

974.90
F537
1984

PUBLIC HEARING

before

SENATE NATURAL RESOURCES AND AGRICULTURE COMMITTEE

on

SENATE BILL 1372

(Prohibits the taking of menhaden)

New Jersey State Library

Held:

September 19, 1984

Monmouth College

West Long Branch, New Jersey

MEMBERS OF COMMITTEE PRESENT:

Senator Raymond J. Zane, Chairman

Senator Wayne Dumont, Jr.

Senator S. Thomas Gagliano

ALSO PRESENT:

Denise Drace, Research Assistant

Office of Legislative Services

Aide, Senate Natural Resources and

Agriculture Committee

ATTORNEY GENERAL'S LIBRARY
APR 03 1985

TABLE OF CONTENTS

	<u>Page</u>
Senator Frank Pallone, Jr. District 11	2
Assemblyman Joseph A. Palaia District 11	5
Assemblyman Anthony M. Villane, Jr. District 11	7
Bruce Freeman, Staff Director Marine Fisheries Council New Jersey Department of Environmental Protection	9
Don MacPherson Representative of Bait & Tackle Dealers and Jersey Coast Anglers Association	19
Joseph Melillo, President Jersey Coast Anglers Association	20
Susan Boyce Mac's Bait & Tackle Shop Neptune, New Jersey	22
James Furlong New Jersey Farm Bureau	24
Gosta "Swede" Lovgren, Chairman Commercial Fisheries Committee New Jersey Farm Bureau	26
Rick Sengor, President Shark River Surf Anglers	28
Fred Forman Spring Lake Freezer Company	30
Tom Macconchie Belford Seafood Cooperative	33
Chris Anthopoulos Belford Seafood Cooperative	35

TABLE OF CONTENTS (continued)

	<u>Page</u>
Ray Richardson New Jersey Marine Fisheries Council	38
Ed Peterson Peterson Enterprises	41
Ronald Sickler New Jersey Coast Anglers	42
Donald Morantz, Vice President Jersey Coast Anglers	44
Captain David Hart Cape May County	45
Paul Haimer, Bureau Chief Atlantic States Marine Fisheries Commission	58

APPENDIX

Statement submitted by Bruce Freeman on behalf of Division of Fish, Game, and Wildlife	1x
Statement submitted by Don MacPherson on behalf of Bait & Tackle Dealers & Jersey Coast Anglers Association	14x

* * * * *

jb: 1-29
tm:30-58

[OFFICIAL COPY REPRINT]

SENATE, No. 1372

STATE OF NEW JERSEY

INTRODUCED FEBRUARY 27, 1984

By Senators PALLONE, GORMLEY, RUSSO and ZANE

Referred to Committee on Natural Resources and Agriculture

AN ACT concerning the taking of menhaden, amending R. S. 23:3-48, R. S. 23:3-51, P. L. 1979, c. 199 and supplementing chapter 3 of Title 23 of the Revised Statutes.

1 BE IT ENACTED by the Senate and General Assembly of the State
2 of New Jersey:

1 1. R. S. 23:3-48 is amended to read as follows:

2 23:3-48. Nothing in [sections] R. S. 23:3-46 to R. S. 23:3-49 of
3 this title shall apply to vessels engaged in taking menhaden, but
4 they shall be licensed to operate in the taking of menhaden pur-
5 suant to [sections 23:3-50 to 23:3-53 of this title] R. S. 23:351.

1 2. R. S. 23:3-51 is amended to read as follows:

2 23:3-51. A person intending to take menhaden with purse or
3 shirred nets in [any waters in the jurisdiction of this State, includ-
4 ing the waters] that portion of the Atlantic ocean, within [3 nauti-
5 cal miles of] the jurisdiction of this State and at least "[two]"
6 "1.2" nautical miles from the coast line of this State, "or .6 nautical
7 miles in the case of any vessel the gross weight of which is 50 tons
8 or less," shall apply to the commissioner for a license therefor. The
9 commissioner, upon the receipt of the application and payment to
10 him of the fee provided in [section] R. S. 23:3-52 [of this Title].
11 may, in his discretion, issue to the applicant a license, to take men-
12 haden with purse or shirred nets. The license shall be void after
13 December 31 next succeeding its issuance.

1 3. Section 73 of P. L. 1979, c. 199 (C. 23:2B-14) is amended to
2 read as follows:

3 73. For purposes of this section, the "act" means and includes
4 all the new sections and amended sections contained herein, all the

EXPLANATION—Matter enclosed in bold-faced brackets [thus] in the above bill
is not enacted and is intended to be omitted in the law.

Matter printed in italics thus is new matter.

Matter enclosed in asterisks or stars has been adopted as follows:

*—Senate committee amendments adopted September 20, 1984.

New Jersey State Library

5 remaining sections of Title 50 of the Revised Statutes, sections
 6 23:3-41, 23:3-46, 23:3-47, 23:3-48, 23:3-51, 23:3-52, 23:5-9,
 7 23:5-16, 23:5-35, 23:9-114, 23:9-115 and 23:9-120 of Title 23 of
 8 the Revised Statutes, sections 1, 2, 3 and 7 of P. L. 1938, c. 318
 9 (C. 23:5-5.1 through 23:5-5.3 and 23:5-5.7), P. L. 1952, c. 216 (C.
 10 23:5-5.1a); **[and]** sections 1, 2 and 3 of P. L. 1941, c. 211 (C.
 11 23:5-24.1 to 23:5-24.3); *and section 4 of P. L. , c. (C.)*
 12 *(now pending before the Legislature as Senate Bill No. of*
 13 *198)*.

14 The commissioner may utilize any or all of the following reme-
 15 dies for any violation of this act:

16 a. (1) Any person who violates the provisions of this act or of
 17 any rule, regulation, license or permit promulgated or issued pur-
 18 suant to this act shall be liable to a penalty of not less than \$100.00
 19 or more than \$3,000.00 for the first offense and not less than \$200.00
 20 or more than \$5,000.00 for any subsequent offense, unless the com-
 21 missioner has established an alternate penalty for a specific offense
 22 pursuant to subsection a. (2) of this section.

23 (2) The Commissioner of Environmental Protection, with the
 24 approval of the Marine Fisheries Council, may, by regulation,
 25 establish a penalty schedule for any specific violation of this act
 26 or of any rule or regulation promulgated pursuant to this act. No
 27 such penalty may be less than \$10.00 nor more than \$100.00 on the
 28 first offense or less than \$20.00 nor more than \$200.00 on any sub-
 29 sequent offense. Any penalty provided for by this act or by the fee
 30 schedule promulgated by the commissioner shall be collected in a
 31 civil action by a summary proceeding under the penalty enforce-
 32 ment law (N. J. S. 2A:58-1 et seq.). The Superior Court or any
 32a **[County Court, county district court or]** municipal court shall have
 33 jurisdiction to enforce said penalty enforcement law. If the viola-
 34 tion is of a continuing nature, each day during which it continues
 35 shall constitute an additional separate and distinct offense.

36 b. Any person who violates the provisions of this act or any rule
 37 or regulation or any license or permit promulgated or issued pur-
 38 suant to this act shall be liable to the revocation of any license
 39 which he holds pursuant to this act for such period of time as the
 40 court may choose.

41 c. If any person violates any of the provisions of this act, or
 42 any rule or regulation or any license or permit promulgated or
 43 issued pursuant to the provisions of this act, the department may
 44 institute a civil action in a court of competent jurisdiction for in-
 45 junctive relief to prohibit and prevent such violation or violations
 46 and the said court may proceed in the action in a summary manner.

47 The department is hereby authorized and empowered to com-
48 promise and settle any claim for a penalty under this section in
49 such amount in the discretion of the department as may appear
50 appropriate and equitable under all of the circumstances.

51 d. In addition to the penalties prescribed by this section, a person
52 violating the provisions of R. S. 50:4-3 shall be subject to the for-
53 feiture of any vessel or equipment used in the commission of the
54 violation. A designated enforcement officer of the Department of
55 Environmental Protection, the marine police, or any other law en-
56 forcement officer may seize and secure any vessel or equipment
57 used in the commission of such a violation. Upon the seizure of the
58 vessel or equipment, the enforcement officer, member of the marine
59 police, or other law enforcement officer shall immediately thereafter
60 institute a civil action to determine if the forfeiture is warranted in
61 the court in which the penalty action was filed pursuant to this
62 section, which court shall have jurisdiction to adjudicate the for-
63 feiture action. The owner or any person having a security interest
64 in the vessel or equipment may secure a release of the same by
65 depositing with the clerk of the court in which the action is pending
66 a bond with good and sufficient sureties in an amount to be fixed by
67 the court, conditioned upon the return of the vessel or equipment to
68 the Department of Environmental Protection upon demand after
69 completion of the court proceeding. The court may proceed in a
70 summary manner and may direct the confiscation of the vessel
71 or equipment by the department for its use or for disposal by sale
72 or public auction. Moneys collected by the department through the
73 sale or public auction of the vessel or equipment shall be used by
74 the Division of Fish, Game and Wildlife for the enforcement of the
75 provisions of this act.

1 4. (New section) A person shall not take menhaden with purse
2 or shirred nets in the following jurisdictional waters of this State:
3 Sandy Hook bay; Raritan bay; Lower bay; **Delaware bay** and
4 in the Atlantic ocean, less than ***[two]*** **1.2 nautical miles* from
5 the coast line of this State **or .6 nautical miles in the case of any*
6 *vessel the gross weight of which is 50 tons or less**.

1 5. This act shall take effect ***[immediately]*** **on October 25,*
2 *1985**.

SENATOR RAYMOND J. ZANE (Chairman): We are short a quorum at this time, but Senator Dumont is on his way. We are going to begin rather than wait for him, so that we can give everyone an opportunity to speak.

We all know why we are here; we are here on Senator Pallone's bill, S-1372. Senator Pallone is going to make an opening statement, but first I would like to read a brief statement.

The public hearing today is intended as a fact-finding session concerning the issue of offshore restrictions of menhaden fishing.

On June 18, the Senate Natural Resources and Agricultural Committee considered S-1372, sponsored by Senator Pallone, which prohibits the taking of menhaden with purse or shirred nets in the waters of Sandy Hook Bay, Raritan Bay, Lower Bay, and in the Atlantic Ocean within two nautical miles of the coast. At that time, several conflicting positions were expressed concerning the reasonableness of the restriction, and this Committee deferred further action on the bill until all opposing views could be fairly considered.

It is this Committee's purpose today to hear, among others, the positions of the commercial menhaden fishing industry, recreational fishing concerns, the bait and tackle industry, and the Department of Environmental Protection. We will want to hear today about the contribution of menhaden to the preservation of a clean oceanic environment, the nature and extent of any interference by commercial activities on recreational fishing, the financial effects of restrictions on the bait and tackle industry, and the health and safety consequences of menhaden fishing to shoreline bathing and recreational activities.

Our goal today is to try to find out how this bill can reconcile economic interests with the broad public interest in a clean and safe oceanic environment.

The one thing I would ask of the speakers, so that we are not here all day long dwelling on the same point, is, if one speaker clearly expresses your point, and you have something new to add, please just give us that which is new. If you want to indicate that you are

in agreement with the prior speaker, please feel free to do that. It makes for a long and boring day if we hear the same thing over and over and over again, so I ask that you don't fill our record with repetitious statements.

First, I will call on Senator Pallone, who has a few remarks to make about the bill.

SENATOR FRANK PALLONE, JR.: First of all, I want to take this opportunity to thank the Chairman, Senator Ray Zane, for coming all the way from Salem County to hold this hearing in Monmouth County, which is basically adjacent to where much of the activity occurs with regard to menhaden. I know that public hearings are not that routine, especially when they are held away from Trenton, so I do appreciate your coming and holding the hearing here.

Senator Gagliano has been supportive, and so has Senator Dumont, who has also come a long distance -- all the way from Warren County -- to be at this public hearing.

The prime purpose of the legislation is to end abuse by Virginia and other southern fishing operations. In my opinion, and based upon the facts that have been presented to me, these large factory vessels, the adjoining spotter planes, and purse-seining vessels that come up from Virginia and the southern ports to fish for menhaden are basically acting in, what I consider, a dangerous manner. They come very close to the shore of New Jersey; they come within two miles, and sometimes as close as a half a mile, from the coast. They use spotter planes, and through huge nets, they chase schools of menhaden. They have interfered with our own commercial and recreational fishing, sometimes to the point of ordering New Jersey boats away from the areas where they are fishing for menhaden.

New Jersey, in my opinion, gains very little from their activities. We do not have an indigenous commercial menhaden fleet on the order of what comes up from Virginia and the Carolinas. We do have some local bait fishermen, whom you will probably hear from today, but we do not have this factory, commercial-type of operation, which basically uses menhaden by grinding it up and using it for various agricultural and industrial purposes.

I think the activities of the southern fleets pose a threat to our recreational fishing in a number of ways. First of all, striped bass, weakfish, blues, tuna, and other game fish feed on the menhaden. There is certainly evidence that when the factory ships come in with their huge nets, drop them to the ocean bottom, and suck all of the game fish into their boats -- along with the menhaden -- it depletes important stocks of sports fish off the coast of New Jersey.

Menhaden has also been shown to be essential to the health of the ocean because they feed on plankton and algae. There is some evidence that with the absence of menhaden, and an increase in plankton and algae, there is an increased possibility of red tide off the coast of New Jersey. We have had some spotty occurrences of red tide this summer, and certainly a more severe problem in the past.

There is also a problem with the residue from these factory ships in that they basically throw back the dead fish or the remains into the ocean. For several weeks last fall after the menhaden boats were here, we had the stench from the residue fouling and polluting the coast of New Jersey. This poses a health risk, and certainly an irritation to local recreational interests.

Frankly, I don't see why we shouldn't have this bill. Other neighboring states have it. New York, Delaware, and Maryland have similar legislation, and they are, of course, the states adjacent to us which have the possibility of a menhaden fishery. I see no reason why New Jersey should continue to be singled out as one state that doesn't have a two-mile prohibition. With this legislation, I am not trying to put any commercial fishing operation out of business. I think I stated the last time I was before this Committee that according to factual information that has been provided by DEP, there are still two miles of primary and four miles of secondary menhaden fishing beyond the proposed two-mile limit.

Fish and Game has also said the majority of bunker is caught within two miles of our coast. That is because they are allowed to go within two miles. I don't believe that factual information -- if it is true -- is necessarily indicative that they would not be able to fish beyond the two miles if they weren't allowed to be within the two-mile limit.

Finally, I want to say that as far as our local commercial operations are concerned, out of Belford we do have one boat that fishes for menhaden, which is used and sold for bait. There is also a possibility of other vessels, either out of Belford or perhaps the Delaware Bay, doing the same thing.

With this legislation, we are not trying to put those local commercial bait fishermen out of business. It is very possible that we could put an exception in the bill for vessels under 50 gross tons to allow for local bait fishing. I haven't proposed that; I just simply throw that out today because I think if we put that type of exception in, it should be part of a compromise whereby the Division of Fish and Game and the New Jersey commercial fishermen support the two-mile prohibition. So far, there has been an unwillingness on the part of the Division and some of the local commercial fishermen to support the bill. I think that if we put the 50-gross-ton exception in, there would be no problem, as long as we understand that with that 50-gross-ton prohibition, we would still have the two-mile limit for other purposes.

The other thing I want to mention is that currently, by regulation, DEP has put in a 0.6-mile restriction on menhaden. My feeling about that is, it doesn't go far enough. It is not going to solve the problems that I've outlined above with regard to the southern menhaden fleets. They will continue to fish, to do those types of operations, and to pose the problems that we have cited beyond the 0.6 miles. I don't think that is going to end until they are put beyond the two-mile prohibition.

I mentioned the last time I was before your Committee that I would like to see the bill amended to include Delaware Bay. I don't think we took action on any of the amendments that were proposed last time, so I would like to see that amendment put into the legislation.

I also want to thank you. I think we are all here in an effort to do what is best for New Jersey fishermen, both commercial and recreational. I would not have proposed this bill if I didn't think it was in the interest of both New Jersey commercial and recreational fishermen.

Again, let me take this opportunity to thank Senator Dumont for coming from so far away to be here in Monmouth County and hear our concerns. I know that all three of you have been in the Legislature for many more years than I have, so I'm confident you will do what is best for New Jersey fishermen, both recreational and commercial. Thanks again.

SENATOR ZANE: Before we go any further, just so you know who is here, to my far right is Senator Wayne Dumont, who is affectionately known as "Dean of the Senate," because he has been there since it began, right? (laughter) He is highly regarded and respected by both parties, and his words are always taken as being meaningful. Next to me is Senator Gagliano. We are in his district, and he is obviously interested, as well.

I believe Assemblyman Palaia is here, and he would like to make some comments on the bill.

ASSEMBLYMAN JOSEPH A. PALAIA: Thank you, Mr. Chairman. I will be brief, because after having sat on these Committees many times, I know repetition can really stretch out a hearing when we really want to get to the meat of the problem.

SENATOR ZANE: I appreciate your reminding the audience of that.

ASSEMBLYMAN PALAIA: Yes, and I think when Dr. Villane gets up, he'll probably say the same thing.

First and foremost, I want to thank you for coming to Monmouth County and this district. Basically, this is where the problem began last year. I think I had as many phone calls a year ago about the menhaden problem as I did on the income tax and sales tax problems. The local fishermen were up in arms, and the phone rang all day long. I don't blame them, because I went down to see it myself. It is a severe problem.

I am here to say that I wholeheartedly support this bill. I have one question though. I think initially in the bill, there was a two-mile limit. Mr. Chairman, was that amended, or are we still thinking about amendments?

SENATOR ZANE: No.

ASSEMBLYMAN PALAIA: We haven't gotten to that part yet?

SENATOR ZANE: No.

ASSEMBLYMAN PALAIA: I would hope that nothing would come under 1.2 miles. I think it has to be at least that far out to make it meaningful. Anything under that, I think, would only be a further encroachment closer to shore. If you could consider that and not allow it to be any closer than 1.2 miles, I think it would be in the best interest.

As the sponsor stated, we are not here to put the commercial fishermen out of business. I think we are only here to do what is fair and to do what is environmentally sound. I don't think it is sound to continue to practice as we do now, and it certainly isn't in the best interest of any of the fishermen in the State of New Jersey.

Again, I wholeheartedly support the bill, and I look forward to its passage out of this Committee to the Senate, and over to the Assembly side. Thank you very much.

SENATOR ZANE: Thank you.

SENATOR GAGLIANO: If I may, I would like to ask a question. Maybe it is staff, and maybe it is Senator Pallone. I was under the impression that we had amended the bill to 1.2 miles. If you still want 2.0 miles, of course, the bill can be re-amended, but I think, Denise, if I'm right, we adopted an amendment of 1.2 miles at our meeting last summer. At the time, if you will recall, it was an attempt to reconcile the differences between the two sides. We knew that Fish and Game wanted 0.6 miles, and that Senator Pallone had 2.0 in his bill. I guess I came up with the idea of a compromise. As I said, if it is not acceptable to the sponsor, that is understandable, but I think we are talking about a 1.2-mile distance now.

SENATOR ZANE: Denise has advised me that we did amend the bill.

ASSEMBLYMAN PALAIA: The amendment is, in effect, held also when you hold the bill.

SENATOR GAGLIANO: Oh, excuse me. I didn't know that.

ASSEMBLYMAN PALAIA: My only testimony, Mr. Chairman, is this: If it is two miles, that is fine. But, I would hope that nothing would come under 1.2 miles -- whatever compromise is reached with the sponsor. That is my major concern.

SENATOR ZANE: Thank you very much.

ASSEMBLYMAN PALAIA: Thank you, Mr. Chairman.

SENATOR ZANE: Assemblyman Dr. Villane?

ASSEMBLYMAN ANTHONY M. VILLANE, JR.: Thank you, Senator. Although this is Senator Gagliano's district, if you cross the street, it is Joe Palaia's and my district.

SENATOR ZANE: I have already explained that. (laughter)

ASSEMBLYMAN VILLANE: As you know, we are all very proud of the Jersey shore, and we want to thank you very much for coming here. I want the audience here to know that Senator Zane, Senator Dumont, and Senator Gagliano were very supportive of the Shore Protection Bond Act when it was presented in the State Senate. Those of us who are from the Jersey shore appreciate the help you have given us in the past.

The bill you are reviewing today is another bill that deals primarily with the Jersey shore. It is a bill that is right environmentally; it is a bill that is correct as far as protecting the sport industry in the State of New Jersey; and, it is a bill that we introduced in 1978 at the urging of Lou Figurelli from New York, who put a similar bill through the New York Legislature through his extended efforts and hard work. We put that bill in in 1978, and then the Seacoast plant closed down in the Bayshore area. The bill never moved, and it never appeared to be a critically important bill until we began to find seiners coming up from the southern part of the country.

What they have done is, they have destroyed the bay fish that feed our game fish along the Jersey shore. The disruption of the bottom, the use of high-volume suction pumps, pumping the fish out of the nets and onboard their boats, and the indiscriminate net use that doesn't differentiate between a bunker fish, a bluefish, or a striped bass have really caused a problem to our sports fishing industry in the State of New Jersey. You know that when we talk about the sports fishing industry in New Jersey, it is part of the second largest business in the entire State. The tourism business, I think, is probably the cleanest business in the State of New Jersey.

When we look at this bill, it is a bill that, I think, is overdue. I think it is a bill that would be good for New Jersey and

our citizens. It would not, in any way, be detrimental to the fishing industry.

I think there is room for negotiation, both in the bill I have in the New Jersey State Assembly and the bill that is presently in the State Senate. I think we can negotiate the offshore distance, and I think there should be some provisions to allow for bait fishermen who take small quantities of bunker fish that are used extensively along the Jersey shore, not only for fishing, but for crabbing and other bait uses. We should take into consideration those small mom-and-pop businesses that derive a living and provide bait fish to our local fishermen.

It is with a great deal of pride as a member of the Legislature that I see you gentlemen travel from different parts of the State of New Jersey to join with Senator Gagliano and Senator Pallone to work on an important environmental bill.

SENATOR ZANE: Doctor, you talk in terms of negotiating the distance. Do you have any feelings about that?

ASSEMBLYMAN VILLANE: I think that the most acceptable inshore distance would be about 1.2 miles.

SENATOR ZANE: By that, are you saying that the two-mile request might be-- Let's put it this way. Do you feel that the same effect will be accomplished with 1.2 miles as with 2.0 miles?

ASSEMBLYMAN VILLANE: I think the end result will be about the same. I think that is a reasonable request. The one thing we have to be concerned about is, we have been losing a tremendous number of sport-fish species along the Jersey shore. Years ago, one used to be able to go in the surf here and bring in striped bass and tons of bluefish. The resource has been limited quite a bit, and anything we can do that would bring back a more controlled atmosphere to the fishing industry in the State would help a great deal, Senator. I think the 1.2 miles, as Assemblyman Palaia said, is the inshore minimum.

SENATOR ZANE: Thank you very much.

ASSEMBLYMAN VILLANE: Thank you, Senators.

SENATOR ZANE: Are there any other questions?

SENATOR DUMONT: Doctor, before you leave, not being much of a fisherman, and particularly since I come from the lakeland region where we don't have these, you don't have any samples of menhaden around here that I could look at, do you?

ASSEMBLYMAN VILLANE: Menhaden bunker fish is a highly-bony fish, and it has a very high oil content. It is primarily used, Senator, as you well know, as a source for fertilizer and for commercial oils. It is unacceptable for eating or anything like that. I don't know what it is comparable to in freshwater fish; nobody ever eats the bunker fish. It is primarily a bait fish.

SENATOR DUMONT: Do you call it "manhaden" singular, and "menhaden" plural? Is that what it is? (laughter) Or, is it menhaden for both?

ASSEMBLYMAN VILLANE: Senator Wayne Dumont is famous for his amendments to the River Dredging Bond Act. He said I could only pass the River Dredging Bond Act if I included the lakes in the State of New Jersey, and he prevails. (laughter)

SENATOR DUMONT: That is right. I'll be looking to you for reciprocal help. Thank you very much.

ASSEMBLYMAN VILLANE: Thank you.

SENATOR ZANE: The next witness per our scheduled list was to have been Russ Cookingham, but in his place we have Bruce Freeman, who is from DEP and who is the Administrator of Marine Fisheries. Is that correct?

BRUCE FREEMAN: That is correct. Thank you, Senator, for inviting us to testify this morning.

SENATOR ZANE: May I ask you this? If you have a prepared speech, rather than reading it, why don't you hand it in to us, and we can make it a part of the record? Why don't you highlight what your viewpoints are?

