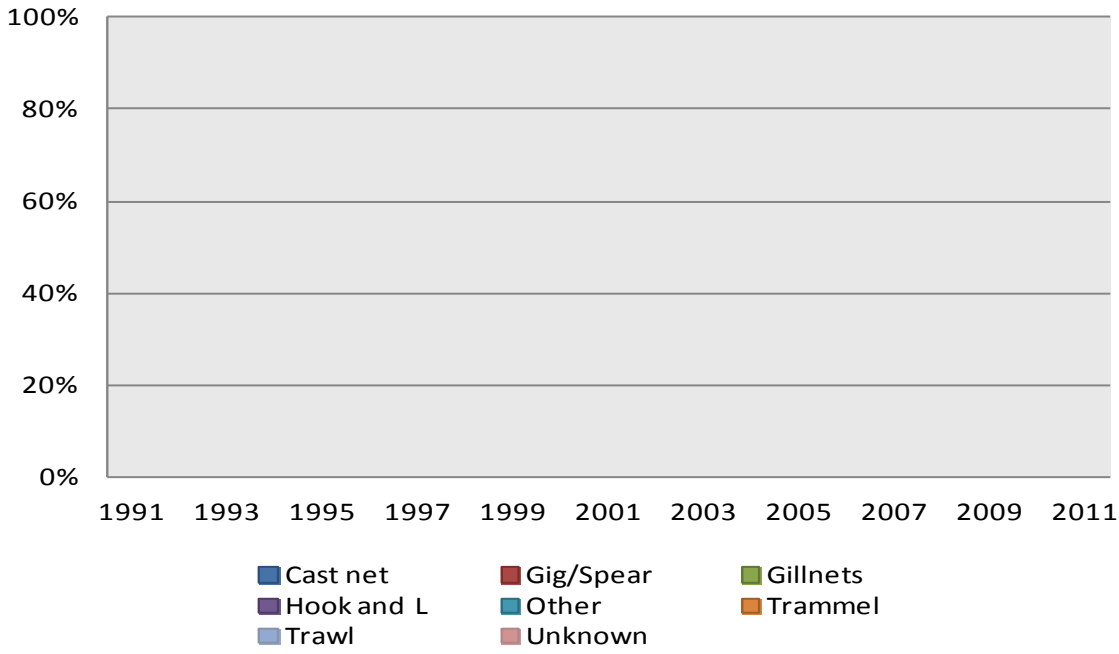

Fig. 3 – Relative composition (%) of commercial weakfish landings by gear type on Florida's Atlantic Coast, 1991–2011. The 2011 landings were preliminary.

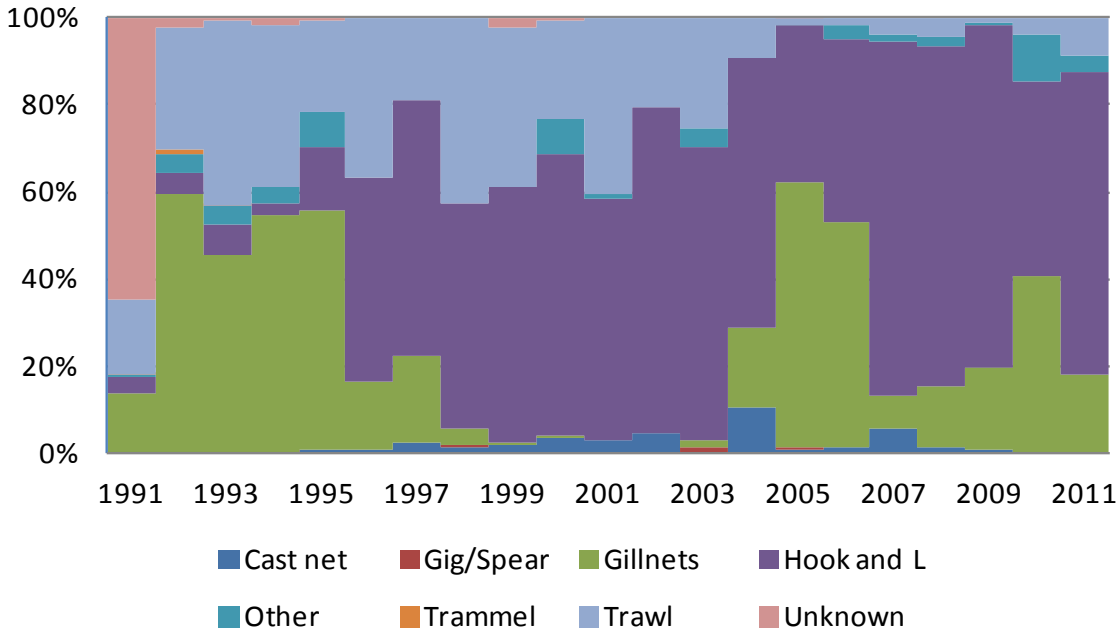

Fig. 4– Relative contribution (%) of commercial weakfish trips by gear type on Florida's Atlantic coast, 1991–2011. The 2011 trips were preliminary.

