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PUBLIC HEARING

before

THE SENATE SPECIAL COMMITTEE TO STUDY COASTAL AND OCEAN WATER POLLUTION

New Jersey Point Sources of Pollution

July 30, 1986 Room 403 State House Annex Trenton, New Jersey

MEMBERS OF COMMITTEE PRESENT:

Senator Frank Pallone, Jr., Chairman Senator Richard Van Wagner, Vice Chairman Senator S. Thomas Gagliano

ALSO PRESENT:

Raymond Cantor Office of Legislative Services Aide, Senate Special Committee To Study Coastal and Ocean Water Pollution

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July 22, 1986

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NOTICE OF A PUBLIC HEARING

The Senate Special Committee to Study Coastal and Ocean Pollution will hold a public hearing on Wednesday, July 30, 1986, beginning at 10:00 A.M. in Room 403 of the State House Annex, Trenton, New Jersey.

The committee will study the causes and sources of both identifiable and nonpoint source Atlantic ocean pollution, onshore hazardous waste dumping practices which result in shoreline degradation, and other related sources of both coastal and Atlantic ocean pollution.

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SENATOR FRANK PALLONE (Chairman): I'd like to welcome everyone to this special Committee hearing. Let me start off by saying that the Special Committee on Coastal and Ocean Pollution was established by the Senate pursuant to Senate Resolution Number 21. It basically was a response to the beach closings that occurred last summer and the summer of 1985, and the concern that the Senate had over a state response to those beach closings.

The members of the Committee -- two of the members are here, and we're expecting some of the others. Senator Gagliano, to my right; I'm Senator Frank Pallone. I've been appointed Chairman of the Committee by Senator Russo, the Senate President; and we also have Senator Weiss, Senator Van Wagner, and Senator Hurley, who we're hoping will be joining us for all or part of the hearing today.

Basically, the Committee's focus is very broad -- or the scope of the Committee is very broad. We are entrusted to deal with a variety of pollution problems facing the Jersey Those problems may be of State origin, they may be of Coast. Federal origin, they may be from other States. And during the course of hearings or meetings that we may have, we do intend to investigate not only New Jersey point sources of pollution, but also the problems that we may face from sewage coming from New York City, the problem with ocean disposal of sewage sludge, dredge materials coming from New York Harbor, and the other sources of ocean pollution, of which there are many. In fact, as some of you who are here today, I remember seeing yesterday at the Woodburning Hearing in Point Pleasant Beach. which is, of course, another source of ocean dumping that we're concerned about.

However, today we intend to focus at this hearing on New Jersey's response; in other words, to deal with New Jersey point sources of pollution. I guess it's been my own feeling that we have, in the past, focused on New Jersey. New York, and

Federal problems; but that perhaps we haven't focused enough on what New Jersey has done. Particularly since we are the State Legislature, we are in the position to do more about the State's response to coastal pollution than we might be with regard to Federal, New York, or other potential sources of pollution.

When I say "New Jersey point sources," of course, I'm talking about outfall pipes that may be coming from municipal sewage treatment plants, storm drains that may be conduits for improperly treated sewage, and other possible routes into the ocean -- rivers, lakes, etc., which we have found over the last few years may be a source of coastal pollution.

I guess I don't have to say that at least, in my opinion -- and I think that's shared by most of us -- that we are, in fact, at a crisis situation in many parts of the State. I represent Monmouth County, and I can only tell you that in the last few weeks, and certainly over the last few years, those residents of Monmouth County are very outraged by the fact that we've had beach closings. Many of them feel they cannot swim in the ocean any more because of the problems associated with ocean pollution.

As I said, this Committee was set up in response to the beach closings that we had last year -- last summer, pretty much at the end of the summer. And at that time, the DEP -our State Department of Environmental Protection -- outlined a program, a monitoring program, which we would like to get into today -- was the immediate response to that, and they have taken some actions and dealt with monitoring of beach closings and municipal sewage treatment plants at least since the early part of this year; and primarily, of course, over the last few months. Yet, the problem remains, even though we've had this monitoring program -- maybe perhaps because we have the monitoring program, there have been some beach closings over the past few weeks, and so the problem that we foresaw last

summer continues. In fact, now, it's happening earlier in the summer season, so that's causing even more concern, 1 think, for shore residents.

Just briefly, we're going to, obviously, ask some questions of the speakers that we have this morning. We did invite today exclusively, health and environment officials -people in the State bureaucracy, if I may say, that are responsible for dealing with the coastal pollution problems; and therefore, we're talking about State, county, and local environmental health officials; and we also have some tourism officials here to talk about the problem as well.

In terms of an overall outline, if I could just say, I would like to see some discussion of the causes and the sources of pollution. Is it coming from partially treated sewage, as a result of primary treatment plants that have not been upgraded to secondary treatment? Is it raw sewage that is a result of primary or secondary treatment plants that have reached over capacity, because of new construction -- whatever -- and therefore, they're forced, sometimes, to pour raw sewage into the ocean? Is it from storm drains? Is it from our lakes and streams and sources further upstream, that are eventually getting into the ocean?

Then, we would like to get into some solutions, and solutions. discussion about the We know some the have exists; we'd like to know if it's monitoring program sufficient, if the monitoring is being done often enough, if the types of things that are being monitored are proper, or if we should be monitoring other sources of pollution.

In addition to that, whether or not there is a need for more enforcement -- in other words, whether or not there's a need for a greater number of inspections, a greater number of people hired on a State or county level, to do more monitoring and inspection.

With regard to some kind of a correction strategy, we would like to have some discussion of timetables for upgrading primary treatment plants. We know that around the State, there are a number of primary treatment plants that are being upgraded. We know there are secondary treatment plants that are being expanded because of the need for capacity. We'd like to know the timetable for that, whether it can be speeded up.

We'd also like to know what can be done in the interim -- in other words, if we know that a primary treatment plant is going to be upgraded by 1995 or 1992 or 1991, what can be done in the interim? Is it possible to do something on an interim basis to prevent the problem of raw sewage or partially treated sewage going into the ocean before these treatment plants are upgraded?

And finally, we would also -- as I said -- like to deal with the problem of enforcement. Are existing laws sufficient? Do we have sufficient penalties? Are the penalties being-- Are people being fined, are plants being fined when they're supposed to be? And what other enforcement actions need to be taken?

I don't want to keep talking because I could talk forever about the problem, and I think the best thing right now is for us to just jump in and start off with some of the individuals on a State level, who perhaps can outline the problems that we have. I would, however, before I start having speakers, ask Senator Gagliano if he would like to make some comments.

SENATOR GAGLIANO: Thank you, Senator Pallone.

I agree with Senator Pallone that this Commission and the concept of this Commission was set up as a result of problems of a year ago, but 1 think it's fair to say that the problems have worsened in the past year; and I only, the other day, was told by a bather who said that on some beaches, you can actually smell the sewage odor.

1 don't think we had that problem before. 1 do know, the Commissioner of the Department having talked to of Environmental Protection awhile back that, as Frank has said -as Senator Pallone has said -- we're going to carefully check each plant, if necessary, have someone from DEP on duty in the plant to see to it that these plants were operating properly. My problem is that we all know what the problem is; and we know it comes from certain sewer plants, we can't maybe pick each one out -- we know that it comes from certain other sewer We know it comes from certain municipalities. plants. We certainly know that it comes from New York, and I don't think we're moving fast enough to cure the problem.

1 feel that if nothing else comes out of these Commission meetings, that we must have a plan, that we must have a timetable for correction, and we must know when we will be able to say that our sewer plants, and the sewer plants of New York and anyplace else, are in such a condition that they are not creating any more coastal or ocean pollution. And as I say, that -- if nothing else come out of this, if we have a timetable that we can count on without anybody pulling our leg. so to speak -- a timetable that we can count on, then we can honestly tell the people, "Well, it's not good this year, and it may not be so good next year, but we know that by a certain date, everything will be done that can be done to clean up the ocean environment." And I think that's what I'm looking for, I appreciate the opportunity to be here, and I will be **\$**0 listening very intently to the witnesses.

Thank you.

SENATOR PALLONE: Thank you, Senator.

Let me also add that today's Committee hearing will be here in Trenton, dealing with New Jersey point sources, but that we do intend to go throughout the State -- in other words, have local hearings to deal with individual problems; and one of them that -- in fact. most likely the next hearing, will

probably deal with the problem with plastic disposables and floatables that are coming down to the shore; and it's suspected that the main source of that problem right now is the Fresh Kills landfill in Staten Island. We may, in fact, have the next hearing in the Middlesex County area to deal with that problem, and then that will be followed, eventually, with other local hearings.

I'd like to start out, first of all, by having as our first speaker Victoria Schmidt, who is the Director of the Division of Travel and Tourism for the State Department of Commerce and Economic Development; and just preface that by saying I think you're doing a wonderful job -- nice to see you again -- and also to remind you, from what I've been told, to speak in both the black mike and the silver one, because one is and I the tape recorder quess the other is for for amplification in the room. Thanks.

V I C T O R I A S C H M I D T: I have a prepared statement, but I'll be happy to answer any questions from the Committee.

Good morning. My name is Victoria Schmidt. 1 am the Director of the State Division of Travel and Tourism, and I want to thank Senator Pallone and his Committee for the opportunity to speak at this hearing today.