MR. FREEMAN: All right, very good. There are a number of comments I would like to make. We have been involved in managing menhaden for a good number of years. The Marine Fishery Administration and the Director of Fish and Game, as part of a management group, look at striped bass on a coast-wide basis. This is under the auspices of

the Atlantic States Marine Fisheries Commission, and there is a management plan which has been put into effect for the entire East Coast of the United States. Presently, that plan restricts the fishing season, from a starting date in the spring to an ending date in the fall. The principal objective is to reduce the mortality of small fish. The ultimate aim is to develop rules and regulations relative to the size of the net which would be used.

The catch of menhaden presently, in numbers of fish, probably equals its all-time high. We are dealing with perhaps five billion fish or so a year that are harvested in the coastal area.

The weight of the fish, however, is about half of what it was during its peak. Certainly there can be improvements relative to the management of this resource.

As New Jersey's concern, there is no doubt that conflicts have existed. I personally was out fishing during the week last year when some of these conflicts occurred, and I certainly have firsthand information.

There are a number of statements, however, that I feel need to be clarified relative to the perceptions people have of the fish.

One is the fact that it is a very clean fishery in the respect that nearly all the fish captured in the pursuit of menhaden are menhaden. It is perhaps one of the so-called cleanest commercial fisheries that exists.

We have had difficulties with the perception that large numbers of game fish are taken relative to purse seining of menhaden. One of the first programs that we initiated 20 years ago was to test this, primarily in Delaware Bay where the problem was very severe. We have found that, in fact, very, very few other fish are taken.

Other studies have been done in other coastal states, both on the East Coast and the Gulf of Mexico, and essentially, these findings are the same. It is not to say that at times striped bass, bluefish, or weakfish are not taken, but the numbers are extremely small, oftentimes numbering less than a dozen fish in a catch that may amount to over a million menhaden.

The other statement relative to red tide is: The information we have is that menhaden are relatively selective feeders. They are filter feeders. They go through and filter out plankton in the water. However, most of the plankton is diatoms and not species which influence red tide.

If, in fact, menhaden indiscriminately took in all of these organisms, I think we would have severe problems with our other fisheries, particularly since most of our commercial and recreational species have eggs that float in the plankton. We essentially would have depressed populations of bluefish, blue crabs, clams, oysters, etc.

We have put in regulations that restrict the length of the season. We have regulations that restrict the fishing so that purse-seine fishing can occur on weekends and holidays in order to avoid some of these conflicts. We have a regulation that prohibits the use of purse nets inside of six-tenths of a nautical mile. Essentially the purse-seine season is about 100 days long. This is the amount of time that technically menhaden purse-seine nets can be fished in State waters.

The restrictions we have placed on Delaware Bay essentially have eliminated about two-thirds of the Bay to menhaden fishing. We have eliminated most of the oyster grounds where conflicts have occurred in the past, plus the six-tenths court order that exists. In ocean waters, again, the court order is six-tenths of a mile.

We have monitored this regulation very stringently this year, primarily from aircraft, and we have found no infractions. We haven't had great participation, or intense participation, by the menhaden fishery. Most of the activity has occurred in the southern part of the State -- Delaware Bay, Cape May County, and Atlantic County. I don't believe we have had any vessels north of Atlantic City so far this year.

We do support legislation that would increase the license fees. These fees would be used for enforcement. We also support legislation that would increase the penalties, some of which would essentially allow us to withdraw the license if there were infractions.

We believe that these regulations can work. They have been working this year. We would like to have the opportunity to continue these regulations. We are of the opinion that if any of these regulations that we now have in effect, which were signed by the Governor as an emergency, are infracted in any way that causes difficulty, then we would support the complete prohibition of menhaden fishing within the State. We would like the regulations currently in place be given an opportunity to see if we can enforce them. We believe we can.

Thank you.

SENATOR ZANE: Are there any questions from the Committee?

SENATOR GAGLIANO: I have a couple of questions, Bruce. First of all, the date that the regulations went into effect-- Senator Zane, and I guess Senator Dumont, and I have particular problems with regulations at times. I know they were being considered this summer, but I would like to know, for the record, the effective date of the regulations you just talked about.

MR. FREEMAN: I don't have that immediately at hand. I believe it was sometime in early July.

SENATOR GAGLIANO: July 19, 1984?

MR. FREEMAN: Yes, I think it was the first or second week in July.

SENATOR GAGLIANO: You talked about red tide. You said that menhaden are filter feeders, and if they eat in red tide areas, this could cause other problems with other species. Has red tide been proven to be toxic in that regard?

MR. FREEMAN: The issue of red tide is quite complicated because there are a number of organisms which cause it. It is primarily a dinoflagellate, which is a type of half plant, half animal. In many instances, the organism itself is toxic to fish. In areas where it occurs in large concentrations, it actually kills fish.

There are problems that exist down in the Gulf of Mexico; there are problems that exist in New England with different species of organisms.

But, they do, in fact, kill fish. Of course, they also affect human health, as well.

Large concentrations of these dinoflagellates will essentially kill the fish.

SENATOR GAGLIANO: All right. So, what you are saying is, since they are selective feeders, they would somehow know better and probably not feed in the areas of red tide. Is that your statement?

MR. FREEMAN: Yes. The other point I am making is, if, in fact, the menhaden were indiscriminate feeders and fed in large quantities where they actually filter large volumes of water, they would essentially eliminate all the plankton in the water column. Of course, this would include most of the common species that we seek as game fish, such as bluefish which have pelagic eggs, and the eggs of oysters, which are also pelagic eggs. This includes almost all fish. There are very few fish that have an egg that occurs on the bottom.

SENATOR GAGLIANO: We can't go into that. I think it is too complicated to go into today, but suffice it to say that the menhaden, in your experience, do not feed where the red tide is prevalent.

MR. FREEMAN: That is generally true, yes.

SENATOR GAGLIANO: Okay. Again, referring back to the regulations, how long has it been since they could not, by law, fish on weekends?

MR. FREEMAN: That was enacted under these regulations in July. The only regulation--

SENATOR GAGLIANO: (interrupting) Is that part of the regulations as of July, 1984?

MR. FREEMAN: Yes, that is correct. Prior to that, the only regulation we had limited the season. The season cannot begin before the third Monday in May, and it must end by the third Friday in October.

Traditionally, the fish arrive in April, and oftentimes, they are here through November and into December. Essentially, the fishery could exist over a large portion of the year. The regulations we put in over a year ago, at the request of the Atlantic States Marine Fishery Commission-- Each state is asked to enact these to restrict the fishery. That was the only thing in effect prior to these regulations.

SENATOR GAGLIANO: The 100-day limitation?

MR. FREEMAN: Essentially the 100-day limitation is the amount of time they can fish within these bounds. Prior to the regulations, they could fish more than 100 days.

SENATOR GAGLIANO: Okay, so the 100 days also came about as a result of the regulations of 1984.

MR. FREEMAN: Yes, that is correct.

SENATOR GAGLIANO: All right. And, you said that bunker fishing in Delaware Bay was eliminated by two-thirds. Was that also because of the regulation?

MR. FREEMAN: That is correct, yes.

SENATOR GAGLIANO: Am I correct in assuming that maybe this legislation and what happened in September or October prompted the Division to recommend that the DEP adopt these regulations?

MR. FREEMAN: The issue of these conflicts has been with us at least for, I guess, the extent of the fishery; it probably goes back 100 years. As more and more fishermen go on the water, these conflicts become more and more severe. There is no doubt that the conflicts which occurred last October gave us the increased impetus to look at the issue. There definitely were problems; there is no doubt about it. No one disputes the fact that there were difficulties between the menhaden vessels and others that were trying to fish. I think this gave great impact to putting these regulations forth.

I would like to comment about Delaware Bay. The issue years ago was very much in the forefront, as Senator Zane can attest to. The reason we excluded large portions of Delaware Bay was because of the conflicts between the oyster fishery and the purse-seine fishery. That is the principal reason why we have eliminated a large portion of that. We have taken all the active oyster grounds and made them areas where fishing could not take place with the purse seine.

SENATOR GAGLIANO: I think it was Assemblyman Villane's testimony-- I guess I'm paraphrasing; I certainly can't quote him. It seems to me he said that by protecting the immediate shoreline and going out as far as we could to prevent menhaden fishing -- say to two miles, 1.5 miles, or 1.2 miles, whatever it is -- and getting it out as far as possible, that would have a direct positive impact on the amount

of game fish available for commercial, as well as surf and car-topper fishermen and fisherwomen. Is that a correct statement? In other words, if it was two miles, and if we couldn't get a menhaden boat within two miles-- It is Dr. Villane's statement that this would help us, and it would have a positive impact on fishing closer to shore. Is that a correct statement?

MR. FREEMAN: What we find with regard to the feeding of game fish is that they are relatively opportunistic, and they will feed on what is available. There is no doubt that when the menhaden are migrating along the coast in large quantities, the game fish will feed upon them. They are relatively easy to find. There is a lot of bird play, there is a lot of fish at the surface, and anyone who is on the water can easily find the schools of menhaden and game fish. Essentially, it is a great attraction.

SENATOR GAGLIANO: Is it a great enough attraction for us to protect?

MR. FREEMAN: I think that is the issue. We find it is close to shore. Obviously, we found conflicts between surf-casters and some purse-seine fishermen. People casting from the beach can actually almost hook the nets. These nets are sometimes set very close. We feel that the menhaden industry can operate by staying off the shore and allowing this safe area to be used by the recreational fishermen. We feel there will be some detrimental effect to the industry, but we feel it will be relatively small. They could wait until the fish moved a little bit, and then they could capture them.

We are also convinced that if we move out two miles, we will eliminate the purse-seine fishery. Between 60% and 80% of their catch is presently made within two miles of the shore.

SENATOR GAGLIANO: Don't they migrate out though? They have spotters, so can't they spot them with their planes and say, "Well, they are headed East. Let's go and get them."

MR. FREEMAN: The further off the fish go, the more difficult it is to capture them. There are many more problems relative to how the fishery operates. Technically, menhaden have--

SENATOR GAGLIANO: (interrupting) But, they are surface fish basically, aren't they? I mean, when they school up, aren't they near the surface? So, it doesn't matter if you are in 30 or 40 fathoms of water. The fish would still be near the surface, or at least that is my understanding.

MR. FREEMAN: Relative to the disposition of the fish, they concentrate very close along the beach, although they are also found 100 miles offshore in rare events. The great majority are pressed right along the beach. It really ends up being a State fishery. The various coastal states have control over this fishery. If each coastal state, for example, enacted no fishing within its territorial waters, I don't think there would be a menhaden fishery.

SENATOR GAGLIANO: Okay, I want to follow up on that. This will be my last question; it is one question in several parts.

What is the law in New York, Delaware, Maryland, and Virginia with respect to the distance that the purse seiners can come in? How close can they come? I know you are an expert; you should know all of this. (laughter)

MR. FREEMAN: Well, I don't absolutely know the regulations in each of these states, but let me indicate what I do know. Relative to New York, certain counties have a restricted fishery. For example, Richmond County, which includes Staten Island, does not allow purse-seine fishing in its waters.

SENATOR GAGLIANO: None?

MR. FREEMAN: No.

SENATOR GAGLIANO: That is Staten Island?

MR. FREEMAN: Yes. In the western end of Long Island, there are also various restrictions. It is my understanding that in the rest of Long Island, there is fishing on the beach. It is primarily on the western end of New York -- western Long Island and Staten Island.

SENATOR GAGLIANO: What is the restriction there? Is it by miles, yards, or what?

MR. FREEMAN: It is actually what they call a buoy line. It is a series of navigational buoys that occur about a mile or so away from shore. They use these as a common boundary for exclusion of the fishing.

SENATOR GAGLIANO: Okay, do you guess it to be about one mile?

MR. FREEMAN: I think it is about a mile. I may be mistaken, but it is between a half a mile and a mile.

SENATOR GAGLIANO: And Delaware?

MR. FREEMAN: Delaware, until last year, had a restriction of a mile. Last year they put in a complete prohibition within three miles of their coast.

SENATOR GAGLIANO: So, through their jurisdiction, they prevent it altogether. That is three miles.

MR. FREEMAN: That is correct. Virginia, I believe, doesn't have any restrictions as far as the use of nets is concerned. Maryland prohibits menhaden fishing in the Chesapeake Bay, as well as in the ocean. There is a complete prohibition of the use of purse-seine nets. That is my understanding.

SENATOR GAGLIANO: Maryland is total?

MR. FREEMAN: Yes.

SENATOR GAGLIANO: So, that would be like Ocean City.

MR. FREEMAN: Yes.

SENATOR GAGLIANO: If you compare Ocean City with Atlantic City, for example, in terms of the number of people who are on shore -- vacationing and all-- I guess what I am saying is, in Ocean City, Maryland, they cannot purse-seine fish, but in Atlantic City, New Jersey, they can.

MR. FREEMAN: Yes, but right now they cannot come any closer than 0.6 miles.

SENATOR GAGLIANO: But, in Ocean City, Maryland, it is three miles.

MR. FREEMAN: Well, Ocean City, Maryland essentially takes care of most of Maryland's Atlantic coast area. I think it only has about 13 miles of coastline.

SENATOR GAGLIANO: I recognize that, but I wanted to use the comparison because I think your testimony is that in Ocean City, Maryland, it would be totally prohibited out to the three-mile line. In Atlantic City, by regulations, it is 0.6 miles. I know how active

you are in the Atlantic States Marine Fisheries Commission. You will be down in Savannah next month. Bruce, does that sound fair to you? Does that sound right and fair to you? I don't want to put you on the spot, and maybe you don't have an answer, but I'll ask it rhetorically. Does it sound fair?

MR. FREEMAN: Well, you are putting me on the spot. (laughter) To answer the question is complicated because we are very much interested in managing the resource. We are very much concerned that the fishery is able to be conducted, both for the commercial aspect of the menhaden fishing and the recreational fishing. At the same time, we are very much concerned about the use of our beaches. That is one thing that I don't think anyone has brought up so far. At times there are problems. When the boats operate close to shore, they pump the fish aboard. There is a slick that occurs because the discharge water goes out the other side of the boat, and sometimes these slicks wash up on the beach, particularly with an easterly or northerly wind. For some reason, bathers don't like to go in the water when that slick comes ashore.

We feel that by moving the boats off, and by requiring anti-foaming agents -- which is another part of the regulations -- we can avoid this. We are very much concerned that the beach goes, not only the fishermen, but the people who enjoy just sitting on the beach and enjoy swimming be protected as well. We believe this can do it.

To answer your question, I don't believe you need to go three miles to solve those problems.

SENATOR GAGLIANO: But, Maryland did. That is the issue. They did, and as you know, because of your job and experience, we have tremendous pollution problems here which limit the ability of our people to use our beaches on many days. Many days the water smells; it has a brown color to it, especially in Long Branch and north up to Sandy Hook. You can actually tell the difference as you get to Sea Girt, Manasquan, and Long Beach Island. There is a different quality to the water, and I've seen it. I know that most of the people here have probably seen it. Since we already have those problems, isn't it appropriate for us to recognize that the fishery is there, and maybe we

want to help? Wouldn't it be appropriate for us to over-regulate somewhat to protect our beaches as much as we can? We have the New York sewage dumping, and we still have sewage plants along the shore that are dumping primary treated effluent. We have to take it a little bit at a time, but this is an issue, I think, that we should try to work more closely with to create a situation where they are further off the shore.

MR. FREEMAN: We feel, as you indicated, that the water quality relative to the color is certainly different. A lot of this has to do with the new drains that go in from the Hudson River Estuary and the Hudson River itself. We find it is very enriched water, and we find a tremendous amount of plankton, which oftentimes discolors the water. When this plankton dies, it obviously creates other problems. There is a smell problem, there is discoloration, and we find areas where there is a depletion of oxygen when these organisms are decomposed.

There are other problems that exist, and we find these primarily in the northern part rather than further down the coast. I don't think there is any doubt about it.

Our position is that we think this 0.6 miles will work. We have given a lot of thought to it. We have looked at various aspects of the fishery, and we would like to at least see it tried. We take the position that if we see it isn't working, we see that there are gross infractions on it, and we cannot enforce it, we will support a complete and total ban within three miles of the State waters.

SENATOR GAGLIANO: Thank you, Bruce. I have no further questions.

SENATOR ZANE: Senator Dumont, do you have any questions?

SENATOR DUMONT: No.

SENATOR ZANE: Thank you very much. Don MacPherson of Long Branch, representing the Bait & Tackle Dealers and the Jersey Coast Anglers Association?

DON MacPHERSON: Thank you. I'll make a very short statement because I want to use a projector. The information I am going to present was gathered by myself in my own research. Other information was provided

by Joe Lopreski, who is the proprietor of the Steven's Bait and Tackle Shop in Long Branch, and the Jersey Coast Anglers Association. The information is all referenced. I am not going to just sit here and talk to you; I'm going to show you the references. There are a lot of words on this, and I don't expect you to read all of them. I have it highlighted for your information.

A lot of the questions that have been asked here today -- the mileage distance, the laws of the various states, do they catch game fish as well as menhaden -- will be answered in the discussion. I think it will be quite complete.

You mentioned the New York bill. If you are interested in more information about New York, you might contact Senator John Marchi from New York, who introduced legislation there. He is a resident of Staten Island and a personal friend.

SENATOR ZANE: How long is your presentation?

MR. MacPHERSON: Fifteen or twenty minutes at the most.

SENATOR ZANE: We are going to take a few of the other speakers first, and we'll come back to you.

MR. MacPHERSON: Fine.

SENATOR ZANE: Joseph Melillo, President, Jersey Coast Anglers Association?

JOSEPH MELILLO: I have a prepared statement on the feelings of the 44 clubs.

SENATOR ZANE: If you have a prepared statement, we would appreciate it if you would submit it to the Committee and then just make your comments. It will be made part of the record.

MR. MELILLO: It is very short.

SENATOR ZANE: Okay.

MR. MELILLO: Many fishermen and boating enthusiasts from New Jersey spend millions of dollars to pursue their sport. I cannot begin to name all the places they spend money to support our businesses. Here are some: restaurants, grocery stores, boats and equipment, marinas, gas stations, tackle shops, party and charter boats, and many others. For a small fee, out-of-state commercial boats can purse seine off our coast and take millions of dollars of menhaden. They leave us

with nothing. They contribute nothing to our economic structure. They do nothing for our environment and create no jobs for State residents. When they have taken what they want, they leave. The destruction they leave behind is obvious to all that fish, swim, and boat. The fishermen complain there aren't any fish, the boaters complain the water smells and dirties everything, the swimmers and residents complain of foul, smelly water which is void of life, and the merchants complain of no customers.

The net these boats use is called a purse-seine net. This net was designed for deep water operations. It is the most efficient net ever designed to catch fish, and it is so efficient that Maryland, Delaware, and New York have banned it. In shallow water such as ours, this net is the most destructive net ever used. It takes everything from the water and the bottom of the ocean. It leaves nothing behind, not even sea weed.

The goal of the Jersey Coast Anglers Association is to seek legislative action. We, the sport fishermen, boaters, and residents of New Jersey will seek a two-mile limit for all purse-seine nets. In other words, no purse-seine nets within two miles from the nearest point of land. Our goal is not to put the bunker people out of business in New Jersey, but to end the many abuses they have inflicted on our residents. The 0.6-mile regulation installed by DEP offers some protection for the surf fishermen, but it does nothing for the small boat fishermen who have been harassed on many occasions. Therefore, we urge the Committee to support the bill as is.

The Jersey Coast Anglers Association consists of 44 fishing clubs -- 23,000 fishermen -- throughout the State. We recently confirmed our stand on the bunker issue, and that is to support Senator Pallone's bill unanimously. As Jersey residents, we ask that you support Senator Pallone's bill too.

SENATOR ZANE: Sir, what is your position on the 1.2-mile compromise that has been talked about?

MR. MELILLO: Well, do you want my personal opinion or Jersey Coast's opinion?

SENATOR ZANE: Your personal--

MR. MELILLO: (interrupting) The Jersey Coast's opinion is that we want two miles.

SENATOR ZANE: What is your personal opinion?

MR. MELILLO: I can probably live with the 1.2 miles, although I feel that with the lack of enforcement, it will be abused sooner or later. I'm sure it won't be abused the first year.

SENATOR ZANE: Isn't it likely that the two miles would be abused as well?

MR. MELILLO: Yes, but they may abuse it within one mile, sir, whereas within twelve-tenths, they will abuse it up to two-tenths. Much of my time is spent on the beach, and I see what happens.

Again, our goal is not to put this fishery out of business. We seek the three-mile limit. We were supplied data, and we know there is a four-mile fishery, but we are only asking for half of that. Jersey Coast feels that is fair.

SENATOR ZANE: Your position then is that the 1.2 miles would probably do it, but you would prefer to see two miles.

MR. MELILLO: Yes, because we feel we lack enforcement, and we think there is going to be a little cheating.

SENATOR ZANE: Okay. Are there any other questions?

SENATOR GAGLIANO: Mr. Melillo, you said there is a four-mile fishery that you have data on.

MR. MELILLO: Yes, it was supplied to us.

SENATOR GAGLIANO: I guess we will have other people testify.

MR. MELILLO: We have maps -- I believe they will be on our slide presentation -- showing that there is a four-mile primary fishery and another four-mile secondary fishery off the coast of New Jersey. This map was supplied to me when we first became involved with the bunker issue. I assume it is accurate. It is from the Division of Fish and Game.

SENATOR ZANE: Thank you. Susan Boyce, Mac's Bait & Tackle of Neptune, New Jersey?

SUSAN BOYCE: I don't have a lot prepared; it is just a small amount. Our tackle store is located in Neptune, and we service the Shark River

area. We also pull in a lot of customers from Trenton and other outlying areas.

I consider our losses last year as substantial because of what went on. We rent a daily key to the boat-launch ramp for all trail boats, and it showed a decrease which went down below 1981 figures because of what happened when the fishermen found out that there were no fish. Whether they went with the fish, or whether they just left-- We believe the area was so disturbed that the fish were just gone. We received calls from people, and there was nothing.

Our losses were -- if you consider the ramp, etc. -- around \$7,000. We are what you consider a mom-and-pop business. That is a lot of money when you consider what was lost in sales tax, etc. When you multiply that by all the other shops--

You also don't take into consideration the items you have to buy to supply fisherman, and all those items are sitting in our freezer or on our shelves waiting to be sold.

I've seen this before, but it was many years ago -- you know, when they were out there and came in close. I think the reason why they came in close was because the bunker were there. This year, the bunker aren't in close. Maybe they got them all last year, I don't know.

SENATOR ZANE: Ma'am, there was testimony earlier by Bruce Freeman, I believe, that there wasn't any of this type of fishing done north of Atlantic City this past year. I don't know if that is accurate or not. How then could that have contributed to your problem of the loss of revenues?

MS. BOYCE: This year?

SENATOR ZANE: Yes.

MS. BOYCE: I'm talking about loss of revenues last year -- October, 1983.

SENATOR ZANE: Oh, okay.

SENATOR GAGLIANO: She is talking about the instance when the bunker boats came in, and as they say, "cleaned out the area."

SENATOR ZANE: Okay. This year, not having been north of Atlantic City, if I heard you right, your business improved?

MS. BOYCE: Let's put it this way: As soon as the rain stops on weekends, it will be nice. (laughter) Yes, business is up for that kind of fishery. What you must consider though is that the bunker are not there this year north of Atlantic City. If they were, I'm sure the boats would be there getting them, but they are not there right now. There are other bait fish there; there are other bait fish every year along the beaches, but these bait fish can be disturbed too. Once you get a lot of disturbance and a lot of people going in, you are going to find that the bait fish leave. They are just not going to stay in an area where they are being disturbed.

SENATOR ZANE: Okay, thank you very much. Are there any questions? (negative response) Thank you, ma'am.

Jim Furlong from the Farm Bureau?

JAMES FURLONG: Senator Zane, I am Jim Furlong. I am with the New Jersey Farm Bureau. We represent some 500 commercial fishermen in several commodities. We are here today on behalf of our bunker fishermen.

At the June hearing, I made the statement that our major concern is that Senator Pallone's bill speaks to a total prohibition of menhaden fishing in the bays. If that were to become law, it would put some fishermen out of business -- some fishermen with crews of seven. This is a primary concern. As Senator Pallone said earlier at this hearing, we have discussed this, and we would be willing to go with a 50-ton exemption in the bays. That would be all three bays -- Delaware, Raritan, and Sandy Hook.

SENATOR ZANE: Is that a proposal you have discussed with Senator Pallone?

MR. FURLONG: Yes, it is.