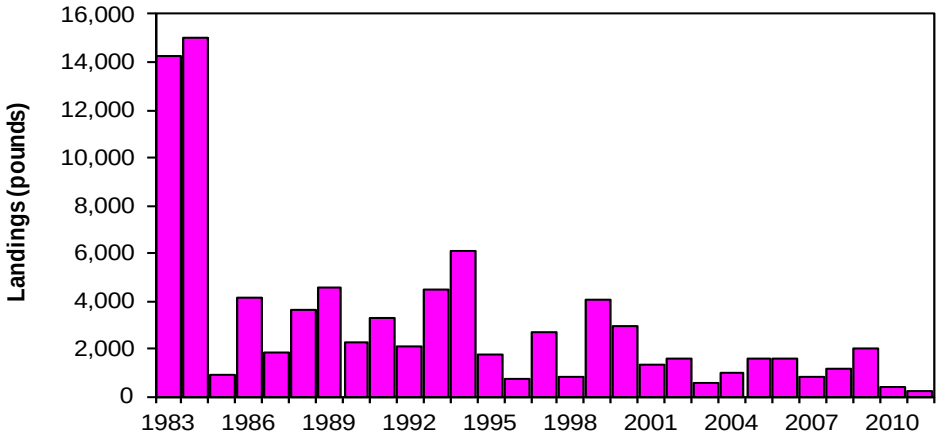

Fig. 5 – Estimates of recreational harvests (Type A+B1 in pounds) of weakfish on Florida's Atlantic coast, 1983-2011

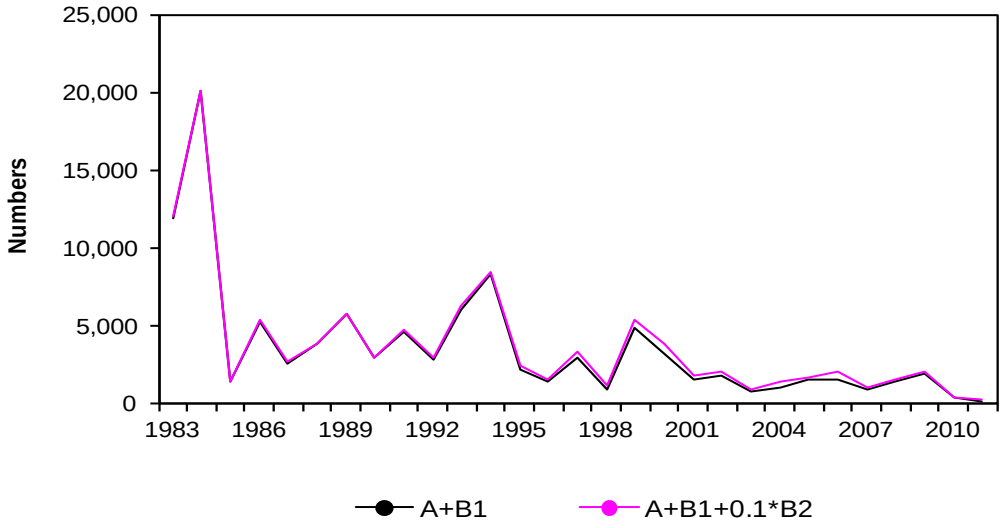

Fig. 6 - Recreational landings (numbers) of weakfish kept by anglers (Type A+B1) and estimates of the total number of fish that died due to fishing (Type A+ B1 + 10% release mortality) on Florida's Atlantic coast, 1983-2011.