I would like to begin by clearly defining for you the relationship between the environment and tourism. Throughout the world, natural wonders have long been considered top tourist attractions. People want to see and enjoy what nature has created -- the Grand Canyon, the Rocky Mountains, the Great Salt Lake, to name just a few.

Here in New Jersey, our natural wonder is a 127-mile long ocean shoreline, the longest stretch of white sand beach in America. Our tourism industry began with this beachfront and clearly, it is our shoreline that has made tourism New Jersey's second largest industry, providing jobs for more than 300,000 persons. It is the shoreline that has made New Jersey fifth in gross annual income from tourism in the nation.

New Jersey's tourism industry is an \$11.4 billion a year business. It annually generates more than \$340 million in sales tax revenues for the State. We estimate that 70% of our tourism dollars are expended during the summer months, since the shore is our number one tourist attraction.

I will leave to marine biologists arguments about the effect of water pollution on marine biology. I am here as a tourism industry official to voice support for a clean environment. I wish to make it clear that there are thousands of business owners whose livelihood depends upon a clean environment. Not only boardwalk vendors and shore community businesses, but those thousands of other business owners who are part of what I call the "silent economy" of tourism.

In order to get to the shore, visitors must drive This means that beach of the State. through other areas closings affect not only the shore economy, but businesses There are literally hundreds of restaurants, hotels, inland. gas stations, gift shops, roadside farm stands, and many, many other establishments throughout the State that depend on the shore traffic. These include the small shops and family businesses that have prospered in this State for generations, and the major corporations, such as national hotel chains, which have invested billions of dollars in New Jersey and offered employment to thousands of our residents.

And there are the residents, your constituents, including shore area residents themselves, who use this great natural resource. Like us, they, too, want clean beaches. Those of us who live in New Jersey also vacation in New Jersey.

Further, I'm sure you all are aware of the fact that there has recently emerged a new New Jersey. There is a growing sense of pride among New Jerseyans, and throughout the rest of the country there is a growing sense of respect for our State.

We have come so very far. We commit \$8.1 million in State revenues annually for tourism promotion, and tourism is one of this State's biggest growth industries, increasing 26% between 1983 and 1984. The Statute of Liberty Centennial is bringing even more tourists to New Jersey. We are projecting an overall 10% increase in tourism this year over last.

We cannot control the weather, Senators. But the State's vital tourism industry should not be subject to the deleterious controllable factors, such as water pollution, which can damage the industry at the very peak of our tourism season. It is far too important to the health of our economy and the well-being of our residents.

Indeed, we cannot even afford the perception of pollution, let alone the reality. Even if the beaches are open, if people think our water is polluted, they will stay away. We simply cannot afford to have our reputation as a premier family vacation destination tarnished in any way.

It is my understanding that under Governor Kean's leadership in the field of environmental protection, efforts are being made and goals are being accomplished. These facts should be known, and all of us -- State and local officials, concerned business owners and environmentalists -- should be relentless in our efforts to preserve and protect our valuable natural resources and inform the public of both our concerns and our successes.

As I said before, the State's tourism industry began at the shore. Let us not allow it to end there. Please count those of us in the Commerce Department to assist you in whatever way we can. Creating and maintaining jobs -- in factories or in fishing boats -- is our number one concern. I know it is yours, too. Working together, I am confident we can remove any obstacles to our continued economic growth.

Thank you again for this opportunity to testify today, Senators. I will gladly remain to answer any questions, if you so desire.

SENATOR PALLONE: Thank you. I just wondered -- is there any estimate of the business loss that was suffered by last year's beach closings in general?

MS. SCHMIDT: No. We have no way to -- of measuring that. We are undertaking in FY '87 a survey with U.S. Travel Data Center from Washington, a survey of the beach areas to find out why there is a decline in several communities throughout the State along the shore. As I mentioned, the increase in tourism will be about 10-15% this year, but there are many other areas in the State that will contribute to that, particularly the northern part of the State.

SENATOR PALLONE: I know you've hinted at it, but what other -- what basic long-term effects would you see from future beach closings? I mean, obviously, you feel that it has had some effect already.

MS. SCHMIDT: Yes, it has had some effect, but not in the dollars that can be counted, so we have nothing to really attribute -- nothing specifically, and until we do our survey, we really can't tell you that it has been badly affected.

SENATOR PALLONE: So, it's more a perception, at this point?

MS. SCHMIDT: It's a perception. But we are very conscious of the perception, and there is a negative perception in many areas.

SENATOR PALLONE: What about the tourism revenue figures you've given me? Does that include the fishing as well -- recreational ocean as well as the bay fishing?

MS. SCHMIDT: All types of recreation in the State of New Jersey.

SENATOR PALLONE: Have you felt that fishing -- the recreational fishing industry has been harmed by the perceived pollution problem as well? Could you give me any indication on that?

MS. SCHMIDT: I'm sorry, I can't respond to that.

SENATOR PALLONE: Okay. Now, just as a-- I don't believe you mentioned it, but what does the State spend annually to promote tourism?

MS. SCHMIDT: I did mention it, but I'll repeat it. I'm happy to repeat it.

SENATOR PALLONE: Okay, I'm sorry. Go ahead.

MS. SCHMIDT: It's 8.1 million in the FY '87 budget, which was increased from 1.2 million in 1982, and it was about a quarter of a million before that.

SENATOR PALLONE: Okay, thank you very much. Senator Gagliano?

SENATOR GAGLIANO: Yes. Mrs. Schmidt, I think that you, like us, have to be ambivalent about this type of a hearing in the middle of the summer. We're here saying that we want the tourism, and that tourism has started at the shore, and we want it to continue at the shore, and increase and get better, and yet we have to recognize that we have a problem which directly affects tourism. I frankly was concerned about having a meeting at this time of the year, and thought maybe it would be better -- we would get the same testimony, the same effect -- by having it in the fall. What's your feeling about that, or do you have one? I mean, we take--

MS. SCHMIDT: Oh yes, I do have a feeling--

SENATOR GAGLIANO: We take our opportunities when we have them -- how do you feel about it?

MS. SCHMIDT: I understand your comment about being ambivalent. I have been somewhat, but I'm not, by the very fact that we're having -- you are having this hearing is very important to everyone in the tourism industry, because it focuses attention not only on the problems but on the progress that has been made. And to my knowledge, the Department of Environmental Protection has been dedicating itself to this, and the Governor has been supporting it; and improvements have been made. And I feel we should focus our attention not only

on the problems, but the improvements, because I was completely unaware of all the improvements until a few months ago, and that is what I address myself to.

SENATOR GAGLIANO: So that while the publicity may come from a hearing like this that may bring out some of the issues rather graphically, of the pollution that we have, is overshadowed by the fact that we are doing something about it. And maybe we will come up with a timetable so that while the short-term losses might hurt a little bit, in the long term, we can count on a much better situation. You're satisfied with that?

MS. SCHMIDT: Yes, I am. The very fact that problems exist, and that we are doing something about them -- the very fact that we are having this hearing today, I think, is a positive step forward; and letting people know that we are having this hearing is important, that we are conscious of it and are doing something about the problem.

SENATOR PALLONE: Thank you very much.

MS. SCHMIDT: Thank you very much for having me.

SENATOR PALLONE: We have on our list Josephine Fryar, the Tourism Coordinator for Ocean and Monmouth Counties, but I don't know if she's here. (pause) Okay, guess she isn't. Then I'd like to have Mr. Raymond Bogan, from the State Marine Fisheries Council. And I take it you're going to outline for us the problem, and hopefully, improvements with regard to the fishing industry.

RAYMOND BOGAN: Yes, Senator.

As a recap or introduction, my name's Ray Bogan. I'm a member of the Marine Fisheries Council, and the Fishery Development Commission, which is a Commission created by the Governor by executive order regarding the economic development of the fishing industry. I'm also a captain of party and charter boats, and my family has been long involved in the party and charter boat industry.

Fishing is impacted directly and indirectly by the pollution matter. Specifically, I'll talk about sewage -sewage discharge within the State of New Jersey, and how it impacts directly, both negatively and positively. I'll pick a couple of fish which are primary draws in terms of money for the fishing industry; specifically, the recreational fishery, although the fluke fishery, which 1 will discuss, also has a major impact and is a major fishery for the commercial fishery.

Fluke are most directly affected by low oxygen levels. That is the primary manifestation of pollution as it affects plankton, algae, and when they reproduce through feeding on any kind of sewage -- excessive sewage -- they proliferate, bring down oxygen levels. That immediately affects fluke insofar as they become lethargic. We lose quite a bit in terms of fishing ability with those.

Now, there are many other factors involved in that -low winds, that type of thing. But that is one thing that we see directly from sewage outfall, that is, its effect on fluke.

Likewise, we have a fish that is going to become very popular at this time of year, and that's the tuna fish. Right now -- I just got a report yesterday that the fish had left from Block Island -- what they call medium-sized tuna, that's between 100 and 180 pounds. There are literally hundreds and hundreds, maybe thousands, of boats which go for tuna that size, as well as billfish.