SENATOR ZANE: Is he receptive to that?

MR. FURLONG: I believe he is.

SENATOR ZANE: Okay. Is there anything else, Jim?

MR. FURLONG: Yes, I have just one other point. As far as the current regulations of July 12 about the 0.6 are concerned, we are in agreement with that. I don't think Bruce made it entirely clear. It isn't his fault; he just didn't have the time to go into any of the

details, but I'm sure he has made the Committee aware in his written statement. A lot of the issues that were brought up by the sportsmen and the tackle dealers have been duressed in these new regulations -- like all discharging should take place below the water line, the anti-foaming agents, etc., etc. The holiday situation was a time when we really did have some conflicts, but those have been addressed.

Regarding the issue of the 0.6, I agree with Bruce that we should give it a try. If it doesn't work, then let's put them out further.

SENATOR ZANE: Because you represent commercial fishermen, let me ask you this: What if it were 1.2 miles? Would that have a devastating effect on them?

MR. FURLONG: I can only--

SENATOR ZANE: (interrupting) If you know. If you don't know, then don't venture a guess.

MR. FURLONG: I'll tell you what I know, Senator Zane. The information that has been provided to me is that the majority of the fishery is somewhere between one-half mile and one mile.

SENATOR ZANE: One-half mile to one mile?

MR. FURLONG: Yes.

SENATOR ZANE: Okay.

MR. FURLONG: I have one final point, Senator. We have the Chairman of the Farm Bureau Commercial Fisheries Committee here today, and I would like to request that he have about one minute to testify.

SENATOR ZANE: Give me his name and we'll add it to our list.

MR. FURLONG: Okay. His name is Swede Lovgren.

SENATOR ZANE: Pardon me?

MR. FURLONG: Swede Lovgren -- L-O-V-G-R-E-N.

SENATOR GAGLIANO: He is a famous, famous individual here in this area.

SENATOR ZANE: Okay, thank you very much.

SENATOR DUMONT: Jim, just a minute, please. How large a percentage of the Farm Bureau consists of commercial fishermen? It is kind of new to me that you have commercial fishermen in the Farm Bureau.

MR. FURLONG: We have had commercial fishermen, Senator Dumont, in the Farm Bureau since 1978. It is growing every year. We are in excess of 500 today.

SENATOR DUMONT: In excess of what?

MR. FURLONG: Five hundred.

SENATOR DUMONT: Thank you.

SENATOR ZANE: Mr. Lovgren?

GOSTA LOVGREN: For the record, my name is Gosta Lovgren, but they call me "Swede." I am the Chairman of the Commercial Fisheries Committee of the Farm Bureau.

I am not going to speak especially to the issue today, except to say that it must be considered that all commercial fisheries are a primary producer of wealth, whereas the tourist segment of the recreational industry is secondary. It is a transfer of wealth. It is very important to the economy of New Jersey that we maintain a viable commercial fishery -- not just bunker fisheries, but all of them. They provide for every job on the ocean and approximately seven jobs on the beach -- possibly more. These are the National Marine Fishery Service's statistics. They may or may not be reliable, like everything else they do.

The other thing I want to point out that I think is very important is, this legislation, like much other legislation that has been proposed during the last 10 years, is a reaction to a declining fishery in the State of New Jersey. It isn't that the fish are being caught -- whether it is recreational or commercial -- so much as it is that we are just not getting the fish in this area anymore. My opinion, and the opinion of many other people, is, it is because of the massive pollution problems we have in the New York Bight. I know I can go home and get records, but there are at least 20 species of fish that we don't see in this area anymore in abundance. They used to be in abundance -- blowfish, spots. A major fishery in the early 50's and 60's was porgy fishing, both for commercial and recreational purposes. The bluefish are becoming less and less and the fluke are becoming less and less. This is not an over-harvesting problem so much as it is an underproduction problem.

When these sportsmen -- and, rightfully so -- become concerned that they are not catching the fish that they caught before, they naturally reach out to lay blame. The commercial guys are a very easy scapegoat because they see boats coming in with hundreds and thousands of pounds of fish. Obviously, that is where all the fish are going. That is not true. In most fisheries in New Jersey -- the commercial fisheries -- there is as much as 20 times as a commercial man, yet they still try to regulate the commercial man. We are not quarreling about that, but the point I want to make is, this is a reaction to a declining resource that we have. We don't have tuna fish inshore, we don't have porpoises inshore, and we don't have whales inshore anymore. That isn't because they are being over-harvested; it is because the water conditions are such that they are not coming to our area anymore. Maybe our estuaries aren't producing -- not only in New Jersey, but throughout the East Coast.

I hope you consider that. Those two factors are very, very important to the economy of New Jersey.

SENATOR ZANE: Sir, what are your thoughts on the proposed amendment of 1.2 miles?

MR. LOVGREN: I would say, the 1.2-- I have never been seining. It is one of the few fisheries that I have never personally participated in. I was born and raised in the commercial fishing industry. My experience through the years has been that seining is an inshore, shallow water fishery, and they do come in very close. I think 1.2 miles is roughly estimated to be 70 to 80 feet of water. That is pretty damned deep for seiners, unless you are talking about tuna seiners with massive nets.

My opinion and that of the Farm Bureau is, 0.6 miles is-- I personally think it is going to create a hardship on the commercial fellows, but we also have to recognize that we are not the only ones using the ocean.

The second thing is, the 50-ton exemption would keep out those big boats. In the surf clam industry, when we had regulations that we were very actively involved in six or seven years ago, we passed a tonnage exemption, and we also regulated that only residents

could get licenses. If we had something similar to that, we wouldn't have to worry about Virginia or any other states coming here.

One other thing I would like to mention, Senator Gagliano, is the fact that Maryland, New York, Delaware, and other states may have more restrictive laws than what is being proposed here. That doesn't, in my opinion, really have any bearing on the matter. We have to deal with New Jersey. I do know that in Maryland, there is a very, very strong and hopeful sportsmen lobby. I hear this through the Farm Bureau when I meet with the national people. I just hope you consider this.

This is a reaction to conditions that aren't really true. It isn't true that the bunker seiners are harvesting all the fish. When I was a kid in the 40's and the 50's, there were hundreds of boats, literally hundreds of boats every summer. Now we hardly see any. The fish are just not coming here. That includes virtually every single species of fish that has landed in the State of New Jersey. Without exception, every fish that has landed in the waters of the State of New Jersey has been declining, and they have been declining for 30 years. It is not because of over-harvesting; it is because of pollution. This is symptomatic of other problems. If you over-react in this system, next year these fellows are going to be back because they are not catching enough weakfish. The next year they are going to be back because the bluefish came in late, etc., etc. I don't blame them; I can understand it. I really can. But, this is not the problem. Fishing is not the problem.

SENATOR ZANE: Okay, thank you. Are there any questions?
(negative response)

The next speaker is Captain David Hart from Cape May. Do you wish to speak now? You spoke to me before. (Captain Hart indicates that he would like to defer his testimony until later in the hearing.)

Rick Sengor, Shark River Surf Anglers?

RICK SENGOR: Hi. I am Rick Sengor, President of the Shark River Surf Anglers of Belmar, New Jersey.

First of all, in reference to the moss bunker, I would like to discuss a situation that occurred to me in 1968 when I first began

fishing in the surf. I started in September, and in October, the bunker boats were there. I didn't know what was going on. There were fish in front of me, and then all of a sudden there was nothing. This went on for a whole week. Boats were in and out. I have pictures of those boats right on the beach, so many that at 8th Avenue in Belmar, one boat actually bunked a pipeline that was off the north side of the jetty.

When these boats come into the beach area -- and, there are pictures to prove this, which I don't have -- they have a 60-foot drag net that is very heavy. Those pictures of the net show crushed lobsters, crabs, etc. These boats even come in to the one-mile limit.

You are still not answering the situation. The situation is, as was said before, discoloration of the water due to plankton. If you take our moss bunker away, we are going to have continued discoloration of the water due to plankton. As far as I'm concerned, I don't think the State of New Jersey should allow any of those boats within three miles. We don't get anything from those boats. All we get is their residue. The residue is, when they release the bows of their boats, the slime, the scales, and the blood of fish, etc., which is in direct relation to the cause of red tide. This was proven in 1976. The greatest harvest of moss bunker ever on the East Coast occurred then.

Two weeks later, we had the largest red tide ever from Maine through Florida. They proved the point then. Take the moss bunker away and animal plankton will become abundant to the point that they will die off. When they die off, they cause bacteria, bacteria eats oxygen, and we lose all of our fish.

In the Raritan Bay-- There was a fellow from Staten Island who put up an issue. His issue in New York was of tremendous value to the Raritan Bay. Raritan Bay, on the New York side, is a clean body of water. They have not had a reoccurrence of red tide for a number of years. They proved the point-- I wish to submit this to you to read. If you would like, I will read it aloud. It deals specifically with the bunker fleets, their netting operations, and the residue that is left when they leave. There is nothing left. Recreational and

commercial fishermen are at a loss. The State Treasury is at a loss. The waters become polluted, and we don't stand a chance then.

We need the moss bunker on the beach. Without the moss bunker, we are in trouble because moss bunker is the prime food source for our sport fish. Moss bunker is also the checkpoint of the plankton. Take the moss bunker away, and we're in trouble.

I had a lot more to say, but I really don't want to say much more because there are other people who want a chance to speak. I want to leave this report with you.

SENATOR ZANE: Thank you. Are there any questions of the speaker? (negative response) Thank you very much.

Is Bill Forman here? (Fred Forman answers from audience)

FRED FORMAN: I thank you for the time, Mr. Chairman.

SENATOR ZANE: You are from the Spring Lake Freezer Company?

MR. FORMAN: That's correct. All I want to state is that we are primarily bait dealers. We have no interest in big boats or large fleets. We supply marinas, bait stores, party boats, and charter boats. At this point if-- Let me say it this way: Since this new regulation came into effect -- the six-tenths of a mile -- the one boat we have to supply our bait in New Jersey has caught very little bait; consequently, we have to go out of state to get it.

Three years ago, our bait was two cents a pound higher than it was this spring. It came down simply because we were getting more bait from our local supplier.

Since this new law went into effect, in July, our one supplier couldn't supply us and we had to go out of state. Since July 10th -- only within the last three weeks -- the price of bait has gone up five cents a pound due to the fact that we have to go to Virginia and the southern states to get the bait. In effect, we are penalizing our own suppliers here, and the people you are trying to stop are getting money out of it anyhow, because they are coming up here, catching the bait, going back down south, and selling it to us.

SENATOR ZANE: So, your position is that you are in opposition to the bill?

MR. FORMAN: Yes, I am in opposition to it, sir.

One boat, the Bellatrix, is the only supplier in the State of New Jersey. In the beginning of the season, we depend on the pound-pole fishermen -- that is, from April until maybe the middle of June or the end of June. The supply then sort of diminishes from the pound-pole fishermen.

The one purse seiner starts around the middle of June, and we have to depend solely on him until the end of the season.

SENATOR ZANE: Is that the Bellatrix?

MR. FORMAN: Yes, the Bellatrix. Now, if you restrict him, he is the only supplier New Jersey has for bait. If you stop him from fishing, you are going to stop our supply, and we will have to go out of state. We can get bait, but the same people who are sitting here today -- the sportsmen -- saying that we should stop it, are going to be complaining when they find out what the cost of bait is going to be.

SENATOR ZANE: Are you telling the Committee that he is the only bait supplier in the State?

MR. FORMAN: He is the only bait supplier, other than the pound-pole fishermen, and their supply only lasts several weeks in the spring.

SENATOR ZANE: How many boats does he operate? How many people are in his employ? Do you know?

MR. FORMAN: Oh, what does he have? Seven? He has seven men.

SENATOR ZANE: Is it one boat?

MR. FORMAN: One boat, the Bellatrix, out of Belford. He supplies this whole area, including a lot of people from New York.

SENATOR ZANE: It has been discussed here, sir, that we could try to come up with a limitation on the size of the vessel and make it one which would pretty much be able to fish at any time. This, hopefully, would take care of the Bellatrix -- or someone like him -- which is just getting enough fish to supply bait dealers. I don't know whether this is constitutional or legal. It has been suggested that, for example, we should have a fifty-ton limit. If the boat is more than fifty tons, it would not be able to come in any closer than two miles. If it is less than fifty tons, it could come in closer.

Again, I don't know whether that is constitutional. I raise the question as to whether or not, if it were -- or if we felt we could amend the bill along those lines -- you yourself would be agreeable to that?

MR. FORMAN: Yes. When we first spoke to Senator Pallone we presented that to him. That would eliminate our problem.

You see, we figure that a small boat, such as the Bellatrix, would have to make sixteen trips in one day to equal what one of the big boats does in five minutes, in one big suck -- you know?

That's about all I have to present, sir. It is a problem. If we don't let our local fishermen supply us, within the next several years we are going to see the price of bait double, and the people we are trying to prevent from making the money are the ones who are going to gain.

SENATOR ZANE: Senator Pallone, are you receptive to the fifty-ton limit just in the bay, or anywhere?

SENATOR PALLONE: Well, the way I understood it, right now we have 0.6, pursuant to regulation. I have no problem with the fifty-ton exemption, but I assume that we would incorporate the regulation so, in effect, they would be allowed to go between 0.6 and the two miles.

I don't know if it is even being suggested that we eliminate the 0.6 for the under-fifty-ton. I have a problem with that.

SENATOR ZANE: I guess you are saying that this is for the fifty-ton boat, right?

MR. FORMAN: Fifty-ton, gross weight.

SENATOR ZANE: Okay. You are saying that you would be receptive to amendments that would permit them to operate within the regulated area, up to the two miles as proposed -- or whatever it ends up at?

SENATOR PALLONE: Right.

SENATOR ZANE: Okay. Are there any questions? (negative response) Thank you very much.

MR. FORMAN: Thank you, Senator.

Tom Macconchie.

TOM MACCONCHIE: I run the Belford Seafood Cooperative. I more or less have the same thing to say as Freddie did. The thing I want to bring out, Freddie couldn't explain as well as I can. The pound boats, in the spring when the bunkers are running, start fishing in about April. The bunkers run then, and they will catch bunkers. But then, around the middle of June, the bunker-run is over. When the sun comes out real strong, they school up. This is when the pound boats do not catch any bunkers. That is why we depend solely on Chris to supply Spring Lake, Forked River, Peterson's -- all the major freezers that supply the tackle shops.

Right now, with the 0.6, his catch has been reduced like you wouldn't believe, because there are fish there but they are up in the rivers and they are close to the beach, and we can't get at them. There is not an over-abundance of fish, but fish are there. I mean, there are not even enough fish for the big boats to come from Virginia to catch; that's why you haven't seen them. But, there are enough in order for Chris to supply what we need to supply our freezers. This is why we are in favor of the tonnage, if it can be done.
done.

But, the 0.6 is hurting us too. You are talking about only one boat, and it is a small boat. It is not a 250-foot boat, and these fish are in relatively shallow water.

SENATOR ZANE: What would preclude somebody from coming up with a lot of small boats? Is that just impractical? It seems to me we are talking now about just one boat. But what if somebody came up with fifty little boats?

MR. MACCONCHIE: Well, it all depends on the men. You see, in the spring I have to put the pound boats on a limit, because the freezers are freezing them -- you know, to prepare for the summer.

Now, it just wouldn't be feasible to send ten or fifteen boats, like Chris' boat, up there because I would have to put them on a fifty-barrel limit. I mean, Chris is the only one who is doing it.

SENATOR ZANE: How about the major fishermen?

SENATOR PALLONE: You are asking about the southern boats now.

SENATOR ZANE: Yes. Suppose the southern boats came up and they somehow had ten small boats instead of one huge boat? Maybe the economics wouldn't be--

MR. MACCONCHIE: (interrupting) It is not probable.

SENATOR ZANE: It isn't?

MR. MACCONCHIE: No.

SENATOR ZANE: Because of the cost of operation and all of that?

MR. MACCONCHIE: Yes. You can't run a boat from Virginia.

SENATOR ZANE: What would a harvest on a 50-ton boat be worth to somebody, dollarwise? Can you tell me?

MR. MACCONCHIE: Dollarwise?

SENATOR ZANE: Chris? Is that your name?

MR. ANTHOPULOS: Yes.

SENATOR ZANE: If Chris has a fifty-ton boat, and it is full whenever he comes to you, what is it worth to you?

MR. MACCONCHIE: I don't know what he can carry totally, but the thing is, when he goes out I usually have a limit for him.

SENATOR ZANE: Can you answer that question -- what it would be worth? Forget the limit; forget that you are involved. If somebody has a fifty-ton boat--

MR. ANTHOPULOS: Can I answer that?

SENATOR ZANE: Well, I don't want to start opening this up to floor discussion, but you can answer that one question.

MR. ANTHOPULOS: If he gives me an order for nine hundred bushels--

SENATOR ZANE: (interrupting) Forget that, sir. What would the harvest be if a fifty-ton boat is filled to capacity? What would that be worth?

MR. ANTHOPULOS: At his market price?

MR. MACCONCHIE: Maybe one hundred thousand pounds.

MR. ANTHOPULOS: That would be \$8,000.

SENATOR ZANE: Eight thousand dollars?

MR. ANTHOPULOS: Yes, \$8,000.

SENATOR ZANE: How long would it take to fill one boat with an \$8,000 load -- if you know?

MR. MACCONCHIE: How long would it take him? A boat like that?

SENATOR ZANE: Yes.

MR. MACCONCHIE: It would take two, three, or four hours.

SENATOR ZANE: Two, three or four hours?

MR. MACCONCHIE: Number one, you have to set a number. You have to bail. He does not discharge anything. They do not process anything on the boat, so there is nothing discharged.

SENATOR ZANE: So, if we had ten boats with a load like that, in two or three hours ten boats could pick up maybe \$80,000 worth of fish? Is that correct?

MR. MACCONCHIE: Yes. I would say so.

SENATOR ZANE: Is there anything else, sir?

MR. MACCONCHIE: Well, the only other thing I would like to say is something Freddie said -- and I am going to back him up. If you stop Chris -- if you put the law into effect -- and these guys have to go out of State, as he said, you will be taking a lot of money out of the State. You are just taking New Jersey money and throwing it into Maryland or Virginia, or someplace like that. The money should be kept right here. You have a product right here, and we can't harvest it.

SENATOR ZANE: Do you have anything further? (negative response) Are there any questions?

SENATOR DUMONT: Are you opposed to the bill, sir?

MR. MACCONCHIE: Yes, sir.

SENATOR DUMONT: Okay.

SENATOR ZANE: Thank you.

Chris Anthopoulos, representing Belford Seafood Cooperative.

CHRIS ANTHOPOULOS: I will answer any questions you would like to ask me. I have been saying for four years now-- Now, the first thing we read in the paper regarding Mr. Pallone was that the fish were being depleted: "We catch clams; we catch crabs; we catch lobsters." This was just readable stuff that was written, which he never saw.

Now, this summer, and the previous summers, we welcomed anybody -- the newspaper people, a politician, anybody -- to come out and see our operation. We are strictly menhaden fishermen.

SENATOR ZANE: What about car dealers?

MR. ANTHOPULOS: All right. Yesterday I got a call from a man from North Jersey. He asked me if I was going fishing today. He was a newspaper man. I said, "If we go, you are welcome to come." But, I said, "We have a meeting tomorrow and we have to be at that meeting."

There is a depletion of fish, which is just a rumor. People who don't know the fishing industry don't see this. This spring, as it was, we had a lot of easterly weather.

SENATOR ZANE: Sir, I am going to ask you, if you will, to try and direct your testimony to the bill.

MR. ANTHOPULOS: Yes.

SENATOR ZANE: You are either in opposition or--

MR. ANTHOPULOS: (interrupting) I am in opposition to it.

SENATOR ZANE: (continuing) --pro the bill.

MR. ANTHOPULOS: Well, anyway, in July we got a letter in the mail saying that we were restricted to six-tenths of a mile from any point of land. Well, anybody who bunker fishes knows that fish go to estuaries. They go close to shore. That is where they stay until they migrate again and move off shore. Well, if you are going to wait all summer for fish to come offshore, you are going to have to wait all summer; they aren't coming.

We have bluefish in the bay that have pushed the bunkers up into the Shrewsbury River, the Navesink River, and the into the lower Highlands, to the Atlantic Highlands buoy, which is unfishable to us. We never did fish in the Navesink or the Shrewsbury River. But, the fish are there, which is not doing anybody any good -- that is, commercial-wise or resource-wise. They are just sitting dormant, as they do in Staten Island now. In Staten Island--

SENATOR ZANE: Sir, let's stay on the bill.

MR. ANTHOPULOS: Yes. Well, I am in opposition to this bill, and I am in opposition to this six-tenths of one mile, which we have been going along with. We don't have spotter planes. We don't have big rigs. We just have a small little industry that supplies the Belford Co-op with bunkers for the local bait buyers and the people who come down to the dock to buy bait.

We now have a tuna tournament going on and there is a scarcity of bait. We have scalpers who have bought fish, and who are selling fish for an exorbitantly high price, and the people are paying it.

We set one price -- eight cents a pound -- to the wholesaler. This stays the same from one end of the year to the other, in order to keep these people buying fish.

SENATOR ZANE: Sir, let's stay with the bill.

MR. ANTHOPULOS: Yes. Well, I am opposed to this bill.

SENATOR ZANE: Okay. Are there any questions?

SENATOR GAGLIANO: Yes. Chris, how heavy is your boat?

MR. ANTHOPULOS: My boat is 38 tons, gross.

SENATOR GAGLIANO: Are you saying to us that the 0.6 distance in the bay pretty much puts you out of business in the bay? Would you favor our moving on this bill if there was some way that smaller boats could continue to fish in the estuary areas?

MR. ANTHOPULOS: Well, I have bunker fished since 1944. I worked for J. Howard Smith. I worked for private rigs, and all of the rigs. Now, I can't be Abel and Cain at the same time. I am a commercial fisherman. I am not a sports fisherman. They can't see me doing this, and I can't see what they do. But, that is their business, and my business is my business.

SENATOR GAGLIANO: So, your answer is that because you have colleagues who have larger boats, you are not--

MR. ANTHOPULOS: I have no colleagues now.

SENATOR GAGLIANO: I asked you if you could support a bill that gave smaller boats-- Someone mentioned 50 tons, and I don't know if that is the right number or not. I don't know if it is legal or not. But, I am asking, if we could pass a bill that would allow smaller boats, up to 50 ton, to fish the estuaries and the bays, whether or not you would be in favor of the bill?

MR. ANTHOPULOS: You see, I am a resident. That is the only way I can answer that. I am a resident of the State of New Jersey. I do not come from Carolina, or Maryland, or anywhere else. I am right here. I couldn't answer that question, no.

SENATOR ZANE: Okay, thank you very much.

Theodore Hutler, Jr., Forked River Freezer -- wholesale bait. (no response) He is not here.

The next speaker who has requested to give testimony is Ray Richardson, New Jersey Marine Fisheries Council.

RAY RICHARDSON: Mr. Chairman, members of the Committee, I have a prepared statement to make, which will take me about five minutes. I would like to read it as it is written so it is not taken out of context.

My name is Raymond Richardson and my presence before this Committee today is as a member of the New Jersey Marine Fisheries Council. Just as a brief background of my qualifications to present this statement in opposition to Senate Bill 1372, I was a commercial fisherman in New Jersey for over thirty years, operating just about every type of fishing gear used in New Jersey to harvest finfish and shellfish, including menhaden purse seines. For the past eleven years I have been the Director of Industry Relations for Seacoast Products, Inc., who operated from Port Monmouth, New Jersey.

From 1956 to 1980, I served four terms as commercial fisheries representative on the New Jersey Fish and Game Council. From 1980 to the present, I have been a member of the New Jersey Marine Fisheries Council. During this period of time, I have served at the pleasure of five Governors of the State of New Jersey, which includes the current Governor, Thomas Kean.

Following the passage by Congress of the Fisheries Conservation and Management Act of 1976, and in order for New Jersey to participate with flexibility in State and Federal Fisheries Management Programs, the Legislature, in its wisdom, passed Senate Bill 1399 in 1979.

On September 19, 1979 -- which is the same date we are holding this hearing on -- Governor Byrne signed Senate Bill 1399 into law, to be known as the Marine Fisheries Management and Commercial Fisheries Act, P.L. 1979, Chapter 199 of New Jersey State Statutes.

The mandate of the Act was to provide an organizational framework that would permit the State to manage more effectively its fishery resources. In order to carry out this mandate, the authority

to promulgate regulations to properly manage New Jersey marine fisheries resources was placed with the Commissioner of the Department of Environmental Protection, after first receiving advice from fisheries management professionals through the Director of Fish, Game and Wildlife in the Bureau of Marine Fisheries, and the expert advice of the eleven-member New Jersey Marine Council.