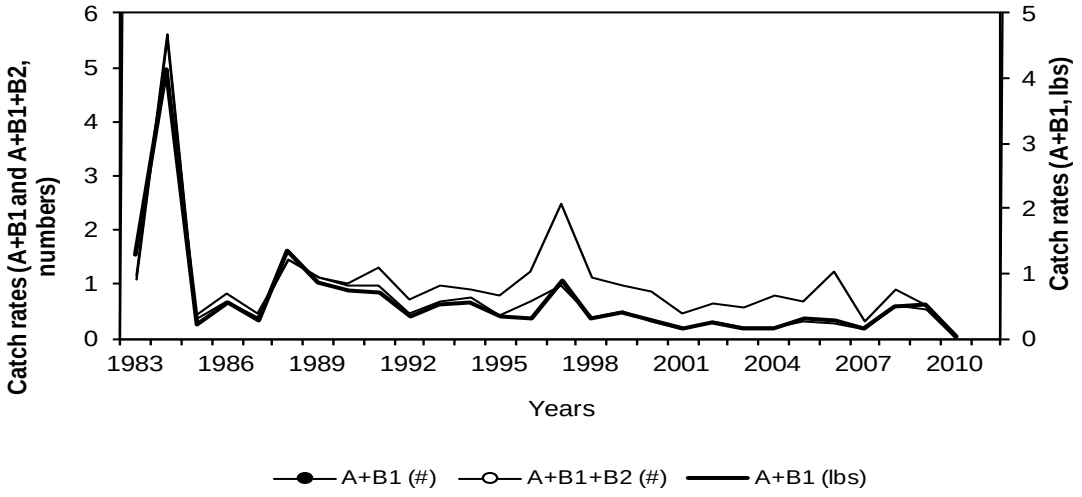

Fig. 7 – Catch rates of weakfish on the east coast of Florida, 1983-2011

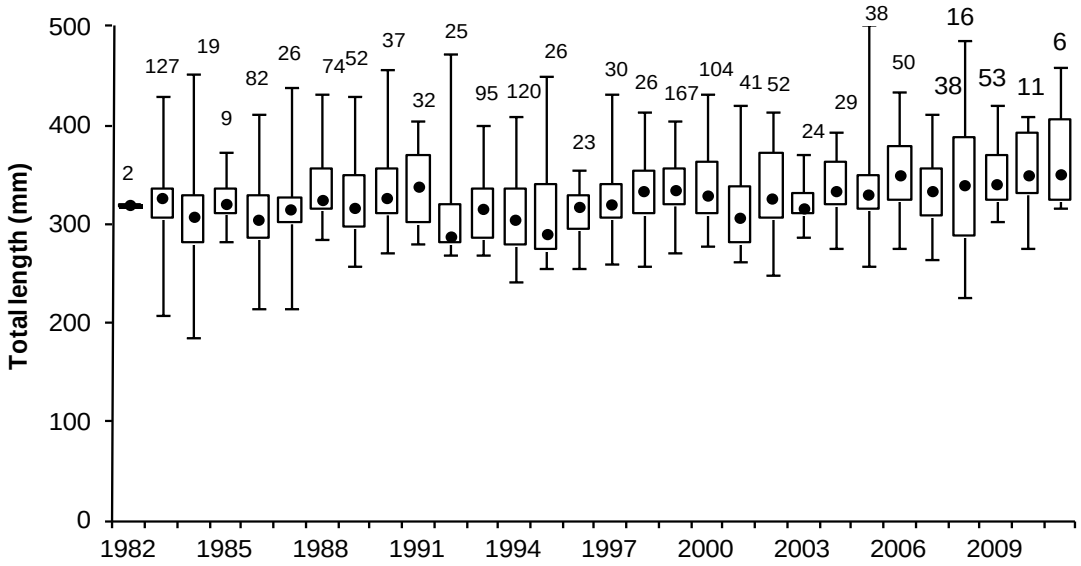

Fig. 8 - Size distributions of weakfish-like fish measured in the recreational fishery on the Atlantic coast of Florida, 1982-2011. The dark circle represents the median, the box represents the 25th-75th percentiles and the vertical whiskers extend from the 2.5th-97.5th percentiles. Numbers of fish measured are shown above the upper whiskers.