Now these fish, after leaving Block Island, have a couple of routes they can take. They can hit what we call the mudhole, which is approximately 12 to 15 to 18 miles offshore, depending on what part of the shore you're at. The one thing we've noticed, for example, last year, we had a trend of what we'll call dirty water -- for lack of a better word -- come in shore. When you're in the air or -- scientists can monitor where this particular dirty water is quite -- from our standpoint, it's quite easy to see, just because we go out and

we see a difference in water. You can go to certain parts of the mudhole, see down 40 foot of water, and others, you can see 20 foot of water. Last year, the problem we had with the tuna fish was, tuna came and skirted the area of pollution. We were cut off -- primarily cut off from a giant tuna fishery last year, which was something that we fought very hard for from the National Marine Fishery Service to get. The fish will skirt offshore, thereby making it much more difficult to find them because of the normal spots to go to are cut off, and they have to go find alternative food sources in different areas.

Those two things are -- the fluke and the tuna are fish that are affected directly right now. As for any form of chemical discharge, one of the fish that comes most readily to mind is bluefish. The bluefish -- There have been quite a few bluefish warnings, and the DEP -- the State DEP -- puts out warnings, I think, twice a year regarding bluefish on PCB levels and chlorine levels. That has the direct impact -- As a matter of fact, the best way you could find out is standing on a dock before the boats go out. The fishermen will come down -- and this is not uncommon now, unfortunately -- for fishermen to come down and say, "Sure, we can catch them, but we can't eat them." That -- When the -- I'd say the most major press release on PCBs came out, was two years ago -- two summers ago -- we had a noticeable -- probably 40-50% -- dropoff in the bluefish industry. Now, mind you, the bluefish industry is considered about the most major -- that and the fluke industry are considered the most major parts of the recreational fishery in New Jersey. They were cut down -- not the fluke, T shouldn't say, but the bluefish were cut down between 40-50% for a period of time. That cutdown tapered off, but we still have that negative impact. We don't have repeat fishermen as we once did.

That, for a recreational fishery-- There's the old saying. "You have to get the hay while the sun shines" -- it's

kind of tough to get it, because every time any form of pollution scare comes out, it immediately impacts the fishing industry, even though it may be indirectly. Just by guilt by association, so to speak -- the fact that we're in the ocean all the time. You hear about negative problems, some form of pollution problem with the ocean -- that immediately impacts on the fishing industry.

1 want to give an example of a positive impact that we've had with regional sewerage authorities, specifically, the Ocean County. We had, at one time -- say, 15 years ago, as 1 can remember -- many divers would come in and talk about the winter wrecks -- near the Mantoloking pipe, specifically, there are three, I think, outfalls from the Regional Sewerage But the Mantoloking pipe Authority of Ocean County. in particular -- there are some wrecks and rockpiles -- the rockpiles being created by the Ice Age -- have formed there, and fish use those as havens. There have been times where, as I said, 15 years ago, where divers would come in and talk about dead wrecks. Specifically, they would say that there were brigalls (phonetic spelling), lobster, other forms of crabs which would pile up on top of a place we call in-rock. They'd just pile up, and pile up, and pile up, with the sewage sediment.

Now, during the winter we don't expect to see that because generally, you have better water quality, or at least, it appears to be better quality during the winter. That was pretty disheartening. Since the Ocean County Regional Sewerage Authority has, so to speak, gotten its act together and we have better treatment systems, it's been noticeable that during the winter, we can fish for blackfish, for example, on the areas we call in-rock and that area off of Mantoloking. That is a fantastic result of somebody saying we've got to do something about a problem -- a sewage problem. They did it, and we had an immediate impact -- a positive impact. Also, from those -- from Ocean County, we have in the bay, we have better crab fishing and fluke fishing. We got reports from tackle shops within the Mantoloking-Bricktown area, on their improved fishing within the bay. So, that not only improves for tackle shops, it improves for boat liveries, which, as I believe the senators know, most boat liveries are disappearing because of decreased river fishing -- party boat and charter boat owners, especially charter boats that fish in the bay.

I'd just like to juxtapose two pipes -- and when 1 refer to pipes again, discharge pipes -- one off of Mantoloking, the other off of Ocean Beach, or Ortley Beach, rather -- that is the Ciba-Geigy pipe. Now, I know the Ciba-Geigy pipe is being -- and the whole Ciba-Geigy controversy is being handled by another -- by the DEP itself, but it's an interesting thing to look at.

We had fishing in the early spring of about three years ago to four years ago, when supposedly, Ciba-Geigy was having no problem with any form of chemical discharge or any kind of problem with the treatment system within their plant. We had such excessive fin rot that we had to leave areas -- we could no longer fish with the excessive fin rot we had. Fish were coming out with no tails, literally. Customers would ask us what they are -- you look at them, and when you first see them, it's not uncommon to have fish attacked by other fish, or by sharks, and you can quite simply -- especially a ling, which is a common, in-shore fish and say, "Okay, that's a shark, or it's a bluefish, or something like that." The problem was, we couldn't justify that because it was during the spring, and then when you took a closer look at them -- when you've been fishing long enough, you can recognize fin rot, because it's not a sharp cut, it's a very soft, sore -- it almost looks like a (indiscernible) from bubonic plague. It looks terrible. And from what we gather, by having form any

of basket samples of their meat checked, there are no chemical problems within the fish itself, but the image that that gives, coming up with a rotted-away fish, is pretty bad. We left, and had to go, as a matter of fact, to the Mantoloking pipe and fish in that area, because there's a constant water temperature there, and the fish like that area. No problem with fin rot in that other area -- or minor, if any.

The fishing industry is supposed to be worth, in the State of New Jersey, somewhere over a billion dollars. The DEP-- From what l've heard, there are conflicting breakdowns of that, but roughly, they say, over \$600 million for the recreational fishery, and over \$400 million for the commercial fishery.

Commercial fishermen and recreational fishermen have already said -- and this is more or less a response to Senator Gagliano's question, just part of this, regarding the actual impact on the industry -- our fishermen have said that we would be willing to have negative publicity, whether it be during the summer or any other time when we have good business, if it's going to have some action follow from it. Our reluctance to have bad publicity is sometimes -- the impact is there, but unfortunately, it's not sustained long enough to actually implement some form of action.

A hearing like this is going somewhere beyond just this hearing. You're trying to reach a goal, and that's very -- from a fisherman's standpoint, that's a very laudable goal, and we're very-- It's kind of a bittersweet type of thing, but more sweet than anything, because we're trying to accomplish something here. We're trying to have something that we can pass down to children. We're trying to continue the fishing industry. And the only way we see us being able to do that -besides rising insurance costs and stuff like that -- would be the pollution matter. We have to directly affect it. We have to, rather, directly address it. We have to directly take responsible action -- for example, Ocean County Sewerage

Authority. They've done a good job, and they've had an immediate impact that we can point to. People see that, and people see it's possible. Then you go up to Asbury Park, you go up to Deal, and it's a whole different ballgame. Whole different ballgame. Fin rot, even from sewage outfalls, you have fin rot. Fortunately, because it's got such good bottom up there, with obstructions and things like that -- which fish live in, they love the area. If they weren't up there, if all things were equal between north and south, they wouldn't get anywhere near it. They'd be off that Ocean County area most of the time, where you have bigger fish stay quite a bit.

that is the impact on the fishing industry. So. That's where we would -- why we would like something to Specifically, don't know enough about 1 sewage happen. treatment to say what has to be done or what doesn't have to be That's for the DEP and for other folks with expertise. done. But I can say we're directly affected by it. We can point to many instances, unfortunately, where we are directly affected by it, and anything that the Committee here, or the Commission here, sees that can help us or can help any of the other tourism industries, we'd greatly appreciate it.

Thank you.

SENATOR PALLONE: Ray, could I just say -- could I divide problems into two areas? On the one hand, I see that you mention almost a continuous problem, from certain outfalls; and then on the other hand, I suppose we have the fish kills that occur occasionally because of a sudden situation.

With regard to the fish kills, I mean, what basically causes that? I mean, is that because at any given time there's a great deal of raw sewage, maybe, that's going into the coast, or is it a combination of a long-term problem that just all builds up at once?

MR. BOGAN: Well, that is something that scientists that we have come on our boats, on occasion -- scientists that

I talk to, both State and Federal level, disagree on, to a small extent. We have had people within environmental organizations who have come out and said, on one hand, "Look, you have a lot of pollution coming in, you have -- rather, a lot of sewage coming in." That's great food for plankton and that type of thing. They proliferate; they take oxygen out of the water. As soon as there's oxygen out of the water, fluke and other in-shore dwelling fish need that oxygen. At best they become lethargic and they will not bite; and at worst, they'll die. We've had that. The '76 fish kill was probably the most notorious -- we had terrible situation there.

And the same thing happened in the '76 fish kill as has happened, perhaps, this year -- that is, when we don't have recurrent, what we call nasty weather -- that is, northeasters, southeasters, which will churn up the water and bring in the oxygen -- when we don't have that is when we lean towards a fish kill. That's why this year it wouldn't be surprising to have a fish kill. We had -- this is not the fishing industry, but Senator Gagliano mentioned people who said they smelled it. I live on the ocean. I live on the ocean in Sea Girt, and we have people who won't get into the water right now, because it stinks. That's pretty bad.