Following the above prescribed procedure, the Commissioner of the Department of Environmental Protection has promulgated a regulation for the menhaden purse seine fishery which restricts fishing not closer than six-tenths nautical miles of the shore, jetties, or fishing piers along with other restrictions as described in the regulation.

Senate Bill 1372, the subject of this hearing today, proposes to restrict the menhaden purse seine fishery to two nautical miles from the coastline of this State.

In my opinion, this proposal is totally inconsistent with the advice of the professionals, the advice of the New Jersey Marine Council, and the action taken by the Commissioner of the Department of Environmental Protection for the proper management of the menhaden resource in the State of New Jersey.

Further, it is my opinion that if Senate Bill 1372 is released from this Committee for consideration by the Legislature, it is inconsistent with New Jersey State Statutes, P.L. 1979, Chapter 199.

Therefore, it is my opinion that Senate Bill 1372 should not be considered further by this Committee, and should not be released for consideration by the Legislature.

I have copies of this statement, which I will leave with the secretary.

SENATOR ZANE: Are there any questions?

SENATOR DUMONT: Mr. Richardson, did you say you served by appointment of five Governors?

MR. RICHARDSON: Yes, sir.

SENATOR DUMONT: Let me get this straight. Was the Marine Fisheries Council created by the Act of 1979, or long before that?

MR. RICHARDSON: It was created by the Act of 1979.

SENATOR DUMONT: Well, how did you serve on this by appointment of five Governors?

MR. RICHARDSON: I served as the commercial fisheries' representative on the New Jersey Fish and Game Council prior to that.

SENATOR DUMONT: Okay, because that was passed in 1948, as I remember.

MR. RICHARDSON: That's right, sir.

SENATOR DUMONT: So, if Governor Kean made your last appointment, then you should have been on through six Governors, because that is the number I have served with, starting with Al Driscoll.

MR. RICHARDSON: I think mine went back to Governor Meyner in 1956 -- from there on.

SENATOR DUMONT: Well, that's true. He was after Driscoll, but Driscoll was Governor at the time the Fish and Game Council was created, with two commercial fishermen on it.

MR. RICHARDSON: That's correct. I did not come on it when it was first formed; I came on it in 1956.

SENATOR DUMONT: All right. Under Governor Meyner?

MR. RICHARDSON: Yes, sir.

SENATOR ZANE: That was right after Teddy Roosevelt, wasn't it? (laughter)

Sir, what is your occupation?

MR. RICHARDSON: I am presently working with the industry until the end of this year.

SENATOR ZANE: Are you a commercial fisherman?

MR. RICHARDSON: I was for over thirty years, yes, sir.

SENATOR ZANE: Are there any other questions? (negative response) Thank you very much.

MR. RICHARDSON: I would like to make one comment. I have heard it suggested here that we have a limitation on a certain sized vessel. Senator Gagliano made the remark, "If it is legal." I can say this much: This very same thing was tried in the State of Rhode Island some years back -- to limit the size of vessels so that it would only benefit fishermen from the State of Rhode Island. It was passed. We took it to the U.S. District Court and it was beaten under the Commerce Clause and discrimination. I thought I would pass that on to you.

SENATOR ZANE: Thank you very much.

SENATOR GAGLIANO: Ray, how long ago was that? How many years ago was that contested?

MR. RICHARDSON: I would say that was roughly around 1978 or 1979. I have records of it in my office. I could supply them to you.

SENATOR GAGLIANO: Legislative Services can get that for us.

MR. RICHARDSON: That's correct.

SENATOR ZANE: Are there any further questions? (negative response) Thank you very much, Mr. Richardson.

Ed Peterson, Peterson Enterprises, Monmouth Beach.

ED PETERSON: Senator, I would like to go on record as opposing this bill. Several topics have already been covered.

It would affect us -- the dealers -- greatly. In the spring we purchase our menhaden from pound-boats. That supply is built up and it does not run out until June, or practically July. That supply is like a reserve for us.

The Bellatrix is our main source of supply of fish. They give us our tonnage. Once we tap into our pound supply and he does not produce, we have to go out-of-state. We don't want to go out-of-state, but we are forced to. He has been supplying us very well over the years, since I have been affiliated with him.

The local fish we purchase is of better quality, in my opinion, than it is when we have to go out-of-state. It is cheaper, yes. So, we can process it and still hold our price down. When we have to buy out-of-state, we have to buy in large quantities and speculate that the weather and the fish will be around in order for us to use up that supply.

When we purchase it out-of-state, ninety percent of it is frozen. The labor costs are cut down, but we still have the increase in price. It cuts down on manpower in my plant, which cuts down on salaries. I have part-time help come in, whose taxes go into the State. When we cannot get the bunkers out-of-state, our sales are slowed down. We have a limitation on who we sell to, which, consequently also affects the State when it comes to sales tax, etc.

There are fish in the bay and in the tributaries now, way up in the back, which, with this 0.6-mile limitation, cannot be touched.

They are up there. I believe that this was all intended, Senator, for the large boats. I think that is why this came about.

I would be in favor, if it is possible, of going to tonnage, as was recommended. But, I also wish we would get rid of this 0.6-mile limitation so that we could keep everything in the area. Our hands are tied, and we gamble that the bait will be there to catch. If it is not, all our supplies are wiped out.

That's about all I have to say.

SENATOR ZANE: Are there any questions? (no questions)

Thank you, Mr. Peterson.

Donald Morantz, Vice President, Jersey Coast Anglers, and Board of Directors, Newark Bait and Flycasting Club. (no response)

Ronald Sickler, Delegate, New Jersey Coast Anglers.

Before you speak, sir, is there anyone else here who wishes to speak on the legislation today? (affirmative response)

RONALD SICKLER: Well, in keeping with your initial request not to be redundant, I have learned that speaking last has its drawbacks. I would like to deal -- as you aptly started to -- with the small boat issue. From my perspective on this, one of the things that hasn't been brought up is, if for some reason the bunker factory in Belford is reopened and we go with a fifty-ton limit, we would be right back to square one if they decided to operate that factory by using ten or more of these smaller boats. The damage would still be done.

The legal issue is something that I am sure you people will have to look into in order to find out where we would go, as far as trying to allow the Bellatrix to operate. The existing regulations that are in effect are certainly not enough. If you take that six tenths of a mile and break it down into footage, it comes out to 3,100 feet. The only reason I do that is to point out that the nets used by the bunker boats -- the huge boats -- are 1,500 feet in length. So, it simply is not enough. It creates an enforcement problem as well.

We, at the Coast Anglers, would certainly like to see an increase in license fees put into this legislation, and the penalties from the regulation put into this legislation. Again, we would like to see this two-mile zone.

We are not trying to put the bunker industry out of business. It has been pointed out before that there are primary and secondary zones, and if you take that total zone area of eight miles and consider that we are asking for two miles, or twenty-five percent of that area, we are not asking for a great deal.

SENATOR ZANE: There was a prior speaker with interests similar to yours who said that his personal position was that he could live with 1.2 miles. How about yourself?

MR. SICKLER: Yes, I feel, as opposed to six tenths of a mile, the 1.2 is a reasonable alternative. Again, I have to state I really think it would be much easier to enforce.

It was pointed out by another speaker that these fish are migratory, and it was also pointed out that these fish are in the bays and in the rivers. I would like to point out that when these fish come out of the bays and the rivers -- as they did last year when those, as the newspapers put it, "Southern Armadas" came up here and took these fish -- they are in a gathering stage for that big push, the migration, and in this stage they all come out of the rivers and gather up to start their migration.

What we are saying is, once these fish decide to migrate and they move offshore -- and the industry is very aware of when this happens, and of what times of the year in a given area it happens -- They will be targeted outside of that 1.2 area.

Again, I reiterate, we are not trying to put them out of business. We have been told here that sports fish in this State have been on the decline. I would like to point out that without the bunker, a major food source for these sports fish, they will further decline.

I think it is time we act on this with legislation, not regulation, and we should do it now. I thank you very much for your time and consideration.

SENATOR ZANE: Are there any questions for Mr. Sickler? (no questions)

Donald Morantz.

DONALD MORANTZ: What I have to say will take less than three minutes. I am Don Morantz. I am a resident of Monmouth County. I am also Second Vice President of the New Jersey Coast Anglers Association. I am club representative for the Clean Ocean Air, which is a group of clubs, women's organizations, and business groups that are fighting against pollution and the temporary 106-mile dump site.

I am also on the Board of Directors of the Newark Bait and Flycasting Club. It is a 77-year-old club, probably the oldest in New Jersey. We voted unanimously for Bill 1372, by the way.

I am a very active member. I work all the outdoor shows in the area for Sufferin, New York, Rutgers, and Asbury Park. I talk to a lot of people -- hundreds, in fact. I put a lot of hours in.

I have questioned them on Bill 1372, and everyone that I talk to says that this fishery for the menhaden could be over-fished -- okay?

With the sophisticated methods of getting the bunker, it is very possible, as I said, that it will be over-fished. The menhaden travel in giant schools and they feed on plankton.

By definition, plankton eat microscopic animals, bacteria, algae, protozoans, larvae, and small crustaceans. These are a vital link to menhaden, they are a vital link in the marine food chain, and they are one of nature's ways to filter polluted waters. Over-harvesting of these vital fish could destroy the ecological balance of an area, whether it is a bay or shallow water.

The companies that own some of these boats are well-known. Nobody ever says that. The Natural Resources Committee of Staten Island investigated, and found out there are holding companies that have ownership of some of these large boats. It is very important for us to understand that some of these companies are far known. These are deep-draft vessels, and they tear up the sea beds.

The nets are 1,250 feet long, to 1,500 feet long. They go 60 feet in depth. The mesh isn't important. They are three-quarters of an inch to one inch, and that doesn't matter.

To use these fish for fertilizer, paint base, cooking oil, and fish meal, which is probably going to other countries, is surely not in the best interest of New Jersey.

One final note: Not this past weekend but the weekend before, I was out fishing with my sons on a party boat. We fished from Long Branch all the way to Spring Lake. There was an algae bloom; it was dirty brown water. As the propellers of this party boat churned through the dirty water, it turned lime green. I never saw anything like it. It looked like anti-freeze, and probably smelled like it also.

The next day I went to fly kites with the kids and I took them down the whole coast. I think I found three spots in five hours that didn't have this green colored water. My sons couldn't understand how this could happen. Maybe it is pollution. Is it possible that the plankton eaters are over-fished already and that it was an organism that they did not eat which was causing a green -- like a red tide? We don't know, but it is possible.

I want my sons to have a chance to fish and do the things I do: To have clean water and catch some fish also. I think S-1372 should be passed before the menhaden stocks are depleted. Most importantly, these laws have to be enforced. Thank you.

SENATOR ZANE: Thank you. Are there any questions? (no questions)

I am going to get back to Mr. MacPherson. Captain Hart, you indicated earlier that you wanted to wait. Do you want to speak now?

CAPTAIN DAVID HART: I would like to speak now, Mr. Chairman. I have been straightening some things out here, and I am going to submit these papers. I am not going to go through them.

I was amused at Senator Dumont's comment about being around when Governor Alfred E. Driscoll was the Governor. Alfred E. Driscoll appointed me, for four years, to the Fish and Game Council at that time, and I have served twenty-one years, being appointed and reappointed by every Governor, including Republicans and Democrats. I said then, and I say now that my appointments were based on knowledge and experience, rather than political affiliation. I am sure this is an absolute fact.

I am going to mention some things. I made a movie -- not a professional movie, but a movie from an experienced fisherman who went

aboard the boats, took pictures, narrated it, and put a background to it. I would like the privilege sometime of showing it to some of the groups.

On the other hand, I would like to -- I am going to submit this as part of the record for the Committee -- say one thing that has not been mentioned here at all, and that is the value of the menhaden fishery to the nation, not only to the State of New Jersey but to the nation. There are millions of dollars being spent -- and that have been spent -- on Federal and State management programs, on research, and what have you, because of the value of this resource. This resource is valuable to all the citizens of the country, not just to those in New Jersey.

Because we lost one or two factories, because we had one or two single incidents, this seemed to raise a turmoil, and I have almost laid down on my back and apologized to the sportsmen who, in any way, were concerned, or put at a disadvantage, last October because of this. I have promised the industry that if there was a reoccurrence of it I would no longer be concerned with being on their side, but I would work hard to oppose them and put them out to three miles, if the State has the authority to do that.

This is all completely unnecessary. I have heard so many statements made here today that are based on half truths, and that are the opinion of individuals concerning some things. There are many, many agencies. Senator Gagliano and I are members of one of them. I have been a member for more years than I care to mention. But, we are dealing with menhaden over its entire range, because that is where it is supposed to be considered and researched. There are thousands and thousands of dollars being spent on that, and they are working on programs now. Our chief fishery biologist is Chairman of the Scientific Committee for the ASMFC, and they are begging for an opportunity to continue to work and serve.

I think it is very likely that if this legislation does become law now, it would not become effective until January 1st, or sometime in that time frame. I am just guessing. I don't know.

I think the plan we have in effect now -- the regulation by the State -- should be given an opportunity to function. It only has -- what? -- until the 19th, or the third Friday of October, and then there is no more menhaden fishing in New Jersey until next year, and next year it will be late April before they begin fishing again. There is no need for emergency action, nor to move ahead without getting all of the information we can possibly get in order to help properly manage this very important natural resource, and to protect the recreational fishermen.

I started as a recreational fisherman. I was a member of the Fish and Game Council. I owned and operated my own party boat until the war, and then I had to turn to commercial fishing. After that, I didn't go back to sports fishing because I had so much invested in commercial fishing gear. So, I have seen both sides of the fence and I am very capable of arguing, or discussing, both sides of the issue.

I beg the Committee to give the regulation the State has put into effect an opportunity to function before they take any drastic action to override it. That is all I have to say, Mr. Chairman.

I am going to submit this to the girl.

SENATOR ZANE: Thank you, Captain.

SENATOR DUMONT: Dave, you are not for S-1372, not at this time anyway, is that right?

CAPTAIN HART: Yes, sir.

SENATOR DUMONT: Are you leaning against it entirely?

CAPTAIN HART: I am against it, Senator, because of one comment I make in the movie. I researched and tried to find out the cause, or causes, of all these problems associated with menhaden fishing. What was the problem? And, after I studied it, I found it was the fish, because contrary to what has been said here, menhaden are available to the fishery in this area, I would say, from late April until October. During that time, they seek the warm in-shore waters of bays and inlets. Many times they are found just outside the surf. It is for this reason that the legislators, over the years, have permitted them to fish these areas that are often denied to other types of commercial fishing.

New Jersey State Library

The menhaden fishery has had to prove that they do not do all the things they are being charged with. They do not take large quantities of fish. They do not decimate the ocean. I heard of purse seine use here that would take everything in the ocean. This is completely untrue.

You just have to go by what you said. This law is not required. And, other scientific personnel are trying to manage our fish resources in the best possible manner. I think we should listen to them and try to reconcile the differences between the recreational groups and the commercial groups, which I have done over the years.

The Senator knows I have been representing commercial fisheries for a long time. I am here. I will sit down and talk with them. I go into the lion's den because my gun is loaded with bullets, not blanks. I am talking fact. I hope the Committee will appreciate that.

SENATOR DUMONT: You don't think we ought to be trying to legislate with regard to the conduct of fish, is that right?

CAPTAIN HART: That's right.

SENATOR DUMONT: Okay. Thank you.

SENATOR ZANE: Are there any questions? (no questions)
Thank you, Captain.

CAPTAIN HART: Thank you.

SENATOR ZANE: We have one remaining speaker who is going to continue. We are going to take a five-minute break -- that is five minutes Monmouth County time, not Trenton time. So, that means five minutes. We will be right back.

(FIVE-MINUTE RECESS)

AFTER RECESS:

SENATOR ZANE: We will now reconvene the hearing. Mr. Don MacPherson.

DON MAC PHERSON: I am going to present a lot of factual information. It is going to be devoid of all emotion and statements off the top of someone's head. All references will also be given.

I am going to go with the Committee's wishes, and where I find I am repeating something that has already been said, I will flash the exhibit on (indicating slide presentation) and just say, "This is what it does," take it off and speed up the process.

SENATOR ZANE: We love it.

MR. MAC PHERSON: He loves that. (laughter)

Let me start off. In my first one, I can sit down here and point out what I need. This is the letter -- a copy of which you all received -- from the Director of Fish, Game and Wildlife to the Chairman of this Committee. There are things I want to highlight. I don't expect you to read these. I have highlighted items. Essentially, in this area it states that you have been misled with information regarding what happened to the bunker, and so forth. Cookingham asked that you bear with him, and he promised to report through Hammer, who is going to set you all straight. It also tells about the regulations you have, down at the bottom. I won't discuss that right now.

Basically, let me tell you that what you asked for in court, you didn't receive. That is the truth, the whole truth, and nothing but the truth. You have been misled by Fish, Game, and Wildlife, among others. That will be documented. I will have that done.

I can be interrupted at any time.

SENATOR ZANE: No, you just said -- I kind of got the impression you weren't going to color this. Now you are calling people--

MR. MAC PHERSON: (interrupting) I said I am going to prove this.

SENATOR ZANE: Okay, go ahead.

MR. MAC PHERSON: I am going to prove this.

What I did was -- I am going to refer to this a number of times -- I called this reference "B." I received it later than the "A" reference. I will refer to this as the Cookingham/Hammer Report.

The next one is a reference I have -- and it is well marked at the top. This is a report that was scientifically prepared. It is nice to point out that this was funded partially by the State of New Jersey and the menhaden industry. So, I will refer to this as the industry/New Jersey report. New Jersey financed this. This is the same report that Cookingham/Hammer used in that attachment you received. The figures from that report were lifted right from this report, so they went to a source. You should be aware of that.

Incidentally, I have copies of all of these exhibits, and an abbreviated section of words for you. I will give it to you at the end of the presentation.

This is one I am going to go right through, rapidly. It is the Executive summary of that report, which tells you that menhaden is a food for game fish. Again, I said I would go with the wishes of the Chairman and go by that one fast.

I am going to tell you where menhaden are found. All right? It is going to be in three sections, so I can build up to it. In looking down at the underline, they are generally found on the Continental Shelf. Now, I am going to find the Continental Shelf for you, because that is where they are found.

Incidentally, as I said before, interruptions are permitted at any time. This is not a prepared speech. You won't distract me whatsoever.

Now, here we find out that during the warmer months they are found on the in-shore half of the Continental Shelf. That is where they are found in the warmer months, during the months of July, August, and September. So remember that, one-half of the Continental Shelf. Now, where is the Continental Shelf in Jersey? That's what we want to know right now. Okay?

It says it right here at the top. In New Jersey it is seventy miles. The Continental Shelf extends out seventy miles. So, the menhaden are found 35 miles from shore. This is the industry/Jersey report.

MR. RICHARDSON: You said we could interrupt?

MR. MAC PHERSON: Yes, sir, if it is germane to the discussion, of course.

MR. RICHARDSON: It is germane, because the catchable schools of fish are not out there.

MR. MAC PHERSON: This is the industry report. That's all I can say, sir. I am reporting the reference, okay? The thing to point out here is, we are talking about 1.2 miles and two miles. I think we ought to let that go. But, let me talk about the two-mile limit. The two-mile limit that was talked about would decrease the areas -- the fishable area -- by six percent. That's all. That's assuming one fishes right up to the beach, where the waves are. And, you know you can't go that close. So, that is less than six percent of the area reduction.

The regulation that is in is about one- and one-half percent. That is all they have done, and that one- and one-half percent is probably all beach, where they can't fish anyway. That is one thing to remember.

I am going on as fast as I can. I want to say something about the catch -- "The catch is depleted, and so on" -- the significant part of that is this column here. This is the total catch. It goes up and down, and up and down. Remember, this is a 1981 report. Most of the fish, as you can see, are caught down in the Chesapeake/mid-Atlantic area. It just so happens that after 1973, they hid where they were getting them from because they were all coming from the Chesapeake Bay. What they do is, they over-fish, take all the fish, and all that is left are the little ones which never get up to the Jersey Coast. That is why they are small.

MEMBER OF AUDIENCE: Sir, that is incorrect.

MR. MAC PHERSON: I wish you would ask me a question rather than give another opinion. Questions are okay. Opinions ought to be given afterward. Does the Chairman agree to that?

SENATOR ZANE: Absolutely. We are not conducting a public hearing now. This is your presentation and the questions will be from the Committee.

MR. MAC PHERSON: Fine. Thank you.

MEMBER OF AUDIENCE: I apologize.

New Jersey State Library

MR. MAC PHERSON: If you recall, in the first slide we were going to set the shortage of fish straight. What we try to show here is an interview with the Mayor of Middletown and Smiths, who is President of the Seacoast. He says right here that the reason they stopped fishing is because they didn't have any fish. In this area right here (indicating) he said, "We didn't start up in two years as we promised, because the fish didn't increase." It is the industry that said the menhaden are down, not the sports fishermen or anyone else; the industry said that.

Let's go back to the industry report -- the New Jersey industry report -- and see what they said. In summary, "Can the resource and fishery collapse?" Basically, it says, "Yes." The last sentence is the significant one: "The purse seine menhaden resource would probably persist at an abundant level, well below that required for a fishing cost-effective operation." So, here it is again, this is the industry speaking through their experts.

Let's get into some other things here. This is one I am not going into detail too much on. This shows all the companies that left New Jersey. This just talks about Senator Pallone's bill. It is done with careful research; it is not some kind of offhand thing. What I do not have as something I can project for you is a letter that was written by the Fish, Game and Wildlife Council, which lists all the ships that were registered to fish for menhaden in New Jersey in 1983. There is one New Jersey boat -- we discussed that --and, there are 23 from Virginia, all 167 feet, or longer. I have copies of that in the file that I am going to give to you.

I also have a list of all the clubs that are supporting the bill. I am going to flash that, because you have heard about it, but now you will have it in your record.

Let's get back to something else. This is, again, back on the Cookingham/Hammer report. What did they say about it? It says there is no real problem. They are not in dire straits; everything is fine. This is what Cookingham and Hammer gave you, regardless of what the industry tells you. I don't understand the bottom section here, which says: "Along with this" -- I don't know -- "the average size,

one, two, or three, is possibly due to competition from the large number of fish." I don't know, really, what that means. I don't know if it means the small fish eat the big fish or not. But, that is in your report.

Basically, in here they are objecting. They don't agree that there is a shortage, even though their own resource says there is and the industry says there is.

Did you receive the truth, the whole truth, and nothing but the truth?

Going back to reference "A" again, this is the industry report. Basically, what they say in here is that they are self-regulating, if you will; they are regulating themselves and it is not working. It says that in the second paragraph. So, something has to be done to regulate the menhaden industry. This is their report.

You asked about regulations in various states. Now, this is 1981 data, and they have gotten tougher; they have not softened. This goes right down through Maine and New Hampshire. What you should look at is the season. That is probably the best thing. Think of it as the third column over, because the other ones don't have a heading on them. You can see what they are, without me reading it. Okay? That shows those three states.

One, two, three -- this is the one you want. All right? "No fishing for menhaden one mile from populated beaches." So, now you know just exactly what they are. As I said, again, this is all in your report. I think you will find the answers to a lot of the questions you have been asking in this.

Here it talks about the conflicts. Now, a lot has been said regarding the conflicts that exist. It says, "they are nice people; they don't conflict with anyone," but this is the report -- their report -- okay? -- on taking large numbers of fish.

This is page 61 of their report. They are not taking any game fish or "fin fish," as they refer to it. That is what they are saying in this report.

Now, let me show you another page of that same report. This is page 63, and it says when they are fishing for fin fish, shrimp, and

what not, they catch a good supply of menhaden -- ten percent. Isn't it odd that when you fish for menhaden, you don't catch game fish, but when you fish for game fish, you catch menhaden? That seems strange.

That has all been told to you, now let me tell you where it came from. It didn't come from New Jersey. It didn't come from New Jersey. Here is a reference to that same report. Here is one on Louisiana. There is another one, it is from South Carolina and Georgia. That is not New Jersey.

So, when they tell you they don't catch game fish, ask the question: "Do you in New Jersey?" That is the question to be asked.

This goes on about the same thing. This is about the October incident; this is about taking away boats; this is one they have discussed many times, and I am going to go on without it. You have heard a lot about that. I think it is pretty well agreed upon. I think the State even agreed to that emergency regulation. That was the reason why they did it, which is shown on this next slide.