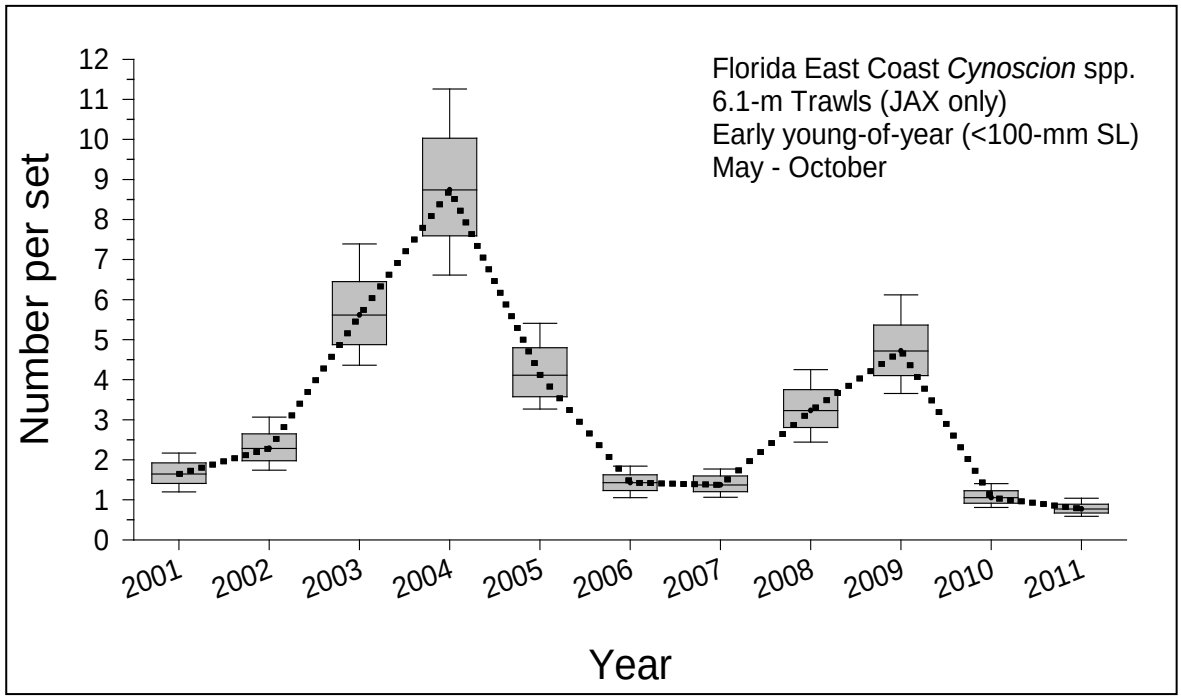

Fig. 9– Indices of relative abundance for young-of-the year "*Cynoscion* complex" (< 100 mm SL) collected using 6.1-m otter trawl during stratified-random sampling (May-October) surveys on the east coast of Florida, 2001-2011. The box represents the 25th and 75th percentiles, the vertical line represents the 10th to 90th percentiles, and the horizontal line represents the median estimate.

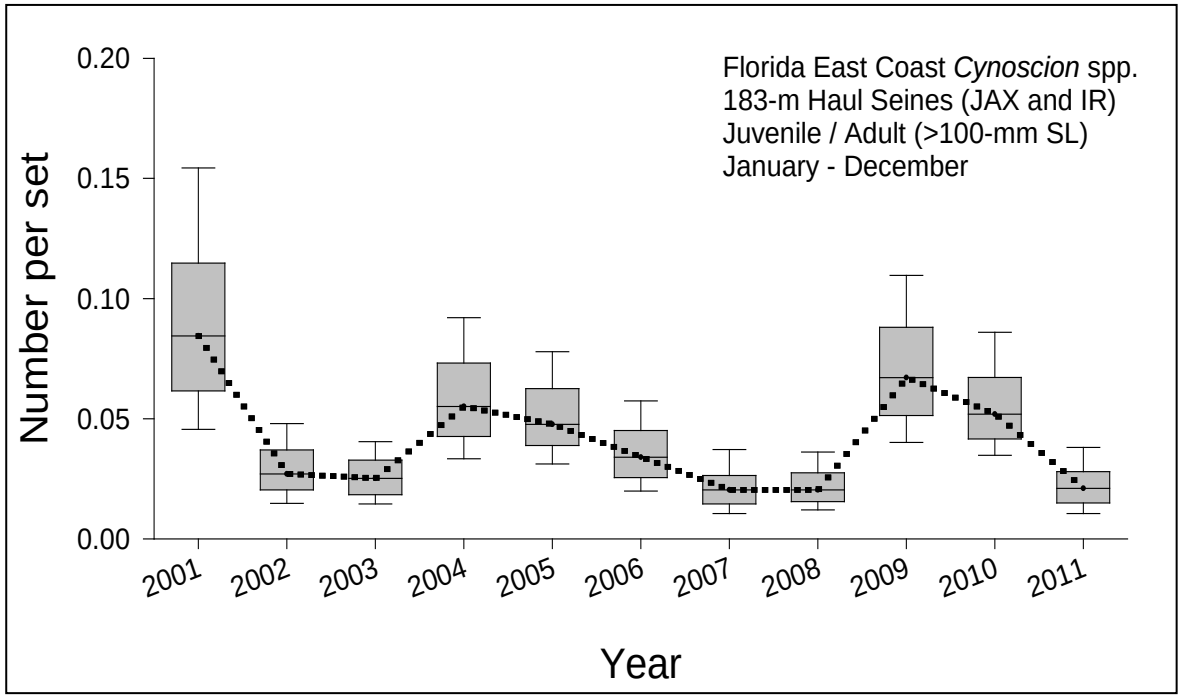

Fig. 10 – Indices of relative abundance for adults of the "*Cynoscion* complex" (> 100 mm SL) collected using 183-m Haul seines during monthly stratified-random sampling surveys on the east coast of Florida, 2001-2011. The box represents the 25th and 75th percentiles, the vertical line represents the 10th to 90th percentiles, and the horizontal line represents the median estimates