You can smell that on a boat, because most of the fluke boats, for example, are right in shore. And there was a thing--

SENATOR PALLONE: What I wanted you to answer, if you can, though, is, in other words, when you have the fish kill situation, is that because we have pollution coming from maybe so many different sources -- possibly New York, New Jersey sources, sludge dumping, whatever -- and climactic conditions that build up at some point so that it occurs? Or, are the situations where locally, for example, a particular sewerage treatment plant -- maybe because of over-capacity -- ends up sewage to the ocean, flushing raw and that causes it immediately? Or maybe you can't answer that, I don't know.

MR. BOGAN: No, I believe it's cumulative. I can't answer it scientifically because I only go on what I read, but it's a cumulative thing. And the reason 1 say that is because fish kills usually don't happen in one small area. At least, not to our experience, they haven't. When we have a fish kill where we can't catch fish off of Asbury-- If we move down to Spring Lake, we can't catch them, and we usually consider a cutoff line to be between the Shark River inlet to the south and to the north. And when we get the fish kill down there, it has to be some form of cumulative thing, because of conditions that, as low wind and other things which would bring oxygen into the water -- hot weather -- and then heavy sewage discharge, you just wind up getting a fish kill.

SENATOR PALLONE: But at the same time, from what you told me earlier, there's definitely local areas, because of outfalls, where the fish are being contaminated because of those outfall sources.

MR. BOGAN: Sure. The ones that I can refer to are Asbury -- that Asbury pipe-- That's an incredible pipe. 1 mean, you can sit right on top of it and you have your boat pushed by it if you want to be. You can be drifted by it, and that type of thing. You have problems-- Asbury is more vulnerable to the fish kills, especially in weather like this. Fortunately, you can move up or down near inlets, and get that more oxygenated water. But specifically, those pipes right there pump quite a bit out.

SENATOR PALLONE: I just have one more question. In some of the newspaper reports, we hear talk about, part of the problem may be caused by fishing vessels themselves, because of toilets that aren't being properly maintained, or stuff going out into the ocean, or material being thrown overboard. I just wanted your response to that.

MR. BOGAN: What party boats and charter boats that carry a certain amount of people are required, are holding

tanks on a boat. We are required to discharge them offshore -a certain distance offshore. We had heard folks saying they're coming in-shore, they don't want to go offshore, so they're emptying their tanks in-shore. In fact, the largest percentage of the boats which fish in-shore for fluke are also night bluefish fishermen. Most of those people, from a practical standpoint, have no reason why they cannot open their tanks the required distance offshore, and the reason being that they are heading off there anyway, for bluefish at night.

Secondly, we do have people who come down and monitor our tanks anyway, to see the condition of tanks. That is the Coast Guard. We're inspected -- we have top and bottom inspection every year. They look at the opening and the bottom of the boat to make sure everything's fine with that. They also look at the tanks, and they look at the open and discharge valves. So, we're monitored on that.

SENATOR PALLONE: But that regulation, then, is strictly Federal, not State?

MR. BOGAN: Yes, that's Federal. That's right.

SENATOR PALLONE: Okay. There's nothing-- The State is not involved in the regulation at all, really?

MR. BOGAN: No, not that I know of.

SENATOR PALLONE: Okay. Senator?

SENATOR GAGLIANO: Ray, is it possible that a captain of a fishing boat could decide -- if he wasn't going to go outside, so to speak, for two or three days -- that he could, without getting caught, dump his tanks in-shore?

MR. BOGAN: Yes, sir. Yes, he could.

SENATOR GAGLIANO: So really-- And with their knowledge of the waters and their knowledge of where the Coast Guard might be at any one moment, they probably could get away with it, couldn't they?

MR. BOGAN: They could. Yes, they could.

SENATOR GAGLIANO: 1 don't know, personally, how else

it could be regulated by almost a matter of honor, which I think most of the fishermen do.

MR. BOGAN: There is a second way, and it was practiced -- it has been done before. That is, they had people come onto boats without acknowledging that they're government representatives, and they put a dye into the head; and any discharge -- if anybody violated a discharge, then sure, they could immediately pick it up because of that dye. I think, at one time, there was a New York boat that was caught doing that, a few years ago.

SENATOR GAGLIANO: Are you satisfied, though, that most of the captains abide by the law?

MR. BOGAN: Most of the captains, yes. I'm sure that there are persons who don't.

I can give you an example. Sunday I was out and the deckhand said we had a problem with an odor downstairs in the cabin. I was running the boat for another person. He said, "Boy, we have"-- and they didn't do it last night. The boat hadn't been out the night before. I just told him -- 1 said, "Wait until tonight. You're going out tonight to do it then." That's how most people handle it, because it's just a very easy thing to do.

SENATOR GAGLIANO: Ray, you fish from Sandy Hook -your people, I know you have a fishing family that goes back to three or four generations. Your boats-- Do you fish Sandy Hook and south?

MR. BOGAN: Yes.

SENATOR GAGLIANO: How far up into the Sandy Hook area do you go?

MR. BOGAN: One cousin fishes around the hook on occasion. He will fish-- The only problem we have with that area is, there's a reluctance to go up there because some of the fish -- the meat smells a bit.

SENATOR GAGLIANO: In general -- or, if you can be specific -- in your opinion, what is the difference in the quality of the water between Sandy Hook and, shall we say -not the bites so much as -- that's a large area -- off the northern tip of Sandy Hook, compared with the quality of water as you see it -- as a fisherman sees it, on a day to day basis -- and the quality of the water, say, Manasquan and south? Can you describe the difference to us?

MR. BOGAN: The difference in clarity, for example--Sometimes you can't see more than 2-3 feet off of Sandy Hook, down. You don't have any more visibility than that. Off the Manasquan, sometimes, we have 15-20 feet. Sandy Hook has many more suspended matter, whether plastic--

SENATOR GAGLIANO: Garbage.

MR. BOGAN: Some things. I don't know what it is -some pretty gross things up there. And on occasion we have what we call breaking the barrier of the Shark River inlet.

SENATOR GAGLIANO: But basically, Manasquan is the barrier, isn't it? Manasquan south?

MR. BOGAN: Yes, exactly. And on occasion, we see that; and then you'll get the stuff washing up on the beaches in Spring Lake and Sea Girt. Usually, however, we don't have that much of a problem. We have-- 1 don't know how to describe it, but cleaner looking. A better color.

SENATOR GAGLIANO: On a scale of 1 to 10, what would you give the quality of the water immediately off the tip of Sandy Hook, compared with the quality of the water south of Manasquan -- Manasquan and south? Scale of 1 to 10 -- 10 being the best, 1 being the worst.

MR. BOGAN: Right. I would say, Sandy Hook about a 2, Manasquan probably around a 7 or 8.

SENATOR GAGLIANO: Thank you.

MR. BOGAN: Thank you very much.

SENATOR PALLONE: Thanks a lot, Ray.

We also have someone from the Department of Health. I'm not going to ask them to come up now, but -- who will basically outline, I hope, the Department's response and concerns about the effects of coastal pollution on the health of individuals. But before we get into that, I wanted to skip around a little and have one of our county health officers, Mr. Lester Jargowsky. Could you come up, please? The reason 1 want you to speak now is because I think that in many of the areas that we've talked about, it's the local and the county health officials who are directly involved in the day-to-day operations of things, and see the pollution problems more directly, perhaps. And I was going to ask you to basically outline some of the problems that you foresee; and also get into, if possible, the monitoring system, how the county fits into that, and what you see as point sources -- New Jersey point sources in terms of outfall storm drains, etc.

LESTER JARGOWSKY: Thank you, Senator. I really appreciate your invitation. I also appreciate your outspoken leadership in Monmouth County. It's interesting that both Senator Gagliano and Senator Pallone are both from Monmouth and they have this interest. I think it speaks well for the county, and the need for promotion of good environmental quality.

This is for purposes of qualification. My name is Lester Jargowsky. I'm the Public Health Coordinator for the Monmouth Health Department. I've served in that capacity since 1978.

SENATOR GAGLIANO: We have a third member from Monmouth County.

SENATOR PALLONE: We'll interrupt you a second to say that Senator Van Wagner, also from Monmouth County, is here.

MR. JARGOWSKY: Yes. Duly noted that Monmouth County is interested in environmental quality.

Since 1978, I've served as the Health Officer for Monmouth County Health Department; and for some time now, we've been doing County Environmental Health Act work pursuant to agreements with the New Jersey DEP.

As part of those agreements, we are a part of a statewide effort to intensely monitor the beachfront. This beachfront monitoring takes place in the coastal counties on every Monday, at predesignated points. The samples are brought back, in our case, to our County health laboratory in Freehold, immediately analyzed using the MPNE-1 (phonetic spelling) methodology for 24-hour analysis. If the counts are high, the samples are -- there's a re-sampling effort that takes places in bracketing above and below that particular point. And if the numbers come back high, the beach is closed and re-sampling continues until we get some clean water.

We have had some problems -- isolated problems in Monmouth County with fecal coliform counts, notably in the Long Branch area, regrettably, for almost two weeks now, off the Chelsea Avenue area -- Kids' World Beach, and it appears to be associated with some infrastructure problems. But what I'd like to do is go through what I feel are the key coastal water pollution sources, with the Committee's blessings.

The first topic I'd like to address is navigational hazards or aesthetical problems, so put that in a general category. These are things like timbers, old dock material; and it's been rough -- it's been bad, the last couple of months out there in the ocean. Just Sunday, I was out in my boat and I witnessed another boat hit one of these timbers. And it's a scary sight. There were young kids on board, and there was a crash that could be heard for some distance, with the fiberglass bending and creaking. And they immediately donned their life vests. It's happening all the time.