You wanted the date of that regulation. Here is it, right on the top. I should put my plastic piece on. Let me hold this down. (indicating slide) There is the date of the regulation. So, what they are saying is, they have done it primarily to lessen conflicts. One of the things they did in here was, they asked the people to clean up. You have heard about the smells, etc.; they have asked the people to clean that up. How they are going to police it remains to be seen, but they have requested it. I say that this is only tokenism.

Let's talk about the environment. We have talked a bit about the environment, and I won't dwell on it here -- about the smells, etc. Lets talk about real marine environment. Now, here is a reference: Angler's Guide by the Department of Commerce in 1974. But, the ocean bed doesn't change. What we are trying to show here is, one mile from the New Jersey shore the water is 35 feet deep, and out to 60 miles it goes down to a certain depth -- it is about five feet per mile. So, Senator Pallone's bill says you can fish in 40 feet of water. Okay?

Let's see what this means. There would be no problem there if the nets they used were, let's say 25 or 30 feet, because they

couldn't touch the bottom, and they would be protecting the marine environment. I am sure the Fish, Game, and Wildlife Council would say the nets should be small. You really don't want to disturb the marine environment.

Well, let's see just what it is. Here is a reference from their report; they tell you how big the nets are. They are 1000 to 1400 feet long and 65- to 90 feet deep, in 40 feet of water. Now they didn't describe purse seine. It is much like a pocketbook, where, when a woman pulls the string it closes. Invert that. They surround it and they pull the string on the bottom -- all the weights -- and they can help but scrape everything that is on the bottom: lobsters, crabs, flounders, flukes, sea bass. They can't help it; they can't really help it. You should think about maybe restricting them on the depth as well, or make them change the depth of the nets, if you really want to protect the environment. I offer that as a suggestion.

This is from their report. We have to look now to see what Cookingham/Hammer told you about this kind of activity. Remember how long the nets were? They were 1000 to 1400 long. I am using that same report, and look at what he tells you: The nets are 1000 to 1400 feet. Right on. He forgot to tell you how deep the nets were, so you would know whether they were destroying the environment.

Did you get the truth, the whole truth, and nothing but the truth?

Let's go on a little further now. We are going to say something about economics. We have heard words about economics and I have some documentation on that. What happened was, there was a survey made of the industry some time ago, regarding their economics. It was done when Sea Coast was still in it, and the information they gathered represented 80 percent of the industry -- 86 percent, I guess it is, and Sea Coast was there. Okay?

Now, what did they find in this report? In-season wages amounted to about \$11 million -- these are the wages of those in the industry. Again, I say this is before Sea Coast left. Well, that doesn't represent New Jersey, but they went into a State record -- and I can show you that next.

Here we find out that New Jersey represents about 8.4 percent of the manpower involved. If we assume they are all paid the same hourly wage, that means that New Jersey's payment was a little less than \$1 million before Sea Coast left.

Now, let's balance that against some other economics. What did the sportsmen do? I am going to skip one. I have one to skip; I will leave it in there because I don't think I need it. I will go right on to the report put out by the Division of Fish, Game and Wildlife. This is just to show you that it is their report.

They show the recreational value to be \$300 million. This versus wiping out the industry, having everyone leave, and having a loss of \$1 million to the State in wages. Here it is \$300 or \$400 million -- \$32 million man-days of recreation, that is what we are balancing with. Okay?

Here is the commercial value: \$120 million. So, the recreational value to the State outweighs all the other value, if you wipe it out; and, we are not suggesting that you wipe it out by any means.

So, what happens? This is a report of your Committee, in June. It says here that Coothingham opposes the bill. This is the report. You probably know this better than I do, but it was a meeting you had in June, and it tells who actually spoke.

This goes on to talk about the New York bill. You heard something about it before, so I won't dwell on it. I did tell you that the Senator you can see in New York is John Marchi. He would give you some more information on how he put the bill through, and you can get some factual information.

This, again, is another report. I am speeding it up. I realize we are going beyond dinner time. This just talks about the bill, and so forth. I will let that go.

Let me make a summary and conclusion, reviewing some of the points I brought up. We know now that the menhaden is an important food fish for our sporting fish. The menhaden industry is the one that reported the shortage and stopped netting.

The fish are found 35 feet from shore in New Jersey.

MEMBER OF AUDIENCE: Thirty-five miles.

MR. MAC PHERSON: Thirty-five miles from the shore. The two-mile restriction only reduces the area by less than six percent. They do not have a code of ethics. They need some regulation. Purse seine does destroy the environment, using 60- to 90-foot nets in 40 feet of water, or less. The license fees collected in 1983 from the boats that use it were a mere \$24,000. If we stopped them completely, you would lose that.

It appears that the sportsmen are completely ignored. Fish, Game and Wildlife does not listen to the sportsmen at all. There should be some reason for that, and we should find out why that is the case.

I said a couple of times, we have tokenism here. The regulation can be withdrawn at any time, or just not enforced. I think we need legislation now. We cannot wait. We need it now.

There has been a financial loss -- as you know -- for people: The sportsmen, the dealers, and so forth.

So, gentlemen, I thank you. I think you will now report that you did not receive the truth, the whole truth, and nothing but the truth.

SENATOR ZANE: Thank you very much, Mr. Mac Pherson.

MR. MAC PHERSON: Thank you.

MR. FREEMAN: May I make a comment?

SENATOR ZANE: We are not going into rebuttals, nor additional comment. Why don't you sit up here where the microphones are?

MR. FREEMAN: The only comment I would like to make that Paul Haimer, the Bureau Chief from Marine Fisheries, is here today. He is the Chairman of the Advisory Group for the Atlantic States Marine Fisheries Commission. He is also the Chairman of the Scientific and Statistical Committee for the Atlantic States Marine Fisheries Commission. If you have time, Paul could probably take three or four minutes to explain, from a resource standpoint, what we are looking at, insofar as menhaden are concerned, on a coastwide basis.

I think it would be very beneficial to the Committee to hear Mr. Haimer.

SENATOR ZANE: We will take one more speaker. Mr. Haimer? Mr. Haimer indicated he would take only three or four minutes. We are counting on that.

PAUL HAIMER: One important point that hasn't been brought out at all today is that we are not talking about a simple conflict between sportsmen and commercial fishermen. We are talking about a natural resource -- in fact, the largest fishery resource that the U.S. has, not in terms of dollars but in terms of tons landed.

This affects not only the sport and commercial fishermen, but it affects everyone who puts chickens, turkeys, or pork on their tables, because that is where the menhaden meal goes: It goes into a protein supplement for these species. The oil, which is the other fraction into which menhaden are reduced, is used in products like linoleum, paints, cosmetics, and a whole host of products. Much of it is shipped to Europe, where it is refined into margarine. That could be done here, but it isn't because of our health laws, which sometimes just aren't realistic. However, by shipping it to Europe, it makes it of no avail to the United States; it helps us with our balance of payments.

If you have any questions, I would be glad to try to answer them.

SENATOR DUMONT: Are you for or against this bill?

MR. HAIMER: I am opposed to it, sir.

SENATOR DUMONT: Thank you.

SENATOR ZANE: Are there any other questions? (no response)
Thank you very much, Mr. Haimer.

(HEARING CONCLUDED)

APPENDIX

Testimony Concerning Menhaden Fishing Along the New Jersey Coast

Submitted to the

Senate Natural Resource and Agricultural Committee

By the Division of Fish, Game and Wildlife

September 19, 1984

Brief History of the Fishery

Menhaden occur in estuaries and close to the ocean shoreline for a substantial part of the year. The menhaden's habit of traveling in dense schools at or near the surface of the water serve to make them vulnerable to fishermen.

Prior to colonial time, menhaden were available to Indians who used them to fertilize their corn and other crops. We know that in colonial times, menhaden were boiled in large cauldrons to extract their oil, which was used to fuel lamps. In those days, the residue or scrap was used as fertilizer. With the introduction of other cheap fuels for lamps, the harvest of menhaden for fertilizer became more prevalent. Today, a small part of the total menhaden catch is used as bait for lobsters and crabs, and as bait and chum in the recreational bluefish and shark fisheries. The majority of the harvest, however, is reduced in an industrial process into oil, meal and solubles. The oil is used in the manufacture of various products including paints, linoleums, cosmetics and margarine; the meal and solubles are used as a protein supplement in livestock feed.

Fishing Conflicts

With the increasing growth of our marine recreational fishing, conflicts between recreational and commercial fishermen have grown. The menhaden fishery has experienced a large proportion of these conflicts because of its proximity to the shore, the large size of the purse seine vessels and the long lengths of the purse nets used for catching this fish. Most of the time, the conflicts arise when both groups of fishermen compete for the same space. Other conflicts are perceived, yet have little basis in fact. For example, it is often said that menhaden purse seiners take all species of fish indiscriminately. This claim has been shown to be not true. By making unannounced boardings of numerous menhaden vessels in Delaware Bay and sampling the fish that were being pumped aboard, it was determined that species other than menhaden made up a very small percentage of the catch. While these boardings were being made, recreational fishermen in the immediate vicinity were catching weakfish, bluefish and summer flounder. Similar boardings have been made on vessels fishing off other coastal states with similar findings.

Another claim is that by taking menhaden, which feed on the passively floating microscopic plants and animals in the sea, i.e., plankton, undesirable plankton such as "red tide" organisms are allowed to flourish. There is no

scientific basis for this statement. Also, it fails to consider the fact that the egg and larval stages of numerous marine species, such as lobster, blue crabs, clams, bluefish, summer flounder, weakfish and many others, are all part of the plankton community. If the menhaden consumed enough plankton to significantly reduce the number of red tide organisms, they would also drastically reduce the planktonic stages of these other species.

Another claim is that all fishing for menhaden should be stopped in New Jersey because the resource is being greatly over-fished. Scientific information does not support this. The 1983 coastwide catch is the highest in twenty years. This is not to say however, that the management of the resource cannot be improved. The Atlantic States Marine Fisheries Commission has recommended a shortening of the season in order to reduce the harvest of immature menhaden. This measure would be supplemented by a minimum size mesh net which would be more effective in protecting the small size fish. A more thorough explanation of this needed measure is given in the attached document entitled "Status of The Atlantic Menhaden Stock".

Conflicts Experienced in New Jersey

Like other schooling forage fish, menhaden schools attract predatory fishes which are of interest to recreational fishermen. Predatory fish, such as bluefish and weakfish, are easy to locate when they are feeding at the surface on schools of menhaden and this situation usually makes for excellent recreational fishing. When the menhaden schools are captured or dispersed by purse seiners, the predatory fish disperse as well, and as can be expected, the recreational catches decline. This may well create the impression that the purse seine vessels take all of the fish, both menhaden and predators, in the area.

At times, there have been conflicts during the summer with bathers and others who enjoy our beaches. This occurs when menhaden seiners fish very close to our beaches and water and foam from their fish pumps drift ashore. In other instances, a net will occasionally burst from the weight of the fish in it, and if the wind is blowing onshore, the beaches can be fouled with large numbers of dead menhaden.

As has been stated above, menhaden spend a large part of the year in waters close to the shore. In fall, they migrate southward and disappear, presumably to offshore waters for the winter. In order to prevent spacial conflicts in nearshore areas, some people have suggested preventing purse seine vessels from setting their nets within two miles of shore. Such a large exclusionary area, if put in place along the shore, could well mean an end to menhaden fishing in New Jersey. Fishing records show that from 67 to 72 percent of the menhaden catch is taken within two miles of shore. Between 10 and 26 percent of the menhaden harvest comes from the area within one-half mile of shore.

Recommendation

We support a no-fishing corridor of one-half mile in width be implemented along our beaches to reduce existing conflicts. In order to ensure the sanctity of this one-half mile corridor, we recommend that no menhaden purse seining be allowed within 0.6 miles from the beach, piers or jetties. The 1/10 mile is added to allow for error in the use of radar or LORAN in determining a vessel's exact location.

We support legislation that would substantially increase purse seine vessel license fees and that the additional funds realized from these increases be used for the enforcement of the menhaden regulations. Also, we support legislation that would result in substantial penalties for violations of menhaden fishing regulations, including the loss of their license.

We feel that the above problems can be adequately controlled. The regulations that the Department of Environmental Protection have promulgated changes the manner in which the menhaden purse seine fishery is pursued along our coast. We estimate that these regulations increase the cost of fishing for the industry, but to a degree that would not eliminate the harvest of this resource in our waters. At the same time, we believe the recreational fishery will be benefitted by these changes as well as increasing the enjoyment of our beach users.

Status of the Atlantic Menhaden Stock

Menhaden or "moss bunkers" are a member of the herring family and are found along the Atlantic and Gulf Coasts of the United States. They spawn in the ocean in every month of the year in some part of their range. The young make their way into estuaries where they grow rapidly. In fall they move south and offshore and are seldom seen during the winter months.

The National Resource

While some menhaden are caught in gill nets and pound nets, by far the largest part of the harvest is taken by purse seines. In purse seining, a large vessel of 70 to 200 feet generally carries two purse seine boats about 36 feet in length. The net employed is about 1000 to 1400 feet long. Menhaden schools are spotted by aircraft accompanying the vessels or from the crow's nest on the mast of the large vessel. When a good sized school is located the the purse boats are lowered into the water. One half of the purse seine is loaded into each of the two boats and they proceed, side-by-side toward the school. As they near the school they move apart and begin laying out the net. They lay the net around the school from opposite sides until they meet. When the two ends are joined and the school is surrounded, the bottom of the net is closed or pursed. At this point the purse boats begin to haul in the net with hydraulic power blocks, concentrating the fish in a reinforced portion of the net called the bunt. The large vessel then joins the purse boats and the three vessels form a triangle with the net between them. After further concentrating or "drying up" the fish, a large hose is lowered into the net and the fish are pumped aboard the large vessel.

The menhaden resource forms the basis for the United States largest commercial fishery in terms of pounds landed, Fig. 1. Presently, they are not used for human food. A small quantity is used for bait, but most of the catch is reduced into fish meal, oil and a liquid by-product. The meal and by-product are used as a protein supplement in livestock feed (primarily chickens, turkeys and swine) while the oil is used in the manufacturing of various products including paint, linoleum, cosmetics and margarine. Although in years past, menhaden was used as fertilizer, it is now too valuable for this use. Figure 2 and Table 1 present the harvest of Atlantic Coast menhaden from 1956 to the present. The 1983 landings of 419,000 metric tons (926.7 million pounds) was the largest catch since 1962. The 1983 landings made up 46% of the commercial fishery catch of the United States and were valued at \$36.9 million. We have no way of knowing at this time what portion of this catch was taken in New Jersey's waters.

Because of the menhadens great importance, state and federal fisheries scientists have been working on a coast-wide management plan for Atlantic menhaden for a number of years. In 1981 the Atlantic States Marine Fisheries Commission, an organization created to improve the use of our Atlantic coast fisheries resources on which all 15 Atlantic coast states are represented, adopted this plan. The objective of the plan is to "Achieve the greatest continuing yield for each area by determining the age at which menhaden should be harvested and eliminating other restrictions which do not contribute to the management goal."

The managers who produced the plan have recommended that the fishing season be closed one month earlier than the time at which the fishing normally ends in order to reduce the harvest of small menhaden which are then coming out of the coastal estuaries and traveling south along the coast. This would be a temporary restriction to be replaced by a minimum mesh size restriction. The minimum size would be more efficient in protecting the small fish since it would be used throughout the season.

The fact that a 20-year record landing was produced in 1983 would strongly indicate that the resource is not in dire straights. However, there is room for improvement in the manner in which we harvest this resource. In weight, current landings are slightly greater than one-half the weight of the landings of the 1955-1962 period (the "hey day" of the fishery) but numbers of individual fish landed are about equal to that time period. This could only happen if the average fish landed today was about one-half the size of the average fish landed in the 1955-1962 period. This in fact is the case. This is demonstrated in Table 2 which provides the numbers of menhaden harvested at various ages. To get the greatest yield from the menhaden resource we should be harvesting menhaden at 3.4 years of age, on average. Production of young menhaden has been good to excellent since 1971; the 1975, 1979 and apparently the 1981 year classes ranking second only to the banner 1958 year class.

As a result of the high levels of recently produced juvenile menhaden, the spawning stock levels have improved somewhat since the low point in the early 1960's. Recent evaluations show that the spawning stock is at its highest level since 1964. However, the spawning stock is composed of more younger fish than was the case in earlier years.

Under ideal management on a coastwide basis, yields from current levels of recruitment could have been in the 450,000 metric ton range since about 1976. Returns to the yields of the late 1960's are unlikely, given our present knowledge of the stock dynamics and fishing patterns. All of this brings us to the importance of fishing menhaden in the northern portion of their range since this is where the larger fish are taken. Most of the young-of-year, 1- and 2- year old menhaden that are harvested are taken in the Chesapeake and more southern area. The larger fish produce more oil and more pounds of a higher grade of meal than would the same fish taken at a smaller (younger age) size (See Figure 3). Along with this we are seeing a reduction in the average size of menhaden at 1, 2 and 3 years of age, possibly due to competition from the large numbers of fish.

New Jersey

While some menhaden may be found in New Jersey's waters during any month of the year, they occur in quantity from April thru November and sometimes into December. Early in the season they do not appear on the surface or in densely packed schools and therefore are not available to the purse seine fishery. They are however, taken in gill nets and pound nets at this time. Purse seine fishing starts in late May, because of the regulations not allowing any purse seine nets until the third Monday of that month. On the average, menhaden are available to purse seiners in our waters until late November. In order to reduce the harvest of young fish along the New Jersey coast, we have adopted a season regulation which ends the fishing season on the third Friday in October.

More recently adopted regulations have prohibited fishing on Saturdays, Sundays, and holidays during the open season, restricted fishing within six-tenths of a mile from shore in the Atlantic Ocean and in Sandy Hook, Raritan and Delaware Bays. (Purse seines fish for menhaden in the coastal bays from Atlantic Highlands to Cape May was never allowed). In addition a portion of Delaware Bay north and west of a line from Fourteen Foot Light to Deadman Shoal Light to Dennis Creek Light has been declared closed to menhaden purse seiners. The combined regulations close an estimated 30% of New Jersey's marine waters to menhaden purse seine fishing. Also, there are only about 100 days in which such fishing is allowed (See Table 6).

Future of the Resources

The Atlantic menhaden resource spawns over most of the year and along the entire east coast. This fact makes it highly unlikely that in any given year there can be a complete resource failure, since spawning success is generally a function of environmental conditions. After the young hatch and make their way into estuaries they are still widespread and no single environmental event is likely to affect all of them.

This coast-wide resource cannot be managed by any single state. For management to be effective it must be coordinated over the entire range of the resource through the cooperative efforts of the Atlantic Coastal states. Such an effort is presently being undertaken by the states and the Atlantic States Marine Fisheries Commission.

Table 1. Fishing effort and catch in the Atlantic menhaden fishery, 1955-1983.

Year	Fishing effort (vessel-weeks)	Total catch (thousands of metric tons)	Year	Fishing effort (vessel-weeks)	Total catch (thousands metric ton)
1955	2748	641.4	1970	906	259.4
1956	2878	712.1	1971	897	250.3
1957	2775	602.8	1972	973	365.9
1958	2343	510.0	1973	1099	346.9
1959	2847	659.1	1974	1145	292.2
1960	2097	529.8	1975	1218	250.2
1961	2371	575.9	1976	1163	340.5
1962	2351	537.7	1977	1239	341.2
1963	2331	346.9	1978	1210	344.1
1964	1807	269.2	1979	1193	375.7
1965	1805	273.4	1980	1158	401.5
1966	1386	219.6	1981	1133	381.3
1967	1316	193.5	1982	948	382.4
1968	1209	234.8	1983	995	418.6
1969	995	161.4			

Table 2. Estimated number (in thousands) of Atlantic menhaden landed by purse seine by age and total weight landed (in thousands of metric tons), 1955-1980.

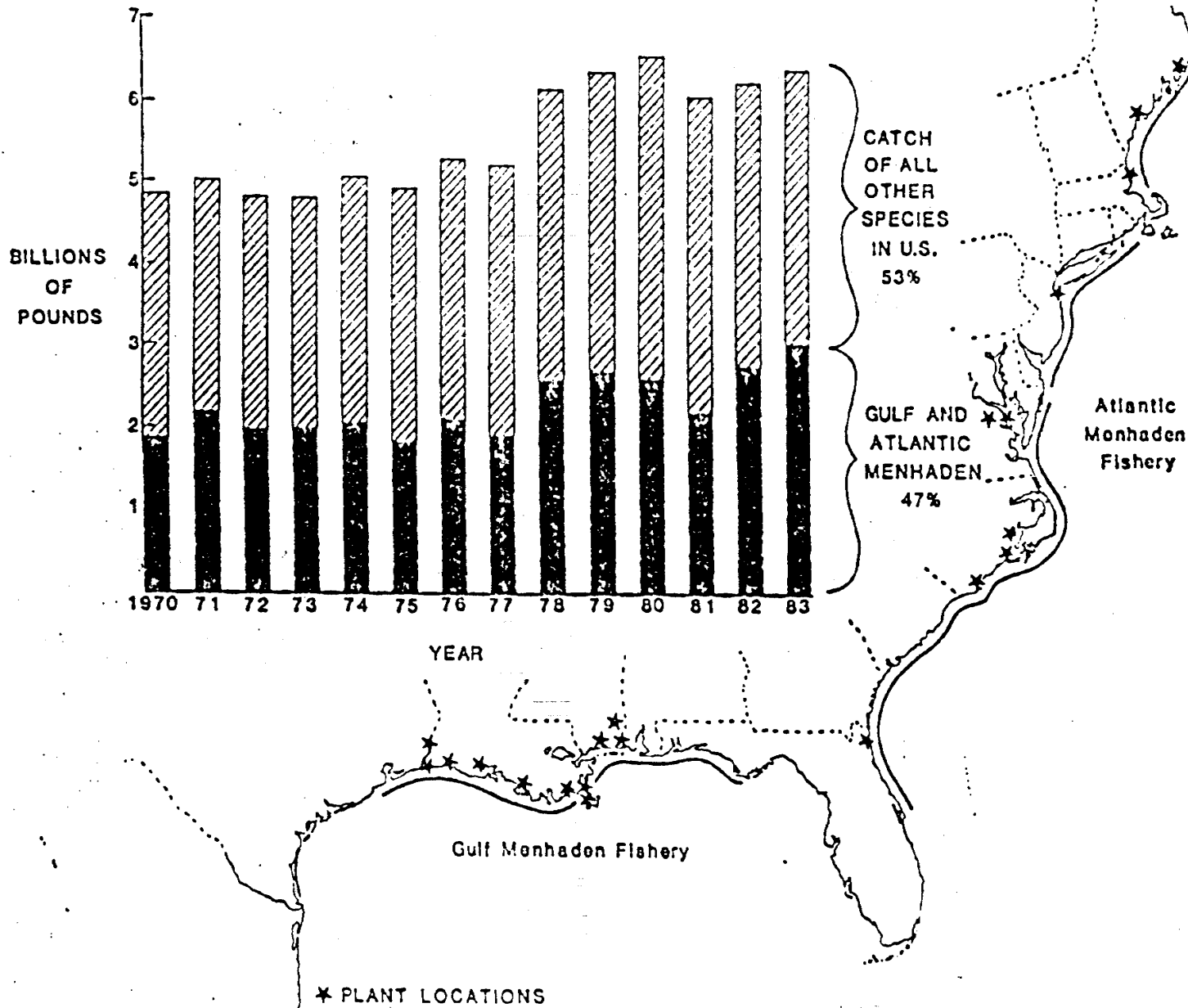
	AGE									TOTAL	
	0	1	2	3	4	5	6	7	8+	Number	Weight
1955	761,010	674,150	1,057,680	267,310	307,210	38,070	10,530	1,840	640	3,118,440	641.4
1956	36,370	2,073,260	902,720	319,600	44,780	150,680	28,700	6,720	1,990	3,564,820	712.1
1957	299,580	1,599,980	1,361,770	96,730	70,800	40,520	36,930	4,260	1,100	3,511,670	602.8
1958	106,060	858,160	1,635,350	72,050	17,250	15,940	9,090	4,880	430	2,719,210	510.0
1959	11,400	4,038,720	851,290	388,270	33,410	11,870	12,360	4,550	1,770	5,353,640	659.1
1960	72,170	281,010	2,208,630	76,370	102,200	23,770	7,950	2,360	650	2,775,110	529.8
1961	250	832,420	503,600	1,209,570	19,180	29,380	810	810	240	2,598,310	575.9
1962	51,580	514,110	834,520	217,250	423,370	30,750	24,600	2,980	700	2,099,860	537.7
1963	96,890	724,230	709,200	122,530	44,970	52,380	10,420	3,330	560	1,764,510	346.9
1964	302,590	703,950	604,980	83,500	17,940	7,850	6,620	1,310	320	1,729,060	269.2
1965	249,120	739,280	417,550	77,750	12,170	1,810	1,220	740	70	1,499,710	273.4
1966	349,460	550,830	404,110	31,700	3,880	370	110	110	40	1,340,610	219.6
1967	6,950	633,200	265,680	72,760	5,090	490	10	0	0	984,180	193.5
1968	114,154	415,348	549,029	70,811	13,045	1,030	140	0	0	1,163,417	234.8
1969	373,412	355,497	288,470	43,013	6,632	336	20	0	0	1,067,360	161.4
1970	31,140	963,646	490,763	38,741	4,877	649	0	0	0	1,529,816	259.4
1971	73,311	262,411	530,582	84,135	18,377	2,397	0	0	0	971,213	250.3
1972	93,902	1,034,277	509,429	154,328	15,570	1,032	0	0	0	1,808,538	365.9
1973	30,392	577,784	1,104,068	61,351	15,704	1,348	0	0	0	1,790,647	346.9
1974	326,055	653,614	966,010	49,513	2,296	1,021	0	0	0	1,998,509	292.2
1975	334,201	749,716	1,033,767	47,762	7,993	253	100	0	0	2,173,792	250.2
1976	271,796	1,467,030	1,211,312	46,047	8,105	53	0	0	0	3,004,343	340.5
1977	459,420	998,329	2,084,536	81,113	17,326	1,318	97	0	0	3,642,109	341.1
1978	323,270	619,670	1,695,090	256,980	31,760	3,490	0	0	0	2,930,260	344.0
1979	1,435,185	610,807	1,593,939	126,119	21,331	1,320	0	0	0	3,792,300	375.7
1980	93,080	1,433,300	1,467,470	222,530	69,360	14,480	1,130	0	0	3,305,340	401.5