And when you look at these timbers. you see they're partially burnt, most of the time. We feel that this is being caused by the burn site that's located roughly 18 miles off of Manasquan. It's -- as we understand -- under EPA control, and there's absolutely a need to monitor that site more closely. A lot of material is getting into that ocean without being burnt. And perhaps there should be an alteration of the burn schedule, so if in fact they do encounter a problem with a total burn, that if it's released, it would be in a less critical time frame. And there aren't as many boaters on the water.

The size of some of these timbers are awesome -- 20 feet long, telephone poles. Easily, with a high speed boat, someone would sink. It's simple.

SENATOR GAGLIANO: Can I interrupt?

SENATOR PALLONE: Sure, go ahead.

SENATOR GAGLIANO: I know Senator Van Wagner does too -- I did not attend the hearing in Point Pleasant because I was here on another matter, mainly a quorum call and other things in Trenton. But with respect to burning -- that is really an issue that is bothersome. I don't know -- maybe you know, Senator Pallone-- Since it's regulated by EPA, do they have people -- not on board, necessarily, but on ships or boats adjacent to the burn -- so that we can feel satisfied that what they're doing meets the regulations, whatever those are?

MR. JARGOWSKY: Not to my knowledge.

SENATOR GAGLIANO: I have heard this complaint by more than some people, about the timbers that are partially burnt, that are floating in the water off Sandy Hook and in that area. And if they're really burning 18 miles off shore, and the currents are bringing them there, then the burn isn't right. But I'd just like -- I wonder what EPA is doing, or DEP, or whomever is in charge, to see to it that the burn is proper. And maybe you can address it.

SENATOR VAN WAGNER: What are the frequencies of occurences that you've monitored?

MR. JARGOWSKY: 1 can give you first-hand account from being on the water this last weekend, that in a run from Shark River up to the Long Branch area looking for some elusive fluke, the -- in that stretch, encountered about 13 of these timers. Now, that's a straight line, with visibility perhaps being 200 yards on either side of you, seeing something bobbing.

SENATOR VAN WAGNER: Would it seem to indicate that this was a result of a single event, then?

MR. JARGOWSKY: I don't think it's a single event, because--

SENATOR VAN WAGNER: Or is it an ongoing occurrence that perhaps, in following Senator Gagliano's line of questioning, needs to be addressed in terms of directing, perhaps, even our Commissioner of Environmental Protection to immediately contact Federal officials and express to them directly the concern we have about this continuing problem?

MR. JARGOWSKY: Yes. It seems to be a function of wind direction.

SENATOR PALLONE: Can I just--

SENATOR VAN WAGNER: Well, regardless of what the problem is, apparently -- I think--

SENATOR PALLONE: I wanted to respond to you, Rich, because I think-- We went -- yesterday, we went through a full day's hearing on the wood burning.

SENATOR VAN WAGNER: Yeah, we were here on a matter of Justice Wilentz.

SENATOR PALLONE: And just to give you an idea -- I mean, I was there for maybe three hours of it, and there was extensive testimony by fishermen, lifeguards, people that use the beaches, about problems with such timbers -- half-charred timbers. I mean, they were interfering on a regular basis, and over the last couple months, the incidents have been constantly

reported. The only thing I was going to interject here is to say that since the whole day was spent on that yesterday, and hopefully, based on all that testimony, the EPA is going to do something about it, although I'm not sure, but I hope--

SENATOR VAN WAGNER: Well, I was going to try to maybe wrap up that part of it and say, we ought to -- this Committee ought to direct and ask and request the Commissioner of Environmental Protection of our State to take immediate action in directing those EPA officials, whoever are responsible, to get in there and monitor that burning; and get that stuff cleaned up and stop that from happening. And that's their responsibility, period. I don't know what else we have to do about it.

SENATOR PALLONE: Why don't we do that? We're going to have representatives from DEP-- 1 think they're going to be after you, Lester, so why don't we bring that up at the time, if that's okay?

SENATOR VAN WAGNER: I would ask you as Chairman, Senator Pallone, if we could as a Committee, direct and request, as an immediate action right now -- as a result of yesterday's hearings, and what you have just said, that the Commissioner of the Department of Environmental Protection move right ahead and take that action, and get this job done--

SENATOR PALLONE: I think based on what I heard yesterday, that--

SENATOR VAN WAGNER: --and stop this nonsense from happening.

SENATOR PALLONE: -- that would be totally in order.

SENATOR GAGLIANO: I would only add that it would seem to me that we ought to -- and maybe all three of us, whoever is on this Commission -- that we direct--

SENATOR VAN WAGNER: Yeah, I wanted to also--

SENATOR GAGLIANO: --and that we sign it, and that it also go to the Regional Director of the EPA in New York,
because that's where it's coming from. It's coming right out of New York Harbor, and it's ending up on our beaches, like so much of the other crap that we get from New York. This is part of it. And I think that--

SENATOR VAN WAGNER: Is this burning 18 miles out?

SENATOR PALLONE: It's only 17 miles off of Manasquan inlet.

SENATOR GAGLIANO: Seventeen miles, and I think Lester said something about a function of the tides. Well, that's exactly the way the tides and the winds run.

MR. JARGOWSKY: That's right.

SENATOR GAGLIANO: And it brings it right back to the Sea Bright area.

SENATOR PALLONE: Right, and Spring Lake Head beach is closed, and all that.

SENATOR VAN WAGNER: I mean, where is that from New York Harbor?

SENATOR PALLONE: The material is taken from New York Harbor--

SENATOR GAGLIANO: The material comes out of the Harbor.

SENATOR VAN WAGNER: Oh, these are timbers being barged out from docks and so on -- yeah.

SENATOR PALLONE: --Right, and barged out to the site, and then only partially burned.

What about if we do this? We'll ask Ray Cantor to draft a letter on behalf of the Committee, addressed to--

SENATOR GAGLIANO: I would address it to the Regional Director of the DEP--

SENATOR PALLONE: EPA, you mean.

SENATOR GAGLIANO: EPA, I'm sorry, as well as the Commissioner of the DEP of our State--

SENATOR PALLONE: Okay.

SENATOR GAGLIANO: --and indicate our displeasure with what's happening. When we have testimony from a health officer who has seen charred timbers 20 feet long -- where was it again? Right off of Sandy Hook?

MR. JARGOWSKY: Yeah-- Well, it's in the stretch right between Shark River and Long Branch.

SENATOR PALLONE: We had Spring Lake beaches that were closed for that reason.

MR. JARGOWSKY: But Spring Lake-- We're also closed down -- Sea Girt-- There's all kinds of debris coming out there.

SENATOR GAGLIANO: Well, I think that testimony should be enough. We weren't there yesterday, but this testimony that Lester has should be enough to prompt us to try to do something about it.

SENATOR PALLONE: Okay. We'll have that --

SENATOR VAN WAGNER: And I think that perhaps we want him to also -- through his own departments, perhaps, himself observe the burning that takes place, or ask the possibility of jointly monitoring how this process takes place, how the disposal is carried out, when the timbers leave whatever site they're leaving. Perhaps we want to have somebody to go along and check how this process is carried out. Maybe there's a problem with that, in the way they dispose of them after they burn, or something.

SENATOR PALLONE: In other words, we would ask that they look into a possible monitoring on the State level as well.

SENATOR GAGLIANO: Monitoring--

SENATOR VAN WAGNER: Yeah, something more that would effect a long-range solution, rather than us having to have to come back here every three or four times and say, "Well, what are you doing about it now?"

SENATOR GAGLIANO: And one final point. If there's any way that the materials could be traced, it seems to me that

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the contractor, whoever that contractor is -- the person responsible for the burn -- should clean it up. 1 know it's a big ocean out there, but they're getting paid and they're probably being paid very handsomely for taking these materials out of New York Harbor, out into the ocean to be burned. And if they don't do the job, it's no different than any other contractor. They should be put to the test. They should clean it up, or pay for the cleanup; and that's why we have to move on this quickly, because these materials are out there, and they're out there now. We know they're there. Before they cause any more damage, let's make the contractor clean them up.

SENATOR VAN WAGNER: Well, the landfill operator -- if he violates or she violates, or even the county -- if they violate any standard set by the DEP in disposal -- either exposed litter or failure to cover, or whatever -- they get fined, and they get fined pretty heavily. And these people should be subject to the same fines.

SENATOR PALLONE: Okay. Do we have that basically outlined?

SENATOR VAN WAGNER: I just wanted to add, Mr. Chairman, that Senator Gormley, who is not on the Committee but who has expressed an interest in ocean pollution concerns, is where I should be, which is in Elizabeth -- this is a busy week in the Senate. And right now, since we had to do double-duty and I serve on this Committee, he asked me to express to you his support for whatever we do, and his concern with what's going on.

SENATOR PALLONE: Well, I appreciate that.

(To Mr. Jargowsky) You want to continue with the different sources?

MR. JARGOWSKY: Right. The next general problem area, I'll refer to as the garbage-refuse problem. And just to freshen up my memory of how things are done, and see if things are changed, last week I went up to Staten Island to take a

look at the garbage scows, to see if things have changed. And things haven't changed. The garbage scows are still being loaded over their capacity. If you take a look -- you could be right there by the highway, and drive by and you will see that there are peaks -- there are mountains on top of the scows. And gentlemen, if you keep in mind that scows have to be transported across open water that at times gets rough, something's going to fall off.

> SENATOR PALLONE: We're talking about Fresh Kills now? MR. JARGOWSKY: Yes.

SENATOR PALLONE: Okay.

SENATOR VAN WAGNER: This is garbage coming into that New York landfill?

MR. JARGOWSKY: This is garbage that's being loaded onto the scows for transport out to sea.

SENATOR GAGLIANO: And these are the plastic items that the fish eat and then can't digest, and die.

MR. JARGOWSKY: Exactly. Plus, whatever else.

That is-- I thought perhaps over the years, there might have been a positive change, so I decided to go up and just take a look. and see if there was a change. And there hasn't been a change. They're still doing business the same I don't know whether they're dumping short, or whether way. it's being caused by these garbage scows being overloaded in rough water, or what is happening, but we have a lot of -periodically, a spectrum of kinds of garbage, from watermelon rinds to plastics -- you name it. It's a little bit of And when it does come, it comes en masse. everything. So. it's not a boat -- it's not a small boat. They could never generate that amount of garbage.

SENATOR PALLONE: I mentioned before, Senator Van Wagner, that particularly Senator Weiss -- one of the main reasons he wanted to be on this Committee was because of his concern about the floatables, and the problems with Fresh

Kills. And probably the next hearing we're going to have is going to be located in the Middlesex County area, where we're going to delve into that and devote the whole day to that. But -- go ahead. I just wanted you to know that that was one of our main concerns.

SENATOR VAN WAGNER: Yes, Senator Weiss also expressed his concern; and he also is doing double-duty today, in the Senate somewhere.

But I was wondering just jurisdictionally, when you see this occur -- and I would assume that you've talked to other health officers in Middlesex County, perhaps, and Ocean County-- Do you make recommendations, or do you report these concerns in any fashion -- procedural fashion to the DEP, or through any mechanism?

MR. JARGOWSKY: Up in New York-- I don't have jurisdictional standing in New York. When there's transport through the Raritan Bay, that's within the purview, I believe, of the Interstate Sanitation Commission. It's a matter of coordination amongst those agencies.

This is not a new process that's going on. This is a long-term disposal method that's been around a long, long time.

that, SENATOR VAN WAGNER: 1 realize but I'm wondering--This may be so, but I think we've come a far distance, particularly in the State of New Jersey, particularly as it related to waste disposal and legislative initiative that have been taken in that regard. And the problems that are being created by what you're talking about now -- 1 looked at an analogy of the same as we've had before we organized a solid waste plan in the State, where we could track the waste and begin to develop methods of making sure waste went where we wanted it to go. And we're still struggling with that problem, and it's a difficult one.

But I'm wondering whether what we really need to have here -- because it seems to me we are continually addressing

this question, that we really need to bring the Commissioners of both States together -- Department of Environmental Protection -- together with those people who are in charge of directing the process of the Interstate Sanitation Commission, together with as many people as we can, and begin to address these problems on an official basis, and on an authoritative basis; and say, "Look, we are degrading the environment. We are endangering the environment" -- not necessarily sounding any health alarms, but that's always a possibility for any individual. Certainly, we're endangering the value of our resources, including the upland resources that are affected by those waters, and how clean they are.

And these forces -- somehow or other, with this practice having gone on for this length of time, and knowing that this continually occurs, summer after summer, on somebody's beach or another -- or in somebody's water or another -- we've got to stop to develop some type of vehicle or mechanism for coming in here and penalizing people, in the same manner that we find landfill owners and industry in this State, when we find they're polluting.

It has occurred right in my own district. Three days ago, the biggest fine in history, which is a very difficult decision to make because it affects the economy, I understand that. The harder you come down on the environment, the harder it may be to balance the so-called economic interest. But somehow or other, it seems to me that we've got to bring the two Departments of Environmental Protection-- I mean, I've seen you talk about these issues now for at least for or five years, and freeholders come together, and all the boards, and we try to bring public reaction. So, somehow, there has to be developed a joint solution here.

SENATOR PALLONE: Lester, let me just mention that possibly, at this next hearing, Senator, we could get some of those same people that were involved in that bistate hearing

that we had -- some of the New York officials, Interstate Sanitation Commission officials -- to deal with that whole problem with Fresh Kills and the floatables.

SENATOR VAN WAGNER: I think the Governors, even, of these two States have to really come down hard on this issue. I mean, we're damaging both States. We're not helping the cause of each other at all.

SENATOR PALLONE: Because we were asked -- a number of us were -- asked by New York legislators-- We had a meeting up at the World Trade Center, where they invited us to come over for a bistate hearing. And then we said at the time that we would reciprocate and have a meeting -- a similar bistate meeting in New Jersey, either in August or September. So, maybe we can work this in, in conjunction with this hearing that we're talking about -- the next hearing.

SENATOR VAN WAGNER: I would even add to that that we might want to suggest to those legislators in New York that by joint resolution of both States, that we pass identical resolutions creating some mechanism for directing at least the executive departments of those States, to bring together some type of vehicle to solve this problem.

SENATOR GAGLIANO: Excuse me -- through you, Mr. Chairman. Lester, where does the garbage come from? I've been through there -- driven in the area-- I see these mountains of garbage. Where does it come from, and then where does it end up? Where is it disposed of? Do you know? I really don't.

MR. JARGOWSKY: The Fresh Kills landfill is perhaps the largest landfill in the world, and--

SENATOR VAN WAGNER: If you drive down 440, you can see it.

MR. JARGOWSKY: Yeah. There's a lot of material being deposited there from the greater New York-Metropolitan area.

SENATOR GAGLIANO: So, it comes there by scow--

SENATOR VAN WAGNER: Truck, scow -- truck.

MR. JARGOWSKY: By truck.

SENATOR GAGLIANO: How is the scow involved -- the boats? The barges?

MR. JARGOWSKY: There appears to be a loading operation on the -- this is the South Side, and you go over there any given day and you can see them loading the barges -the scows. Now, the specifics of that operation, I'm not fully knowledgeable of.

SENATOR VAN WAGNER: I can tell you if you'd like to know.

SENATOR GAGLIANO: Yeah, I'd like to know, because I'd like to know where it goes when it gets in the scow. Other than that, if it doesn't fall off, where's it supposed to go?

SENATOR VAN WAGNER: As was pointed out, the landfill takes the bulk of the boroughs' of the city -- you know, the five boroughs -- it's trucked in. There are several specific facilities for disposing of the waste. They do have a resource recovery facility there, I think, in which they burn some of the waste, and I believe Getty synthetic fuels produced the project. So, they are attempting to get rid of some of it. You've got to think in terms of this huge waste stream, all right?

SENATOR GAGLIANO: Oh, it's monstrous.

SENATOR VAN WAGNER: That dwarfs anything that Monmouth or Ocean County could contemplate, in terms of tons of garbage and truckloads, okay? It's just beyond comparison.

SENATOR GAGLIANO: But when it gets on board the scow--SENATOR VAN WAGNER: Some of it they take out -- they truck to the scows, they load the scows, and they take it out for at-sea disposal. From my understanding, the only material that's supposed to be unloaded to go out is that which is authorized to be dumped in the "bite" area. Is that correct? That's supposed to be supervised.

I really don't know how much monitoring goes on at that landfill to determine what kind of waste really goes on those scows. I don't know. I mean, I'm not raising any alarm or making any charges -- I don't know.

SENATOR PALLONE: Excuse me. Just one second, before we go on. You know, we don't have a great deal of time today, and just a word of caution. We are going to deal with this at our next hearing, and we really haven't gotten into, today, the point -- New Jersey point sources, and what DEP's response is to that.

SENATOR VAN WAGNER: All right. You want to drop that subject?

SENATOR PALLONE: I want to get moving.

SENATOR GAGLIANO: Okay. I just want to put this in the record. 1 want to know, when this stuff is loaded -- which apparently comes from the five boroughs of the City of New York -- and it's loaded on the scows with cranes -- and 1've seen the cranes. I've seen the scows-- Where is it dumped? Is it dumped in the ocean, and if it is, how much longer is that permit going to last? Because I thought it was over with. I thought that we were soon going to end garbage dumping.

SENATOR PALLONE: Why don't we ask Ray, if you would for us -- get as much information as we can about the landfill operation at Fresh Kills, because I understand it's a number of things. It's the material being -- coming to the landfill, it's the way it's disposed of at the landfill, the problem with at-sea disposals-- There are a number of things involved.

SENATOR VAN WAGNER: There are several processes.

SENATOR PALLONE: If we could have that for the next hearing.

Would you just -- Lester, please, if possible, concentrate on New Jersey sources at this point. 1 know we can go on about the sludge dumping and the dredge material and all that, but I want to concentrate on New Jersey sources because

we're going to have the DEP officials speak next, to talk about their monitoring enforcement program.

MR. JARGOWSKY: Okay.

The next topic is the red tide-green tide situation. which we experience periodically along the shoreline. All of these items 1'm going through are reasons for closure of beaches, and it has the impact on the tourism. Just as a general comment, it's my belief, from the Monmouth County experience, that the red tide-green tide always starts in the vicinity of Long Branch. Always. And I've seen it from a boat so many times -- that's where it always starts, and it tracks down the shore from that point. You can make your own to what's happening down there, but my assumptions as assumption is that the nutrients coming around the hook from New York and elsewhere are really loading up the area, and -be that as it may.