Table 3. Protection of Menhaden in New Jersey Waters

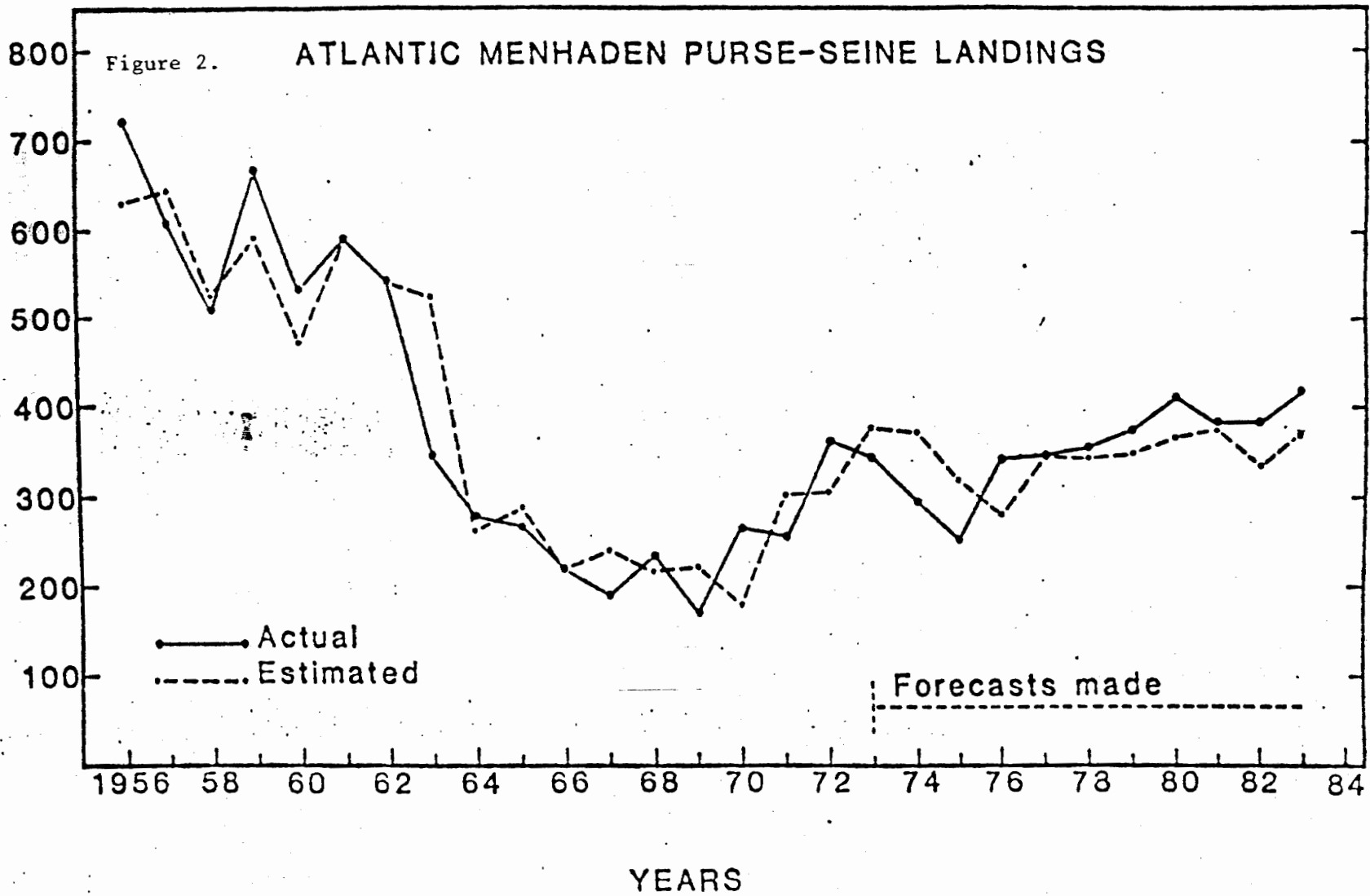
Menhaden arrival (average) April 1 (day 86)	
Menhaden depart (average) Nov. 30 (day 335)	
Menhaden in New Jersey	249 days
Closed season: before May 21 (day 142) - 56 days)	-98 days
after Oct. 19 (day 293) - 42 days)	<hr/>
	151 days
Saturday, Sunday & Holidays	<hr/>
	-45 days
Total Fishing Days	106 days

Figure 1.

GULF AND ATLANTIC MENHADEN CONTRIBUTION TO TOTAL U.S. COMMERCIAL FISHERY LANDINGS



LANDINGS (thousands of metric tons)



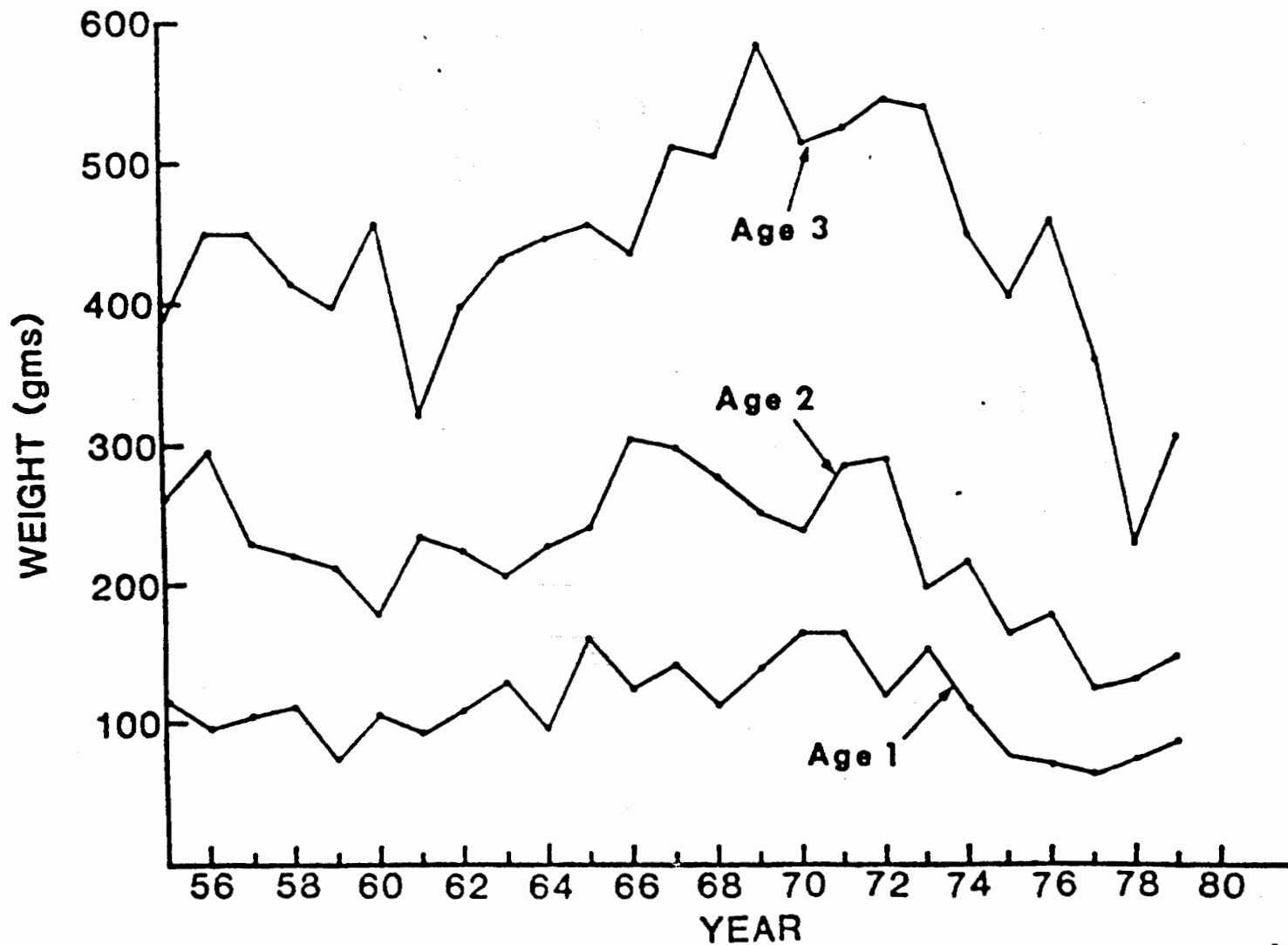


Figure 3. Atlantic menhaden mean weight (weighted) at ages 1, 2, and 3, 1955-1979.^{1/}

^{1/} Source: Population Dynamics Subcommittee II. Communication to Atlantic Menhaden Scientific and Statistical Committee, August 1980.

PERCENT OF SPAWNING STOCK AT AGE TWO

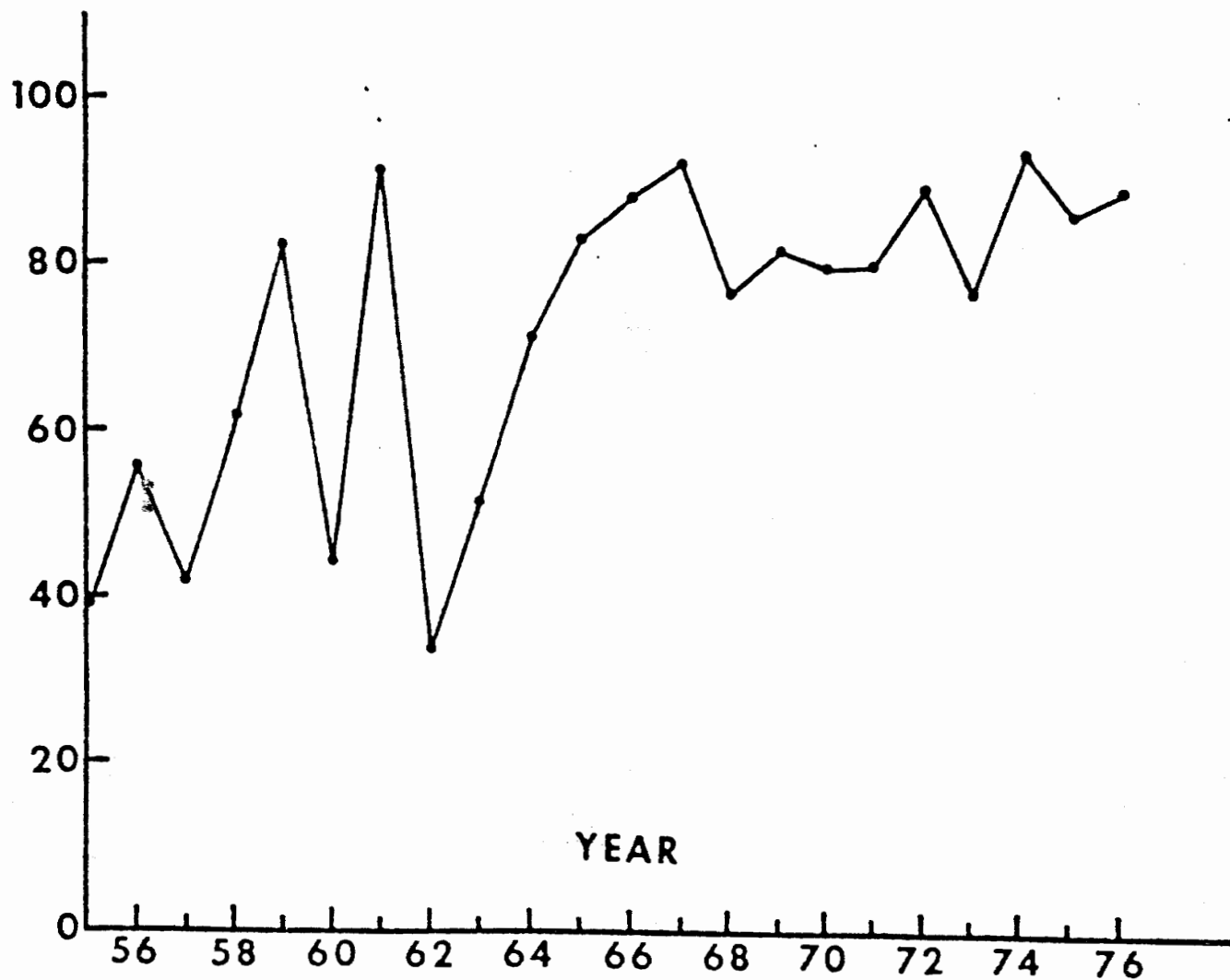


Figure 4. Contribution of late age 2 spawners (%) to total spawning stock of Atlantic menhaden, 1955-1976.^{1/}

^{1/} Source: Population Dynamics Subcommittee II. Communication to Atlantic Menhaden Scientific and Statistical Committee, August 1980.

Don Mac Kerson

**A REPORT IN SUPPORT OF RESTRICTING MANHADEN NETTING WITHIN 2 MILES OF SHORE
AND IN BAYS**

LADIES AND GENTLEMEN:

I represent Sport Equipment Dealers and Sportsmen - Individuals and clubs. I have not been paid or will not accept any payment from anyone - individual or club. I, too, am a sportsman and offered to prepare and deliver this report at my expense. I will present the report to members of the committee.

The information I will present is factual and references will be given. I've avoided opinions and emotional statements made by others.

The first exhibit is a recent letter directed to Hon. R. J. Kane from R. Cookingham. I direct you to the first paragraph. The implication is that statements were off base and not justified. The second paragraph promised a report by Paul Hamer that would set us straight. The Hamer report was attached; I identified the letter and report as reference B.

Let me say that the Hamer report is not, as they say in court, "the truth, the whole truth and nothing but the truth". In fact, the report misleads by omissions and misstatements. This will be made clear as I proceed. No one, particularly a government agency should hide a material fact knowing that it would mislead a committee considering legislation.

The majority of the data I will present comes from the 1981 report identified on exhibit 2. Note that the report was funded, partially, by the State of New Jersey. I identified this report as reference A. Hamer used this same report as reference and figures.

Exhibit 3 sets the stage to show that the manhaden is an important food source for game fish. When it goes, so do game fish.

In Exhibit 4, note that the manhaden are found in the waters of the continental shelf and that they are migratory where older fish are found in more northerly waters.

Exhibit 5 shows that during the fishing season, manhaden are found in the shore half of the continental shelf. Exhibit 6 shows that the continental shelf in New Jersey extends to 70 miles, or manhaden fishing extends to 35 miles. Thus, bill S-1372 will reduce the fishing area by only -- 6%. The recently enacted 0.6 mile limit reduces the area by -- 1.7% and it took them 8 months to act. Is this 2 mile restriction truly a hardship? We must remember that the 0.6 mile limit is not legislation and can be cancelled at anytime or not enforced.

Exhibit 7 shows the catch by years. Note that the Chesapeake area account for the majority of the landing - which is masked after 1972!

Now that the ground work has been presented, lets get back to the Cookingham letter and the short supply of manhaden and "who said what". Exhibit 8 report on an interview with Robert Smith, President of Seacoast. Note that it was he who made the statement that fishing for manhaden was stopped because of scarcity and did not start up as promised after two years because the manhaden population did not increase. Exhibit 9 is a page from Reference A. The last sentence is most revealing. Exhibit 10 identifies other fishing companies that have closed because of the lack of manhaden.

In view of the above, lets see what Cookingham's Chief Mamer concludes in reference B. Exhibit 11 reports contradictions you should understand. He reports that 1) the resource is not in dire straights, 2) fish netted are 1/2 the weight of fish netted 20 years ago, 3) we should net in northern waters where large fish are found that are more profitable and 4) the reduction in size is "possibly due to competition from the large numbers of fish"? Lets examine these, one at a time.

- 1 - "not in dire straights" - I believe we've answered this with their own data.
- 2 - Fish netted are 1/2 size. This is due to overfishing where fish cannot "grow up". He does complain of southern states!
- 3 - We should fish where fish are large - If such fish were available why have so many netters closed shop?
- 4 - Small size due to competition - Do the small fish eat the large ones? Does overfishing reduce the stock? Let him answer these. Are we being told "the truth, the whole truth and nothing but the truth?"

Let us turn our attention to what some states do to control manhaden netting. The information is not up to date, however the controls range to nothing to complete prohibition. See exhibits 12,13 and 14.

Going back to reference A, note that when netting for Manhaden, no significant catch of edible fish are taken, exhibit 15, but when netting edible fish, an important segment of manhaden is taken, exhibit 16. Don't you find this strange? More will be said of this later. Those reports do not report New Jersey netting!

Getting back to exhibit 15, note that manhaden fishermen are nice guys and don't bother recreational fishermen.

Exhibits 19 & 20 dispel these statements!

LET'S DISCUSS THE ENVIRONMENT PROBLEMS

If you recall, I brought out that manhaden netting extends out to 35 miles of the New Jersey coast. It is important to know how deep this water is and how manhaden netting could affect the environment. After all, the Cockingham division is part of the Department of Environment Protection.

Exhibit 21 shows that one mile from shore the water is 35 feet deep and increases at the rate of 5 feet per mile to 60 miles from shore. Or said another way - 2 miles from shore - the limit suggested in bill S 1372 for restricting netting - is 40 feet deep. If the nets used by the manhaden industry are less than 40 feet deep - say 25 feet - they would not bother the environment by taking lobsters, crabs and other bottom swimming edible fish.

In fact, the nets used by manhaden fishermen are 65 to 90 feet deep, so they take all in their path - it can't be avoided. See exhibit 22 - which is available to the Fish, Game and Wildlife Division. - Are they reporting "the truth, the whole truth, and nothing but the truth"? See exhibit 23 for what Hamer reported and using the same data source.

LET'S DISCUSS ECONOMICS

Exhibit 24 reports on a survey conducted using data from those Manhaden fishermen who represent 86% of the total catch. The in season gross wages amounted to approximately \$11 million dollars, Exhibit 25. The wages earned by New Jersey employees amounted to 8.4% of the total or approximately \$1 million dollars - this was before Seacoast shut down, see exhibit 26.

Exhibit 27 shows that 2.7 million people are involved in recreational fishing. Assume they spend \$10 each or \$27 million. This is an assumption, so let's see what the Division of Fish, Game and Wildlife states. See exhibit 28 and 29. They report on expenditures of \$300 to \$400 million against approximately \$1 million in lost wages if we had totally stopped all manhaden fishing - and all we are asking is a reduction of 6% of the total fishing area by the 2 mile restriction.

Who do you think the senate committee should be talking to for the benefit of New Jersey people and to determine "the truth, the whole truth and nothing but the truth"? Obviously the sportsmen.

WRONG! Only 2 anglers were permitted to talk in favor of bill 1372 while 3 commercial fishermen, a lobbyist, and R. Cockingham were permitted to talk against the bill, see exhibit 31.

Exhibit 32 shows that anglers in New York had to go to court and win to limit manhaden fishing close to shore and in their part of Sandy Hook area. Lets hope New Jersey people will not have to resort to this. The new regulation of 0.6 mile restriction does not stop netting on Sandy Hook bay.

CONCLUSION

It is time and sufficient data is available to move bill 1372 out of committee and to a full vote of the Senate. The Committee should also direct the Division of Fish, Game and Wildlife to use "the truth, the whole truth and nothing but the truth" when advising the committee - now and in the future. Perhaps an investigation should be conducted to determine why bill 1372 is not supported by Cookingham in view of the data available.


D. M. MacPHERSON

* * * * *
* * * * *
* * * * *
* * * * *
* * * * *



REF
B

UG

JUL 13 1984

State of New Jersey

DIVISION OF
FISH, GAME AND WILDLIFE
RUSSELL A. COOKINGHAM
DIRECTOR

DEPARTMENT OF ENVIRONMENTAL
PROTECTION

PLEASE REPLY TO:
CN 400
TRENTON, NEW JERSEY 08625

July 16, 1984

Hon. Raymond J. Zane, Chairman
Natural Resources and Agriculture Committee
44 Cooper Street
Room 209
Woodbury, N. J. 08906

Dear Senator Zane:

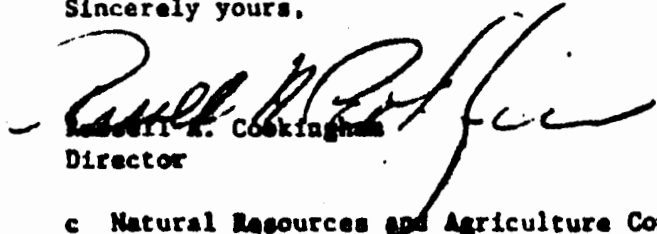
At the recent hearing of your committee wherein the menhaden bill (S-1372) was heard, there appeared to be a number of contradictions over the present status of menhaden stocks. Certain statements were made that the stocks were in trouble justifying why Seacoast Products was restricting their fishing in Atlantic waters, etc.

I have asked my Chief, Bureau of Marine Fisheries, Paul Hamer, who has been Co-Chairman of the Menhaden Scientific and Statistical Committee of the Atlantic States Marine Fisheries Commission, to prepare a status report of menhaden stocks for your information. I think this document should bring you and your committee up to date as to the status of this species wherein considerable scientific information is and has been available for a number of years. I am sending copies of this report to the other members of your committee, along with Senator Pallone, for their information.

As you are probably aware, the emergency regulation to restrict menhaden fishing out to 0.6 miles is now in place (see attached new release).

I appreciate your interest and concern on this most important fisheries issue.

Sincerely yours,


Russell A. Cookingham
Director

c Natural Resources and Agriculture Committee Members

Enclosures

(1)

FISHERY MANAGEMENT PLAN FOR ATLANTIC MENHADEN
BREVOORTIA TYRANNUS (LATROBE)

(A)
REF.

Prepared by the
ATLANTIC MENHADEN MANAGEMENT BOARD
JOHN M. CRONAN
CHAIRMAN

(as part of the Interstate Fishery Management
Program administered by the Atlantic States
Marine Fisheries Commission.)

August 1981

Funds, manpower and support services for plan preparation over the 5 year history of the Atlantic Menhaden Program were provided by the coastal states (most notably, Commonwealth of Virginia, State of New Jersey, State of North Carolina), cooperating menhaden companies (especially Standard Products, Inc., Zapata Haynie Corp., Seacoast Products, Inc.), and National Marine Fisheries Service (in particular the Beaufort Laboratory and the State Federal Fisheries Management Program). The Interstate Fisheries Management Program is supported by funds provided by Northeast Region, National Marine Fisheries Service, National Oceanic and Atmospheric Administration under Cooperative Agreement No. NA-80-FA-H-00017.