Sewage -- get into sewage, the fecal coliform counts. The point sources along the oceanfront -- start off with the list with the primary treatment plants. In Monmouth County, we have two primary plants: the Deal plant and the Asbury plant. which are the ones of concern. Amazingly, the Asbury Park primary plant is operating very well, and I have to give them some credit, because last year, I couldn't say that. But as of late, with the age of that structure, they are doing their darndest with that facility, for what you can do with a permanent plant.

The Deal treatment plant -- just a matter of a couple of weeks ago. I witnessed. in the ocean, a massive discharge right off of that plant. It discolored the water in a very large area. I only wish I had a camera at the time -- I was on a boat. I did secure samples, and there were fecal coliforms in that water. It was reported, and since then, it hasn't happened again. But the primary plants are something we have to upgrade.

SENATOR VAN WAGNER: Those the only two? MR. JARGOWSKY: Yes, that we have--

SENATOR PALLONE: In Monmouth, but there are others.

SENATOR VAN WAGNER: What about the other waterways, besides the ocean? The bay -- what about the bay?

MR. JARGOWSKY: There could be small package plants located in certain areas that could be causing problems, but nothing major.

SENATOR VAN WAGNER: Is there any discharge into Raritan Bay?

MR. JARGOWSKY: Oh, Raritan Bay, yes. Yes. Up in the Highlands area, there is a problem. There is a need of upgrading that problem in the Highlands.

SENATOR VAN WAGNER: What else?

SENATOR GAGLIANO: I thought the Highlands was coming into Middletown.

MR. JARGOWSKY: But that's coming into the other --

SENATOR VAN WAGNER: What else?

MR. JARGOWSKY: They're about the most critical ones.

SENATOR VAN WAGNER: You only mentioned one.

MR. JARGOWSKY: The Highlands, Deal, Asbury.

SENATOR VAN WAGNER: No other problems -- point sources?

MR. JARGOWSKY: As far as sewage facilities? Major problems -- they're the only three.

SENATOR VAN WAGNER: No, any point sources. Are you just on sewage?

SENATOR PALLONE: No, he's-- What he's going to do is talk about the primary plants, the secondary, and then other point sources.

SENATOR VAN WAGNER: Oh, I see. Well, how many secondary plants do we have?

MR. JARGOWSKY: There are numerous secondary plants, like the Neptune Township Sewerage Authority, the South Monmouth Regional Sewerage Authority--

SENATOR VAN WAGNER: Are you having any difficulty with those?

MR. JARGOWSKY: Generally, they're okay. What happens with those plants is, what has to be monitored are their ocean outfall lines. Storms break up the pipes.

SENATOR VAN WAGNER: Now, let me ask you a bigger question. Are they having any problems with some of their operations, based on size and--

MR. JARGOWSKY: Not really in Monmouth County. Not really. They're basically holding their own; in fact, they're doing rather well.

SENATOR VAN WAGNER: Well, we have well-run utilities in this State, I have to say that.

MR. JARGOWSKY: But their ocean discharge lines -they're supposed to be going out some distance into the ocean. Periodically, storms will tear up those lines. For example, the Northeast Monmouth Regional Sewerage Authority, just a matter of a month ago, was repairing a line. You saw a big barge out there in the ocean where it was broken in several intent is this treated effluent is to points. So. the discharge some distance off the shore, and what happened by the break in the line, there was a discharge close to shore, so that--

SENATOR PALLONE: Lester, can I just ask you to focus this a little bit, if possible -- Run through this; this is what I'd like to know -- and I think this is what Rich is getting at also -- We have primary treatment plants, we have secondary treatment plants. We have possible point sources from storm drains that are improperly carrying material. We have some storm drains and outfalls that may enter into rivers, that are then carrying the material out into the ocean. Just, if you could, outline those problems. In other words, primary treatment plants obviously need to be upgraded, and those are the three that you mentioned to us, okay? They may

not pose an immediate problem, but they do need to be upgraded to secondary treatment. With regard to the secondary treatment plants in Monmouth County, do you see a problem with over-capacity at this point that needs to be corrected? And then thirdly, the other point sources -- the storm drains and the river sources.

MR. JARGOWSKY: Okay. Secondary plants -- at this point, we do not see over-capacity. There's a good amount of our sewage in the high-growth areas of Monmouth County that's being diverted down to the Ocean County Utilities Authority, who's been signing up a lot of the sewage claims.

SENATOR VAN WAGNER: They have a big system?

MR. JARGOWSKY: Yes.

The next item are the storm drains. Through our survey work, we have found, on several occasions now -- and probably will find more -- where a long, long time ago, plumbers connected up houses and connected to the wrong pipe. It's not a sneak condition; it's a perfect connection from the house -- the building sewer -- right to the storm drain, and the next pipe over is the sewer line -- sanitary sewer line. They just made the wrong connection. And we have had people that have been paying sewer bills for 30 years, and their sewage has been going down the storm drain for 30 years. Α classic example was in Allenhurst, during our Deal Lake study. When we were looking around the storm drain system around Deal Lake, we found examples of that in several places.

SENATOR VAN WAGNER: You don't think that was just a mistake?

MR. JARGOWSKY: Oh, that was absolutely a mistake. It was a perfect connection. The plumber chose the wrong pipe. (laughter)

SENATOR PALLONE: Lester, in terms of the magnitude--

SENATOR GAGLIANO: You know the definition of a plumber?

SENATOR VAN WAGNER: Is that something like. "The check's in the mail"?

SENATOR PALLONE: But in terms of the magnitude of that problem -- in other words, is there a problem with -- is it just an isolated situation with a house, or are we talking about whole city systems that may be going into a storm drain? Outline the problem with Deal Lake, because 1'd like to go into that.

MR. JARGOWSKY: Yeah. With this particular problem with the one house, on a storm drain -- drain line -- it has an impact but it's not as great as the next thing l'll get into. which is the break in the infrastructure. This is the real problem. The infrastructure -- these old pipes, these old sewer lines that are underground, installed perhaps 60-80 years ago -- out of sight, out of mind. Everybody flushes the toilet and just hopes it's supposed to go get to the right place.

SENATOR VAN WAGNER: It doesn't do that.

MR. JARGOWSKY: What's happening is that these pipes are in various states of disrepair, and we found this as a result of the Deal Lake study, where we sampled storm drains coming into Deal Lake. We found fecal coliform too numerous to count coming into the lake; and there's a flume going from Deal Lake going into the ocean, which was in the middle of what I'll call our combat zone last year, where we had to close down beaches.

> SENATOR VAN WAGNER: Did you say a plume? MR. JARGOWSKY: A flume. SENATOR VAN WAGNER: A flume?

MR. JARGOWSKY: Yeah, which is the overflow from the lake going into the salt water.

SENATOR GAGLIANO: That's where the herring come in.

MR. JARGOWSKY: The herring come up. And the-- Going back--

SENATOR VAN WAGNER: You're a big fisherman, huh?

SENATOR GAGLIANO: No, but I know the herring come in there.

MR. JARGOWSKY: Going back and checking the storm drain using dye -- it's a very laborious, time-consuming project, going back and dye-testing. We went back blocks away from Deal Lake, and we found some major, major problems where the whole sewer line gave way. And since the storm drain was running along side of it, it gave way and all the sewage from the whole city block was being channeled into the storm drain with a direct discharge into the lake.

found that the local utilities -- public works We people, city administrations -- were extremely helpful. A11 they needed was guidance -- "Point the way, tell us what to do" -- and that was repaired in a matter of a day and a half. It Then, we moved on, dye-testing; and we found more of was done. these, and more of these, and more of these. We got to a point where we had it under control; we felt really good about the whole situation. The counts were low. And just about a couple weeks ago, we did some more re-sampling, just to double check on what we had accomplished, or thought we accomplished. We tested it, and it came back high again. We found out that there had been a blockage in a sewer line, and probably as a result of this blockage, these aged pipes gave way at another point. And we found -- we went back, dye tested, found the point -- this is a new point -- patched that one up.

So, what I'm leading to here -- it's not a one-time thing. There has to be an ongoing program of checking this infrastructure, which requires a great amount of sampling, and a good laboratory backup, and a lot of dye -- and a lot of public support, because when we're using this dye, and we find the connection, we change the lake into a red color. Or we change it yellow, or we change it green; and, you want to hear the complaints come in -- "Everything's wrong."

So, with these breaks and inter-connections with the storm drains, I would say that's a very high source --- a very likely source for a lot of the problems along the oceanfront. Now, the situation gets compounded with shore communities that have piers or concessions near the oceanfront. We get bad The infrastructure that's underneath the pier, storms. or along that boardwalk, is being damaged. I guarantee you that the majority of the oceanfront was badly damaged when the last -- when that hurricane went through, with those waves pounding the surf, and the boardwalk being ripped up, and whatever. 1'm sure there was infrastructure damage, and I think we have to have ourselves primed after every storm to protect that coastal There should be a thorough sanitary survey of that resource. whole area, as a matter of fact.