EXECUTIVE SUMMARY

REF

(A)

Atlantic menhaden represent a significant renewable Territorial Sea fishery resource which is distributed from Maine through Florida. Menhaden and other pelagic plankton feeding fishes serve as important foods of major predatory fishes of commercial and recreational importance. Atlantic menhaden occur in the coastal and estuarine waters at an abundance level which is adequate to support their share of the food needs of the predatory fish populations as well as the largest Atlantic coast commercial fishery by volume.

Atlantic menhaden have sustained a large and important fishery since colonial times. The fishery originated in New England waters and extended into the Chesapeake Bay and coastal North Carolina after the Civil War. Following World War II, the fishery expanded rapidly. Currently most of the commercial catch comes from the Territorial Sea and estuarine waters from eastern Long Island to northern South Carolina. Landings have varied over the decades. In 1980 catches by purse seine vessels were unloaded at reduction plants from Maine to Florida.

Analyses of the data base show that the Atlantic menhaden resource and fishery is based upon one stock which shows extensive coastwide migration. The resource is distributed by age and size along the coast with smaller and younger fish concentrating in the South Atlantic and Chesapeake Bay areas, and larger and older fish concentrating in the Middle and North Atlantic areas. All age groups occur in the North Carolina Fall fishery. Environmental factors play a major role in the determination of Atlantic menhaden year class success.

Landings by the purse seine fishery have always been high, making this fishery the largest on the Atlantic coast. The commercial operations provide significant numbers of jobs, and produce useful fishery products for domestic use and export. While social and economic aspects are important to management considerations, the health and well-being of the resource is of prime concern for both commercial and recreational interests.

During the August 1980 Philadelphia meeting, the Atlantic Menhaden Sub Board (=Atlantic Menhaden Management Board) concluded that as a minimum, 10% 3-year old and older fish (spawners) should be represented in the landings. They felt that this index would represent the minimum number of spawners required to maintain the stock, year to year. Further, if this minimum were maintained, the resource as well as commercial and recreational interests would be better protected in the event of consecutive year class failures.

(3)

REF
A

SECTION 1. DESCRIPTION OF THE STOCK COMPRISING THE MANAGEMENT UNIT

A. Description and Distribution of Menhaden

Atlantic menhaden, Brevoortia tyrannus (Latrobe) 1802, belong to the herring family, Clupeidae, and are similar in appearance to the alewife and shad. It is distinguished from other Clupeidae by a large head, absence of teeth, pectinated scales, the location of the dorsal fin over the interval between the pelvic and anal fins and a compressed body with bony scutes. Other features include long gill rakers, and muscular pyloric stomach or gizzard. The body is bluish above and sides are silvery with a reddish luster. A conspicuous scapular spot is usually followed by two rows of smaller, secondary spots or blotches on the sides. The fins are tinged with pale yellow and edged in black.

Atlantic menhaden adults are found from Nova Scotia, Canada to West Palm Beach, Florida. It is an euryhaline species that occurs in the Atlantic Ocean and inland tidal waters along the eastern coast of the United States and Canada (Hildebrand 1948, 1964, Reintjes 1960, 1964).

Juveniles and adults occupy bays, sounds, and estuaries to the uppermost limits of brackish water. In the ocean they generally are confined to, or at least closely associated with, the waters overlying the Continental Shelf and never have been observed far from land. Gusev (1964) reported a catch of menhaden by a Soviet trawler about 130 km (80.8 mi) south of Cape Cod-- about the maximum distance from land that schools have been sighted by scouting aircraft, and farther offshore than the seaward limit of American purse seine operations.

Hildebrand (1948) conjectured that each section of the Atlantic coast has its own population or race. June (1958) concluded from a study of the meristic characters of juveniles that at least two sub-populations occur, one north and one south of Long Island, N.Y., and Sutherland (1963) examined juveniles of four successive year classes-- 1956-59 with the same conclusions. June (1965) further supported the hypothesis by reporting significant differences in vertebral counts for maturing or nearly ripe adults of different spawning populations. More complete information, mostly from tagging studies (Nicholson 1978), demonstrate that Atlantic menhaden as now structured can be considered one population or stock which shows nearly complete intermingling from Maine to Florida.

Studies of the distribution of age and length groups in the catches, combined with information on the amount and distribution of fishing effort by the purse seine fleet, have demonstrated that the fish undertake extensive migrations. There is a northward movement along the coast in spring. During the summer, the smaller and younger fish are found in the southern part of the range, while progressively larger and older fish occur in more northerly latitudes. Further, there is a

(4)

tendency for fish of similar size and age to occur together in a given locality, but to remain distinct from those of overlapping sizes and ages in adjacent localities. Thus, a north-south gradient in size and age becomes established, with larger and older fish found farther northward (June and Reintjes 1959; McHugh et al. 1959).

A southward withdrawal of fish from the summer grounds takes place in autumn. Prior to their southward migration, the fish congregate in large schools, which sometimes cover a surface area of many square kilometers. The fishing fleet follows the large schools as they migrate southward in October, but frequently the schools travel in deep water offshore where they cannot be caught. However, the schools are intercepted again as they pass close inshore along the coast of North Carolina in November. The large, migrating schools are last seen off the North Carolina coast in December or January (June 1961; Nicholson 1971 and 1972; Kroger and Guthrie 1973; Dryfoos et al. 1973; Roithmayr 1963; Reintjes 1969). Young-of-the-year (age 0) as well as older (age 1 and 2) and mature Atlantic menhaden (age 3+) undertake extensive migrations along the Atlantic coast of the United States (Figure 1.1).

In 1963, Roithmayr reported the distribution of fishing by purse seine vessels for the five-year period, 1955-1959. He estimated that during the five seasons surveyed, some 158,000 sets were made between April and January (Figure 1.2 and 1.3). From these data and other information early investigators concluded that Atlantic menhaden do not occur in equal abundance throughout the range, but are concentrated in certain localities during certain periods of the year. During the warmer months, the fish congregate in schools in the near surface waters overlying the inner half of the Continental Shelf. While variations in the amount and distribution of fishing effort occurred from year to year, the area of concentration remained nearly the same over the 5 years for which such information was available. During the colder months, the fish rarely are seen in the surface waters. There is evidence that during this period they occur in loose aggregations in deeper water over the Continental Shelf. In Chesapeake Bay, however, menhaden have been taken at all times of year (McHugh, et al. 1959).

The observations and conclusions drawn by Roithmayr regarding the place and time that Atlantic menhaden appear in fishable quantities along the coast still hold true today, but distribution of fishing effort has changed. In recent years, purse seine fishing has concentrated in Chesapeake Bay and North Carolina. Fishing efforts in New England and Florida waters have been reduced from former years depicted in Figures 1.2 and 1.3.

REF

(A)

At Cape Hatteras, the continental shelf extends seaward approximately 33 km (20 miles) then widens gradually to 113 km (70 miles) off New Jersey and Rhode Island and then broadens to 193 km (120 miles) off Cape Cod forming Georges Bank. The substrate of the shelf in this region is predominantly sand interspersed with large pockets of sand-gravel and sandshell. Beyond 200 m, the substrate becomes a mixture of silt, silt-sand, and clay.

On the continental shelf north of Cape Hatteras, surface circulation is generally southwesterly during all seasons, although this may be interrupted by coastal indrafting and some reversal of flow at the northern and southern extremities of the area. Speeds of the drift are on the order of five nautical miles per day. There may be a shoreward component to this drift during the warm half of the year and an offshore component during the cold half. This drift, fundamentally the result of temperature-salinity distribution, may be made final by the wind. A persistent bottom drift at speeds of tenths of nautical miles per day extends from beyond midshelf toward the coast and eventually into the estuaries.

A southerly flowing coastal current such as that prevalent north of Hatteras is transient to the south of Hatteras. During winter a cross shelf thermal gradient causes a northerly set to the coastal waters. In summer the cross shelf thermal gradient is nearly non-existent, so a general southerly movement is found over most of the shelf.

Circulation in the western North Atlantic is profoundly influenced by the Gulf Stream, an intense western boundary current. Transport by the Gulf Stream off Cape Hatteras has been estimated to be $63 \times 10^6 \text{ m}^3/\text{sec}$, and surface currents as high as 200 cm/sec have been measured.

The salinity cycle results from stream flow and the intrusion of slope water from offshore. The salinity maximum of winter is reduced to a minimum in early summer by large volumes of spring river runoff. Inward drifts of offshore saline water throughout the autumn eventually counterbalance the fresh water outflow and return the region's salinity distribution to the winter maximum. Due to the proximity of the Gulf Stream and the low amount of runoff per unit length of coast, the shelf water south of Hatteras is relatively saline when compared to coastal waters farther north. Shelf salinity here is lower during summer. Water salinities near shore average 32 ‰, increase to 34-35 ‰ along the shelf edge, and exceed 36.5 ‰ along the main lines of the Gulf Stream.

Most, if not all, of the coastal waters and estuaries from New England to central Florida are utilized by juvenile menhaden as

2 MILE LIMIT RESTRICTS COMMERCIAL
FOR $\approx 6\%$ FOR THE FISHING AREA!
OR 0.6 MILE LIMIT IS $\approx 1.7\%$ (6)

Table 1.1. Atlantic menhaden purse seine landings by area, 1940-1980. (A)

Year	Area					Total
	North Atlantic	Middle Atlantic	Chesapeake Bay	South Atlantic	North Carolina Fall Fishery	
-----Thousands of metric tons-----						
1940	16.8	91.1	35.3	37.9	36.6	217.7
1941	33.5	104.1	60.2	45.2	34.9	277.9
1942	14.6	77.7	21.9	32.9	20.1	167.2
1943	9.8	96.8	42.1	59.7	28.8	237.2
1944	27.5	122.6	32.2	46.9	28.7	257.9
1945	34.0	136.4	35.1	58.5	31.9	295.9
1946	42.9	183.8	57.6	40.8	37.3	362.4
1947	44.2	185.8	81.2	34.2	32.9	378.3
1948	44.4	137.4	68.3	55.8	40.6	346.5
1949	52.2	149.8	62.8	59.3	39.7	363.8
1950	49.3	143.0	63.1	20.0	21.8	297.2
1951	51.0	168.6	56.1	54.6	31.1	361.4
1952	58.1	193.7	45.7	86.0	26.4	409.9
1953	59.7	363.2	77.8	52.8	39.7	593.2
1954	64.9	335.7	126.0	39.6	41.9	608.1
1955	83.3	317.6	132.7	43.4	64.4	641.4
1956	98.5	378.3	94.0	68.6	73.7	712.1
1957	83.5	304.5	126.0	36.4	52.0	602.8
1958	36.0	211.1	151.3	41.3	70.3	510.0
1959	66.0	250.9	196.8	63.1	82.3	659.1
1960	66.4	256.0	108.5	36.7	62.2	529.8
1961	58.6	274.6	128.7	44.1	69.9	575.9
1962	64.7	249.9	155.1	42.2	25.8	537.7
1963	35.2	111.7	104.0	34.2	61.8	346.9
1964	15.0	35.2	134.1	46.5	38.4	269.2
1965	11.9	45.8	126.1	36.7	52.9	273.4
1966	1.8	6.0	115.6	24.5	71.7	219.6
1967	0.0	17.1	91.1	34.1	51.2	193.5
1968	6.7	26.2	115.5	33.6	52.8	234.8
1969	2.9	12.4	72.0	32.8	41.3	161.4
1970	4.3	11.5	182.9	42.4	18.3	259.4
1971	10.4	23.0	170.7	38.3	7.9	250.3
1972	14.5	54.6	245.5	45.9	5.4	365.9
1973	29.9	277.4	37.2	2.4	346.9	
1974	35.8	194.8	45.9	15.7	292.2	
1975	23.1	149.8	59.5	17.8	250.2	
1976	28.4	243.3	50.7	18.1	340.5	
1977	15.0	244.1	49.8	32.2	341.1	
1978	31.4	214.1	60.3	38.2	344.0	
1979	29.4	230.7	61.6	54.0	375.7	
1980	29.7	282.8	53.2	35.8	401.5	

1/ Combined to retain confidentiality of landings data.

(7)

REF
(A)

from North Carolina and more southern waters. Fish migrating south in the fall, contribute to catches off New Jersey, Delaware, Virginia and North Carolina. In fact, most of the catch in the North Carolina Fall fishery has been historically fish migrating from more northern waters (Dryfoos et al. 1973, Pristas and Willis 1973, Parker 1973, Nicholson 1978, Kroger, et al 1971, Kroger and Guthrie 1973, Kroger, et al. 1974).

Migrations of Atlantic menhaden along the coast at almost all times of the year tend to expose the fish to several different parts of the purse seine fishery within the same season. Thus, fish that escape capture in one area are often subjected to capture in another area later and possibly in several areas before the fishing season is over. Thus, multiple exposure adds to the likelihood of Atlantic menhaden being captured by man. This feature reduces the chance that large segments of the total population will remain undetected for very long periods during any one fishing season and certainly not for several seasons.

In summary, the answer to the question posed "Can the resource and fishery collapse?" appears to be "yes" on the basis of the biological factors. The collapse would take several years, however, and this might permit time for corrective action. Such action, no matter the form or degree, might not be sufficient to prevent a total collapse. The Atlantic menhaden resource would probably persist at an abundance level well below that required for efficient, cost effective purse seining.

(9)



P.O. Box 111, Spring Lake, N.J. 07762

The following Clubs will seek legislative action to curtail commercial purse seining of menhaden, commonly known as mossbunker in Jersey waters.

Asbury Park Fishing Club	Hudson River Fishermens Assoc.
Long Branch Fishing Club	Picatinny Saltwater Sportsman
Shore Surf Club	Newark Bait & Fly Casting Club
Manasquan Fishing Club	Strip Surf Club
Silverton Fishing Club	Deal Lake Anglers
Spring Lake Live Liners	N.J. Flyrodders Inc.
Surf & Sea Fishing Club	Sunrise Rod & Gun Club
Surf King Fishing Club	Belmar Fishing Club
Beach Buggy Association	Central Jersey Anglers
Jersey Coast Shark Anglers	United Boatmen
Riveria Beach Boat Club	J.R.'s Bass Release Team
Salt Water Anglers of Bergen Cty.	West Long Branch Fishing Club
American Littoral Society	Bay Head Shores Fishing Club

The goal of the Association is to provide a safe corridor for bunker to travel along our coast.

The mossbunker is a plankton eating fish which is a vital link in the food chain for many sportfish such as striped bass, bluefish and weakfish which inhabit the bays and our coastal waters.

Sportfishing is worth 551 million dollars to the State of New Jersey and we cannot allow this sport to be jeopardized by destroying our bunker stocks.

10.A

~~XXXXXXXXXX~~



State of New Jersey

DIVISION OF
FISH, GAME AND WILDLIFE
RUSSELL A. COOKINGHAM
DIRECTOR

DEPARTMENT OF ENVIRONMENTAL
PROTECTION

PLEASE REPLY TO:
CN 400
TRENTON, NEW JERSEY 08625

January 20, 1984

Mr. Joe Melillo
22 Evergreen Place
Howell, NJ 07731

Dear Mr. Melillo:

I am responding to your inquiry of the other day concerning a list of the vessels that the state licenses (N.J.S.A. 23:3-51). During 1983, we had twenty vessels licensed for use of menhaden purse seines. They are as follows: "Reedville", "Tangier Island", "Great Wicomico", "Smith Island", "John D. Deihl", "J. Frank Jett", "Northumberland", "John S. Dempster Jr.", "Mance Lassiter", "Earl J. Conrad Jr.", and "Lancaster". All of these vessels are registered to Zapata Haynie Corporation in Reedville, Virginia, and are approximately 167' in length.

The "Atlantic Breeze", "Atlantic Venture", "Atlantic Surf", "Atlantic Mist", "Atlantic Queen", "Atlantic Beach", and "Atlantic Coast" are all Standard Products Company boats. These boats are approximately 175' in length and are registered to Standard Products Company of Kilmarnock, Virginia.

The last vessel is the "Bellatrix", registered to Chris and Ernest Anthopulos of Port Monmouth, New Jersey. This vessel is about 50' in length.

If you have any other questions concerning the licensing of these vessels, please feel free to give me a call.

Sincerely,


Bruce L. Freeman
Marine Fisheries Administrator

am

c Russell Cookingham
Paul Hamer

REF
②

The managers who produced the plan have recommended that the fishing season be closed one month earlier than the time at which the fishing normally ends in order to reduce the harvest of small menhaden which are then coming out of the coastal estuaries and traveling south along the coast. This would be a temporary restriction to be replaced by a minimum mesh size restriction. The minimum size would be more efficient in protecting the small fish since it would be used throughout the season.

The fact that a 20-year record landing was produced in 1983 would strongly indicate that the resource is not in dire straights. However, there is room for improvement in the manner in which we harvest this resource. In weight, current landings are slightly greater than one-half the weight of the landings of the 1955-1962 period (the "hey day" of the fishery) but numbers of individual fish landed are about equal to that time period. This could only happen if the average fish landed today was about one-half the size of the average fish landed in the 1955-1962 period. This in fact is the case. This is demonstrated in Table 2 which provides the numbers of menhaden harvested at various ages. To get the greatest yield from the menhaden resource we should be harvesting menhaden at 3.4 years of age, on average. Production of young menhaden has been good to excellent since 1971; the 1975, 1979 and apparently the 1981 year classes ranking second only to the banner 1958 year class.

As a result of the high levels of recently produced juvenile menhaden, the spawning stock levels have improved somewhat since the low point in the early 1960's. Recent evaluations show that the spawning stock is at its highest level since 1964. However, the spawning stock is composed of more younger fish than was the case in earlier years.

Under ideal management on a coastwide basis, yields from current levels of recruitment could have been in the 450,000 metric ton range since about 1976. Returns to the yields of the late 1960's are unlikely, given our present knowledge of the stock dynamics and fishing patterns. All of this brings us to the importance of fishing menhaden in the northern portion of their range since this is where the larger fish are taken. Most of the young-of-year, 1- and 2- year old menhaden that are harvested are taken in the Chesapeake and more southern area. The larger fish produce more oil and more pounds of a higher grade of meal than would the same fish taken at a smaller (younger age) size (See Figure 3). Along with this we are seeing a reduction in the average size of menhaden at 1, 2 and 3 years of age, possibly due to competition from the large numbers of fish. ?

New Jersey

While some menhaden may be found in New Jersey's waters during any month of the year, they occur in quantity from April thru November and sometimes into December. Early in the season they do not appear on the surface or in densely packed schools and therefore are not available to the purse seine fishery. They are however, taken in gill nets and pound nets at this time. Purse seine fishing starts in late May, because of the regulations not allowing any purse seine nets until the third Monday of that month. On the average, menhaden are available to purse seiners in our waters until late November. In order to reduce the harvest of young fish along the New Jersey coast, we have adopted a season regulation which ends the fishing season on the third Friday in October.

REF

(A)

SECTION 3. FISHERY MANAGEMENT JURISDICTION, LAWS AND POLICIES

Menhaden management at the present time is left mainly in the hands of the industry which harvests the resource on an economic basis. The states exercise few management controls other than setting of seasons and defining sanctuary areas in response to pressures generated by long-standing institutional conflicts. At present three states have an established season (Maine, New Hampshire and Virginia) and two have mesh sizes (Virginia, 1 3/4"; and South Carolina, 1 1/2" stretched mesh). This system has served well in the past but concern for the valuable Atlantic menhaden resource has increased since the decline in stocks.

The present system is not flexible enough to readily incorporate biological and other pertinent data into management procedures which suffer from political pressures generated by the public's adverse reactions to certain menhaden harvesting techniques. A continuing challenge of management has been to counteract the unwarranted reactions of the public.

A synoptic review of the states' management structures and other features pertinent to the Atlantic menhaden fishery is presented in the following compendium of regulations.

(12)

RCF
A

STATE DELEGATION OF AUTHORITY	LEGISLATIVE AUTHORIZATION	POSSIBLE REGULATIONS TO INSURE ADEQUATE CONSERVATION	LICENSES	SEASON	SPECIAL AREAS	PENALTIES
MAINE Department of Marine Resources	Section 3505 Subsection 4 Paragraph B	Commissioner may make regulations upon advice and consent of the advisory council. Method: time taken, method, number taken, weight taken, length and location, when a condition endangering any marine species exists as determined by a hearing.	None specifically for menhaden MRC - \$200 RC - \$10 (5.0) RC - \$25 (C.)	May 15 to Dec. 1	Damariscotta and Georges River--in certain areas. June 1 to Dec. 31. Boats transporting are limited to 30,590 lbs, 437 bushels, or 25 hog-heads, must be measured, plainly marked and sealed by State sealer. 1) no setting of purse seine within 1500 ft. of any stop seine. 2) no setting of seine within 2000 ft. of the mouth of any weir. 3) no use of purse, drag of stop seine in ports of Kennebec, Sheepscot, Damariscotta, and St. Georges Rivers.	Possible suspension of permit or where specific penalties are not provided fine - \$500 and/or jail for one year.
46 NEW HAMPSHIRE Fish and Game Department	R.S.A. 211.65 Division of Marine Fisheries created R.S.A. 206.1 Commission created R.S.A. 206.10 Powers and Duties of Director	The director may make rules and regulations. Methods: size, number, quantity, areas, and manner of their taking	A.M.R. (for saltwater) by netting, dragging, or trawling is \$150 regardless of the size of boat or vessel	No person shall use a purse seine June 1 to September 15.		General penalty misdemeanor
MASSACHUSETTS Division of Marine Fisheries Marine Fisheries Advisory Commission	Mass. Ann. Laws 2.5, SA; Chapter 130	The Division may promulgate regulations with approval of Marine Advisory Commission. Method: taking fish, size, seasons and hours, and opening and closing of areas.	C. boats 100' - \$100; boats 60' - 99' - \$75; boats up to 59' - \$50 This permit is valid for taking, landing, and selling finfish, and may be endorsed for shellfish. A special permit (\$10) to transport fish	No closed seasons	Special permits are issued for areas designated as a regulated fishery area or as an inshore permit area. Specific regulations may apply by individual area.	NR transporting fish out of state waters are subject to a \$50 fine and forfeiture of the catch. Violators are subject to fines of not less than \$10 - not more than \$1000, imprisonment not more than 1 month - or both.

(13)

REF
A

NEW JERSEY Division of Fish, Game and Shellfisheries	New Jersey Stat. Ann.	Division of Natural Resources has the power to cooperate with other states, interstate and Federal departments and agencies to develop programs and policies for the conservation and protection of natural resources	R 30-100 gt=\$125; 100-150 gt =\$250; 150-175 gt =\$400; 175-200 gt =\$550; 200 + gt = \$900; 20 tons or less used for taking menhaden for bait purposes only. 30-100 gt = \$450; 100-150 gt =\$700; 150-175 gt =\$1000; 175-200 gt =\$1150; 200 + gt = \$1500; Residents who lease vessels from out of state shall pay fees same as N. R.	No closed seasons	None	2 0	Violations are misdemeanors - \$1000 for each offense
48 DELAWARE Division of Fish and Wildlife	House Bill No. 413, Section 919, Delaware Code, Title 7, "Menhaden Fishing"	Division has authority to protect, conserve and propagate the fisheries resources of the state. Further legislation regarding more powers pending.	Vessels over 65' in length shall obtain a license before fishing for menhaden. Fee - \$100	No closed seasons	No menhaden fishing between Memorial Day and Labor Day on the weekends. No fishing for menhaden within 1 mile of populated beach or pier. Dead fish must be kept on vessel.		Violations are regarded as misdemeanors. \$500 - first offense; \$2500 - each offense thereafter.
MARYLAND Tidewater Fisheries Administration	M. D. N. R. Section 1-101, 4-202	Regulations may include, but are not limited to, provisions, enlarging, extending, restricting, or prohibiting the taking or catching of these resources	None issued for purse nets	Commercial menhaden fishery prohibited.	Commercial menhaden fishery prohibited from use of purse nets in Maryland waters		Violations are misdemeanors. Fine not less than \$100 nor more than \$1000; and shall stand committed to the Baltimore City Jail or to the County jail until such fines and costs are paid.

(14)

RFF
④

the Atlantic coast north of South Carolina are found between Cape Hatteras and Cape Fear, NC. Menhaden vessels based in Beaufort, NC pursue these fish in the fall fishery. Fishing continues into January. Menhaden appear to leave the coastal fishing grounds and migrate to deeper ocean waters offshore North Carolina to Florida. Effort and landings in the fall fishery fluctuate widely, depending largely on weather conditions.

F. Conflicts

The menhaden fishery has repeatedly been accused of taking large quantities of edible fish in addition to menhaden. A number of scientific studies have investigated this issue, and all reports have indicated no significant catch of any species other than Atlantic menhaden (Christmas, Gunter, and Whatley 1960). Sampling in Pamlico Sound, North Carolina during December 1978, showed similar results.

Other conflicts have been principally spatial and aesthetic, involving competition for space with recreational boaters and fishermen. Most menhaden purse seine vessels operate under a code of ethics designed to avoid conflicts. Generally, the vessels try to stay away from recreational boaters, beaches, piers, etc.; avoid areas known to be used for shellfishing, pound netting, and other commercial fishing activities; clean up spills of fish; and cooperate to the fullest extent possible with State fishery management agencies. Very few problems have been reported in recent years; in fact, the menhaden industry by its efforts to work harmoniously with recreational fishermen and boaters, the general public and governmental agencies, has set an example for the commercial fishing industry.

G. Landings

1. Purse Seine Landings, 1940-1979

While the production from the resource since 1940 has been impressive by all standards, the fishery witnessed considerable changes in abundance prior to its record-setting years in the 1950s (Table 1.1 and Figure 4.2). After achieving record landings of 712,000 MT (1.6 billion pounds) in 1956, landings began to decline. By 1962, the harvest was still impressive at 538,000 MT, but catches in 1963 crashed to 347,000 MT. The downward slide continued for the next six years, reaching the lowest harvest of 161,000 MT in 1969. Landings improved for a few years, reaching 365,000 MT in 1972. This was a shortlived recovery as landings fell to 250,000 MT in 1975. Landings stabilized at about 340,000 MT during 1976-78.

REF
④

and increased by about 18% in 1980 (401,500 MT). The figures in Table 1.1 show the great range of fluctuations in landings for each major area over the years. The relative importance of the different areas is also apparent; recent catches from the north and mid-Atlantic areas and the North Carolina Fall fishery contribute a much smaller portion of the total than they did prior to the mid-1960s. The Cheapeake Bay fishery (actual landings combined with mid-Atlantic landings to protect individual company data) dominates the industry today. Landings in the south Atlantic area have been most consistent over the years, although there have been significant fluctuations (Figure 4.3).

2. Landings of Atlantic Menhaden by Other Gear - Reported landings data by gear (from NMFS) show that during 1969-74, purse seine landings accounted for an average of 95% of the total catch of Atlantic menhaden. Pound nets were second in importance (averaging 4%) principally in Chesapeake Bay and New Jersey. Other gears were gill nets and haul seines. Catches by purse seine obviously account for an overwhelming portion of the reported landings of Atlantic menhaden, but pound nets might make a fair impact on the resource in selected circumstances.

3. Other Sources of Mortality - In addition to being harvested by man as described above, Atlantic menhaden are one of most important prey species along the Atlantic coast of the United States. Menhaden are eaten by bluefish, striped bass, and many other fishes (see Section 1C).

Millions of menhaden sometime die in a single fish kill; in late December 1978, an estimated 57 million menhaden washed ashore along a 27-mile stretch of ocean beach in northern North Carolina; kills in the hundreds of millions have been reported in Chesapeake Bay and New Jersey. Frequently, no causes can be found for these mortalities, although a virus has recently been implicated in Chesapeake Bay mortalities (Stephens et al. 1980). Records from a single nuclear power plant estimated that more than 10,655,000 individual Atlantic menhaden were trapped on its intake screens during an 8-month period in 1978. Data on numbers of eggs and larvae which were killed going through the plant are not yet available. Virtually all intake pipes located in Atlantic estuaries between southern New England and central Florida probably contribute to the mortality of Atlantic menhaden.

Menhaden often form an important segment of the bycatch in trawl fisheries for finfish and shrimp. For example, menhaden contributed 10.3% of the bycatch in South Carolina (Keiser 1976) and 7% in Georgia (Knowlton 1972).

(16)

REF
(A)

SECTION 12. LITERATURE CITED

- Breder, C. M. 1967. On the survival value of fish schools. *Zoologica* 52:25-40.
- Brock, V. E., and R. H. Riffenburg. 1963. Fish schooling: A possible factor in reducing predation. *J. Cons. Int. Explor. Mer.* 25:307-317.
- Chapoton, R. B. 1972. On the distribution of Atlantic menhaden, eggs, larvae, and adults: A briefing document. (Mimeo.).
- Chesapeake Research Consortium. 1977. Proceedings of the Bi-State Conference on the Chesapeake Bay. Publication No. 61. Annapolis, MD.
- Christmas, J. Y., G. Gunter and E. C. Whatley. 1960. Fishes taken in the menhaden fishery of Alabama, Mississippi, and eastern Louisiana. U.S. Fish and Wildl. Serv., Spec. Sci. Rep. Fish. 339, 10 p.
- Commuto, J. A. 1976. Predation, competition, life-history strategies, and the regulation of estuarine soft-bottom community structure Ph.D. thesis. Duke University, Durham, NC 201 p.
- Corps of Engineers. 1977. Chesapeake Bay: Future conditions report. U.S. Army C.O.E. Norfolk, VA, multiple volumes.
- Dietrich, C. S. 1979. Fecundity of the Atlantic menhaden, Brevoortia tyrannus. U.S. Natl. Mar. Fish. Serv. Fish. Serv. Fish. Bull. 77: 308-311.
- Douglas, P. A. and R. H. Stroud. 1971. A symposium on the biological significance of estuaries. Sport Fishing Institute, Washington, D.C., 111 p.
- Dryfoos, R. L., R. P. Cheek, and R. L. Kroger. 1973. Preliminary analyses of the Atlantic menhaden, Brevoortia tyrannus, migrations, population structure, survival and exploitation rates and availability as indicated from tag returns. *Fish. Bull.* 71:719-734.
- Dubrow, D., M. Hale, and A. Bimbo. 1976. Seasonal variations in chemical composition and protein quality of Menhaden. *Marine Fish. Rev.* 38(9):12-16.
- Frye, J. 1978. The men all singing. The story of menhaden fishing. Donning Co., Virginia Beach, VA. 242 p.

- June, F. C. 1958. Variation in meristic characters of young Atlantic menhaden, Brevoortia tyrannus. Cons. Perma. I'nt. Explor. Mer., Rapp Proc. - Verb. Réunion 143(2):26-35.
- June, F. C. 1961. Age and size composition of the menhaden catch along the Atlantic coast of the United States, 1957, with a brief review of the commercial fishery. U.S. Fish Wildl. Service, Spec. Sci. Rept. Fish. 373, 39 p.
- June, F. C. 1965. Comparison of vertebral counts of Atlantic menhaden. U.S. Fish Wildl. Serv., Spec. Sci. Rep. Fish. 513, iii + 12 p.
- June, F. C. 1972. Variations in size and length composition of Atlantic menhaden groupings. Fish. Bull. 70:699-713.
- June, F. C., and J. W. Reintjes. 1959. Age and size composition of the menhaden catch along the Atlantic coast of the United States, 1952-55; with a brief review of the commercial fishery. Natl. Mar. Fish. Serv., Spec. Sci. Rep. Fish. 317.
- June, F. C., and J. W. Reintjes. 1976. The menhaden fishery, In M. E. Stansby (ed.), Industrial fishery technology. Rev. ed. R. E. Krieger, New York.
- Keiser, R. K., Jr. 1976. Species composition, magnitude and utilization of the incidental catch of the South Carolina shrimp fishery. S.C. Mar. Res. Cnt., Tech. Rep. No. 16, 54 p. + Appendix. ||
- Kendall, A. W., and J. W. Reintjes. 1975. Geographic and hydrographic distribution of Atlantic menhaden eggs and larvae along the middle Atlantic coast from R/V Dolphin cruises, 1956-66. Fish. Bull. 73:317-335.
- Knowlton, C. J. 1972. Fishes taken during commercial shrimping in Georgia's close inshore ocean waters. Ga. Dept. Nat. Res., Div. Coastal Fish, Contrib. Ser. No. 20, 42 p. ||
- Kroger, R. L., and J. F. Guthrie. 1973. Migrations of tagged juvenile menhaden. Trans. Am. Fish. Soc. 102:417-422.
- Kroger, R. L., R. L. Dryfoos, and G. R. Huntsman. 1971. Movement of Atlantic menhaden tagged in New England waters. Chesapeake Sci. 12:114-115.



NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
1402 TRENTON, N.J. 08625
609-292-2994

NEWS

THOMAS H. KEAN, GOVERNOR
ROBERT E. HUGHEY, COMMISSIONER

REF
B

(STATEWIDE)
No. 85/163

VB

EMERGENCY REGULATIONS ADOPTED FOR PURSE-SEINE FISHING OF MENHADEN

Immediate release:
July 12, 1984

TRENTON--State Department of Environmental Protection (DEP) Commissioner Robert E. Hughey has signed into law emergency regulations promulgated by the DEP Division of Fish, Game and Wildlife which prohibit the use of purse nets in menhaden fishing closer than 3,600 feet from shore.

"The primary purpose of the regulations," Commissioner Hughey stated, "is to lessen conflict between menhaden purse-seine fishermen and our own recreational fishermen."

The new regulations are in response to incidents last fall in which 16 menhaden purse-seine vessels, some as long as 160 feet, had concentrated their fishing on schools of menhaden close to New Jersey beaches. At the same time hundreds of small recreational fishing craft and party boats were fishing for bluefish feeding on the same schools of menhaden.

A special conflict which could have had serious safety implications occurred. The menhaden fishery, however, did interfere with the recreational activity of many anglers, including some fishing from the beach and jetties. A financial loss to the recreational fishing industry resulted when catches of fish and, subsequently, bait and tackle sales declined.

The emergency regulations became effective on July 10, 1984, and apply to anyone licensed to use a menhaden purse-seine in the state's marine waters. The new regulations prohibit the use of purse nets in the Atlantic Ocean and Delaware, Raritan and Sandy Hook bays closer than 0.6 nautical miles (3,600 feet) from the shoreline, jetties or fishing piers.

The regulations also make it the responsibility of the captain of a menhaden purse-seine vessel to determine the possibility of drifting inside the 0.6 nautical mile limit

(20)

(more)

Status of the Atlantic Menhaden Stock

REF
B

1/6

Menhaden or "bass bunkers" are a member of the herring family and are found along the Atlantic and Gulf Coasts of the United States. They spawn in the ocean in every month of the year in some part of their range. The young make their way into estuaries where they grow rapidly. In fall they move south and offshore and are seldom seen during the winter months.

The National Resource

While some menhaden are caught in gill nets and pound nets, by far the largest part of the harvest is taken by purse seines. In purse seining, a large vessel of 70 to 200 feet generally carries two purse seine boats about 36 feet in length. The net employed is about 1000 to 1400 feet long. Menhaden schools are spotted by aircraft accompanying the vessels or from the crow's nest on the mast of the large vessel. When a good sized school is located the the purse boats are lowered into the water. One half of the purse seine is loaded into each of the two boats and they proceed, side-by-side toward the school. As they near the school they move apart and begin laying out the net. They lay the net around the school from opposite sides until they meet. When the two ends are joined and the school is surrounded, the bottom of the net is closed or pursed. At this point the purse boats begin to haul in the net with hydraulic power blocks, concentrating the fish in a reinforced portion of the net called the bunt. The large vessel then joins the purse boats and the three vessels form a triangle with the net between them. After further concentrating or "drying up" the fish, a large hose is lowered into the net and the fish are pumped aboard the large vessel.

The menhaden resource forms the basis for the United States largest commercial fishery in terms of pounds landed, Fig. 1. Presently, they are not used for human food. A small quantity is used for bait, but most of the catch is reduced into fish meal, oil and a liquid by-product. The meal and by-product are used as a protein supplement in livestock feed (primarily chickens, turkeys and swine) while the oil is used in the manufacturing of various products including paint, linoleum, cosmetics and margarine. Although in years past, menhaden was used as fertilizer, it is now too valuable for this use. Figure 2 and Table 1 present the harvest of Atlantic Coast menhaden from 1956 to the present. The 1983 landings of 419,000 metric tons (926.7 million pounds) was the largest catch since 1962. The 1983 landings made up 46% of the commercial fishery catch of the United States and were valued at \$36.9 million. We have no way of knowing at this time what portion of this catch was taken in New Jersey's waters.

Because of the menhadens great importance, state and federal fisheries scientists have been working on a coast-wide management plan for Atlantic menhaden for a number of years. In 1981 the Atlantic States Marine Fisheries Commission, an organization created to improve the use of our Atlantic coast fisheries resources on which all 15 Atlantic coast states are represented, adopted this plan. The objective of the plan is to "Achieve the greatest continuing yield for each area by determining the age at which menhaden should be harvested and eliminating other restrictions which do not contribute to the management goal."

2
A

exported during 1980. Menhaden producers sell a large portion of their production for export during the time of production and stocks are cleared out prior to beginning of a new season, April 15th. There is little dependency on the export market due to the availability of fish meal from other nations and competing protein meals such as soybean meal, corn gluten feed.

D. Atlantic Menhaden Cost Questionnaire

A confidential questionnaire was submitted to and completed by three firms* which harvest and process Atlantic menhaden. The purpose of the questionnaire was to provide a better understanding of the types of costs incurred by the industry and their relative magnitudes during the 12 month period ending December 31, 1978. Tables and figures present the sum of the responses by the participating firms.

Table 5.1 provides background information which indicates the relative importance of the participating firms in the Atlantic menhaden fishery. These three firms deployed 31 vessels which fished a total of 1004 vessel-weeks in 1978. Their combined production of 960 million "standard fish" or 292,000 metric tons was approximately 86% of the total catch of Atlantic menhaden reported in 1978. The participating firms operate a total of 5 plants in Virginia, North Carolina and New Jersey.

Figures 5.2 and 5.3 and Table 5.2 summarize the total number of employees and their earnings according to job description. The three participating firms employed 1010 persons during the 1978 fishing season. Approximately 82% of those persons worked on menhaden vessels or in processing plants. This included captains, crewman, production managers and production employees. Other employees worked as spotter pilots, net menders, shore engineers, administrative personnel, etc. Persons employed during the season earned over \$11 million. Some employees are salaried, some are paid an hourly wage and others, primarily vessel employees, are paid according to the quantity of the fish landed.

A comparison of season and off-season employment indicates that firms shifted their work force from harvesting and processing during the fishing season to repair and maintenance during the off-season. This provided continuous employment for some employees in an otherwise seasonal fishery. Nevertheless, total employment was reduced to 461 persons during the off-season. Table 5.3 lists the

* Seacoast Products, Inc., Standard Products Company, Inc., and Zapata Haynie Corp.

REF
A

Table 5.2. Employees and wages by work category (Staff requirements (number of employees) used in each of the following areas of operation during the fishing season and during the off-season, and the amount of their earnings).

	SEASON			OFF-SEASON		
	Number salaried	Number fish catch of hourly	Gross wages	Number salaried	Number hourly	Gross wages
1. Vessel employees	0	501	\$6,613,000	0	50	\$365,000
2. Aircraft employees	20	5	783,000	2	1	29,000
3. Shore marine & net	10	90	594,000	10	132	590,000
4. Plant employees	20	309	1,939,000	18	197	837,000
5. Administrative	39	16	1,134,000	37	14	468,000
6. Other	0	0	0	0	0	0
TOTAL EMPLOYEES, ETC:	89	921	\$11,063,000	67	394	\$2,289,000

During season:

Total salaried: 89
 Total fish catch or hourly: 921
 TOTAL: 1,010

During off-season:

Total salaried: 67
 Total hourly: 394
 TOTAL: 461

Table 5.3. Numbers of employees laid off at the end of the 1978 fishing season by 3 Atlantic menhaden firms (The number of employees in each category that are routinely laid off at the end of the fish processing season each year).

1. Vessel employees	453
2. Aircraft employees	20
3. Shore marine & net	0
4. Plant employees	114
5. Administrative	4
6. Other	0
TOTAL:	591

(25)

REF
A

Table 5.4. State of residence for employees of 3 Atlantic menhaden firms based on the staffing levels during the 1978 fishing season.

<u>State</u>	<u>Number of Employees</u>
Virginia	747
North Carolina	171
South Carolina	2
Maryland	3
New Jersey	85
Louisiana	2
TOTAL:	<u>1,010</u>

OR 8.4% N.J

Table 5.5. Number of employees per vessels. Number of employees that would be laid off if 3 Atlantic menhaden firms each reduced their fleet by one vessel.

1. Vessel employees	49
2. Aircraft employees	2
3. Shore marine & net	1
4. Plant employees	1
5. Administrative	0
6. Other	0
TOTAL:	<u>53</u>

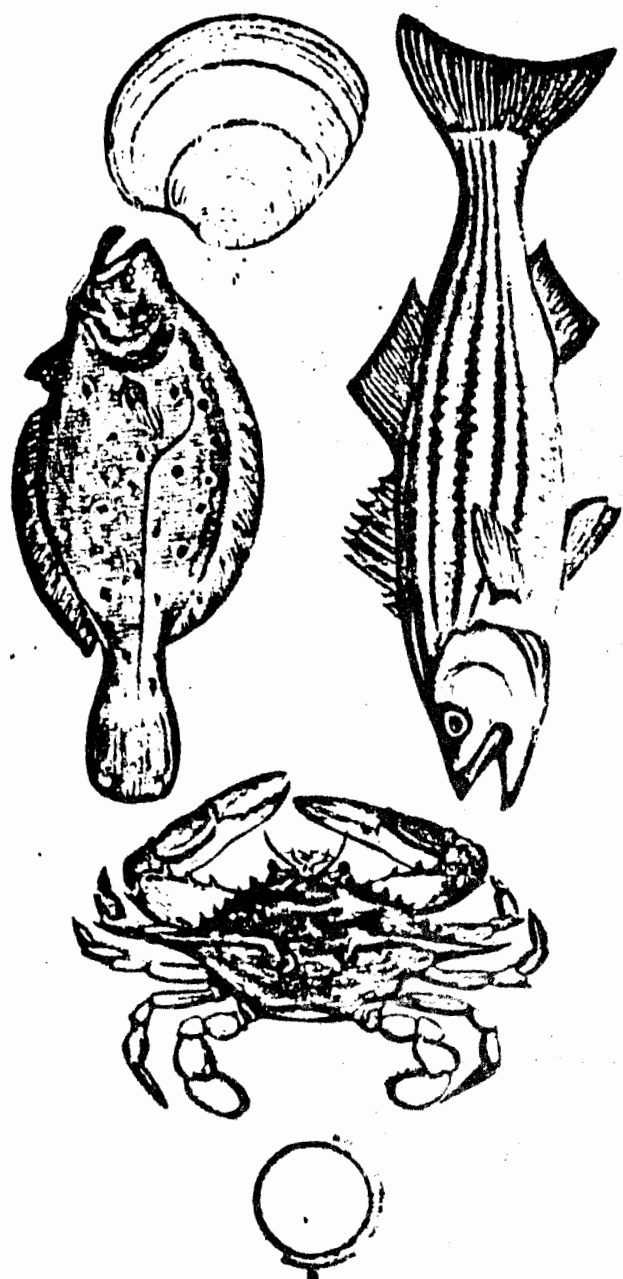
GROSS WAGES \$ 11,063,000
WAGES IN N.J 8.4% OR \$ 940,355

(26)

REF
©

New Jersey's Neglected Resource

A Look at the Resource:
Its Problems and Solutions

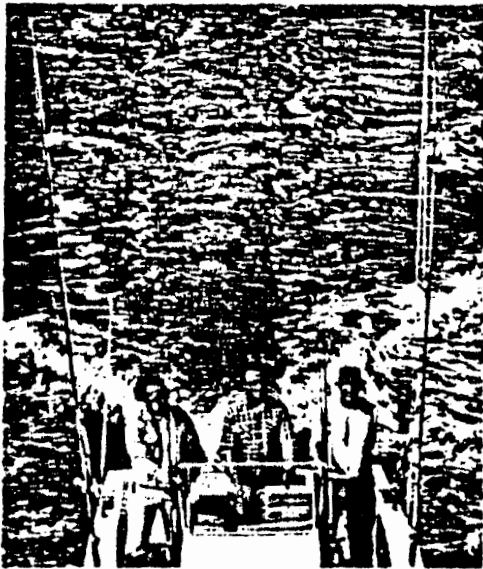


DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF FISH, GAME AND SHELLFISHERIES

REF
 (C)
 16



What are New Jersey's Marine



New Jersey's marine fisheries resources consist of all the plants and animals living within the state's marine environment. The marine environment includes all of the saltwater tidal wetlands, creeks, rivers, bays, inlets and nearshore ocean waters extending from the Hudson River south along the coast to Delaware Bay and into the Delaware River.



THE RECREATIONAL VALUE

Recreational Anglers, Crabbers and Clammers	Man-days of Recreation	Annual Expenditures
1.5 million residents	32 million	\$300-400 million on equipment, bait, transportation, food and lodging.
1.2 million non-residents		
7 MILLION		

ARVEST

recreational fishermen now harvest more pounds of many species — striped bass, bluefish, weakfish, fluke, mackerel, cod — than commercial fishermen.

EXISTING MARINE FISHING AND BOATING FACILITIES

485 marinas	160 boat ramps
125 bait and tackle shops	100 party boats
30,100 boat slips	235 charter boats
	2,400 rental boats



THE MARINE ENVIRONMENT

390,000 acres of bay waters

263,000 acres of tidal wetlands

229,000 acres of ocean waters under state jurisdiction

120 miles of ocean shoreline

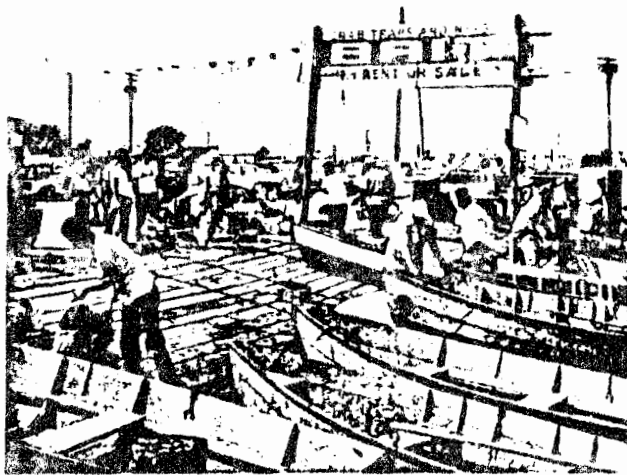
(29)

REF
C

the Fisheries Resources



PROBLEMS



Pollution:

- pollution of ocean waters—sludge dumping, sewage outfalls, industrial wastes and possibly offshore oil drilling
- pollution of bays and tidal rivers—land run-off, sewage outfalls and thermal discharges
- chemical contaminants of fish and shellfish—kepone, PCE, mercury, DDT and others
- fishkills—due to above

Habitat Destruction

- filling of wetlands, bays and tidal rivers
- channel dredging and spoil disposal
- obstruction of spawning streams

Declining Fish and Shellfish Populations:

- overfishing
- inability to develop and implement proper regulations

THE COMMERCIAL VALUE

1978 Harvest	Employment	Annual Value
Fish: 188 million pounds	Fishermen: 3,000	To Fishermen, Processors and Dealers:
Shellfish: 29 million pounds	Processors and Dealers: 4,800	\$120 million

227 MILLION POUNDS

TO BEAR COMMERCIAL
THE RECREATION
PEOPLE MUST TAKE
24 POUNDS AVERAGE



CONCLUSION

- * MANHADEN IS AN IMPORTANT FOOD FOR GAME FISH
- * THE MANHADEN INDUSTRY REPORTS A SCARCITY OF MANHADEN AND STOPPED NETTING
- * MANHADEN ARE FOUND 35 MILES FROM SHORE OFF NEW JERSEY
- * THE 2 MILE RESTRICTION OF BILL S1372 REDUCES THE MANHADEN PURSE SEINING AREA BY ONLY 6%
- * THE MANHADEN INDUSTRY DOES NOT HAVE A CODE OF ETHICS DESIGNED TO AVOID CONFLICTS WITH SPORTSMEN
- * MANHADEN PURSE SEINING DOES DESTROY THE MARINE ENVIRONMENT
- * SPORTSMEN EXPEND \$300 TO \$400 MILLION WHILE MANHADEN INDUSTRY PAYS \$24,000 IN LICENCE FEES
- * SPORTSMEN ARE IGNORED - MANHADEN INDUSTRY IS PROTECTED - W H Y - AN INVESTIGATION IS REQUIRED
- * THE EMERGENCY REGULATION RESTRICTING CLOSER THAN 3600 FEET IS POKENISM AND CAN BE WITHDRAWN OR NOT ENFORCED ANYTIME
- * WE NEED LEGISLATION TO LIMIT SPORT DEALERS' FINANCIAL LOSS AND SPORTSMEN'S MAN - DAYS OF RECREATIONAL LOSS