We also have other problems with low points in some coastal communities, where the public sewer lines run at, or close to sea level. And when there's a bad storm or heavy rainfall, that low point -- the sewers will bubble up and overflow. We have one spot which we have identified which we watch very carefully, and we have to chlorinate when such a thing happens.

We have other problems with discharges, with people discharging at night. Despite our efforts to do all these things and find these other sources, we have people that just outright recklessly, willfully, discharge the contents of their septic tanks or holding tanks into the river at night. And just yesterday, there was a release of an indictment which was handed down by a Monmouth County grand jury against Marty Walsh's Irish Cottage. He did exactly that in the early part of May, and there's a seven-count indictment that was brought by the Monmouth Count Health Department in cooperation with the Monmouth County Prosecutor's Office. There's an Environmental Crimes Task Force that we set up. And he faces up to 34 years in jail, and \$255,000 in fines on this seven-count indictment.

We believe it's the first of its kind--

SENATOR VAN WAGNER: What did he do? (laughter) SENATOR GAGLIANO: That's close to murder.

SENATOR VAN WAGNER: What did he do? He discharged--

MR. JARGOWSKY: He has four, 1000-gallon holding tanks right alongside the Shark River--

SENATOR GAGLIANO: I'm sorry, l was talking -- I had a visitor. Give me this again? What is it?

He has a four, 1000-gallon holding MR. JARGOWSKY: tank capacity for sewage at his business right along the Shark River. Years and years ago, he was found -- that his septic system -- his conventional septic system was leaching. So, the Neptune board made him install these holding tanks. He was supposed to engage the services of a pumper to pump the sewage from the tanks and take it away for appropriate disposal. He was, in fact, observed in the middle of the night, through a tip from someone passing by, with a pump from the tanks, with a pipe slipped down through the grass, pumping his sewage into the river. Thousands of gallons of sewage into the river. This is willfully, knowingly, in violation of orders of the town. And meanwhile, we're seeing these problems develop--

SENATOR VAN WAGNER: He's going to get 34 years in prison?

SENATOR PALLONE: No, that's maximum.

MR. JARGOWSKY: That's the maximum.

SENATOR PALLONE: Let me ask you, Lester, again, trying to focus a little bit on these things-- What you're telling me is of great interest to me because I think it kind of points out the different problems that you can have with New Jersey point sources. But in terms of any kind of a statewide program or impact -- you mentioned the storm drains, and the programs with pipes illegally connected, or deteriorated infrastructure, whatever. Is there the mechanism in place now to take care of that situation, or is there a need for some

kind of a State program or State initiative, maybe funneled through the counties, to do what you did in Deal Lake in other situations? I mean, do you see that as perhaps a statewide problem or just a local problem in certain parts of Monmouth county?

Well, it's absolutely a statewide MR. JARGOWSKY: and what I would recommend is that there problem, be a systematic enhancement of laboratory facilities in every county to accommodate the large number of fecal coastal coliform samples. Our County Health Department lab capability has been expanded dramatically, and we're finding that we're still at peak capacity in the lab. There is that much sampling that has to take place.

SENATOR PALLONE: That's in order to do the actual investigation?

MR. JARGOWSKY: Yes, to document the source.

SENATOR VAN WAGNER: Are you suggesting that the State set up a program for assisting coastal counties in expanding these facilities?

MR. JARGOWSKY: Yes. Yes.

SENATOR PALLONE: Are we talking about a great deal of money now, for the labs, or are we talking about enforcement people, or what?

MR. JARGOWSKY: There are already existing labs.

SENATOR VAN WAGNER: What about non-coastal counties? Do they have a need for doing this?

SENATOR GAGLIANO: On the lakes.

MR. JARGOWSKY: The lakes. They're in the same boat with the lakes in inland areas.

SENATOR VAN WAGNER: Yeah, I asked for a very practical reason, obviously.

SENATOR PALLONE: Well, in other words, you think that we'd need an infusion of funds in order to implement this type of thing?

MR. JARGOWSKY: I think it would be a one-time program for capital costs: incubators, water baths, that kind of a thing.

SENATOR PALLONE: But you have the people, it's just the labs?

MR. JARGOWSKY: Yes, right.

SENATOR PALLONE: And you think the other counties are in the same position -- that they probably have the manpower to do it?

MR. JARGOWSKY: Well, the manpower issue is something that will probably have to be addressed county by county.

SENATOR VAN WAGNER: Many counties are involved in pooled financing. We're looking at where they bond for a certain amount of money for various capital improvements that they're going to make. And it's sort of a pooling arrangement, and those municipalities within that county, if they choose to, can borrow the money through that pool, rather than having to exhaust their own bonding capacities. And perhaps, on a county use basis with some State assistance, maybe, on the debt service side, that might be -- we might be able to develop a nice program that would assist them to continually upgrade those kinds of things, so that you're not just dealing with one, one-shot deal, but an opportunity to upgrade it, assist the county with its debt service cost and expenses, encourage counties to do that kind of thing -- which of course in Monmouth County you don't have to -- or most coastal counties -- because they face that -- maybe enhance the opportunity for passing a bill by including every county in terms of its waterways. Even the northern counties have needs. That might be an approach.

SENATOR PALLONE: Do you feel that legislatively, though, you have the enforcement tools? I mean, you have the power, you have the penalties in place?

MR. JARGOWSKY: No, I want to get to that. There's some areas where I think the Legislature can be of help.

SENATOR PALLONE: Okay. Get into that now.

MR. JARGOWSKY: The next recommendation would be a dedicated grant-in-aid program through existing framework -legislative framework in the County Environmental Health Act. for infrastructure surveys and survey work, specifically dedicated to that. The Legislature would get tremendous yield out of that money, and the State aid could be seed money to establish a long-term, perpetual monitoring program. That's what we're talking about. This isn't something that just--

SENATOR VAN WAGNER: That's what I was getting at earlier. Not a one-one shot, a long-term.

MR. JARGOWSKY: It's got to be forever.

SENATOR VAN WAGNER: Right.

MR. JARGOWSKY: This infrastructure -- it's too risky-- I mean, it's not too risky, it's too expensive just to rip it all off and start from scratch. We're in a patch program, a seal and patch program, to keep it flowing the way it's supposed to flow.

The third thing is a need for the Legislature to increase the penalty provisions for discharge of sewage onto ground and into surface waters. Under current law, a the typical judge will fine him \$50. We could go through -- we can document a case, and there'll be a \$50 -- for someone who--It's small scale, but when you look at all the small scale inputs, it adds up to a lot of sewage. And I would suggest that we develop a philosophy in terms of inputs into the ocean into our waterways, that there's a theme now in the and criminal law that crime with a gun, you get 3-5 years, Environmental crime, mandatory. where you knowingly. willfully, discharge hazardous pollutants, which would include sewage, into our waterways, they should have a mandatory weekend in jail, for starters.

SENATOR GAGLIANO: Under water. (laughter) Under polluted water.

MR. JARGOWSKY: Honestly, when you speak to people and you talk about a \$200 fine or a \$1000 fine, they say, "Yeah, we'll pay it." But if you speak to someone and say, "Would you like to spend your weekends for a month in the Monmouth County Jail?" "We'll let you work all week, but spend your weekends in the Monmouth County Jail" -- you get total compliance. And I would suggest that that is a positive incentive.

SENATOR VAN WAGNER: The problem is, we would probably have to add State aid to expand the Monmouth County Jail. (laughter) We'd have to have a highrise, you know?

SENATOR PALLONE: Let me ask you one-- Everything you're telling me I think is really interesting, and really to the point of what this Committee is all about.

SENATOR GAGLIANO: He's not just telling you, he's telling us.

SENATOR PALLONE: Right. I just wanted to ask you about the primary treatments plants again. One of the things that we're told is that all of them are in the process of being upgraded -- the three you mentioned: Atlantic Highlands --Highlands, Deal, Asbury Park. All of them are on programs, I guess, Federal and State programs to be upgraded. When is that going to take place?

MR. JARGOWSKY: Well, the Deal plant, as I recall, is scheduled for this fall. This fall, the Deal plant should be tied into the Ocean County Utilities Authority. The Asbury plant is some years away, yet.

SENATOR PALLONE: Several?

MR. JARGOWSKY: Yes.

SENATOR GAGLIANO: Has that been-- Excuse me. That's an issue. Has Asbury Park finally decided what they're going to do? Is that decision made? I mean, it's one thing to have to plan and build something-- I don't know if they finally

made a decision as to what they'll do. I've seen several different ideas, but I don't know if they have decided, and for some reason, people have always felt, "We'll leave Asbury alone. Leave Asbury alone." Well, we've left them alone, and now we have what we have. What do you know about that?

MR. JARGOWSKY: I'm not too familiar with the intimate details as to whether all the ink is dry or whether plans can change, but from what I've been told, it's a matter of a couple of years and they'll have a new plant on-line. That's a deep injection -- a deep cell or deep well sewage treatment plant concept. So, it's a vertical sewage treatment plant rather than a horizontal.

SENATOR PALLONE: We do have someone here from Asbury Park who can perhaps address that.

SENATOR GAGLIANO: Good.

SENATOR PALLONE: What about -- The Highlands is Atlantic Highlands. That's being connected to Middletown, I understand?

MR. JARGOWSKY: Right.

SENATOR PALLONE: Okay. Let me just ask you a question. Do you perceive what any of those primary treatment plants -- and I know you can only speak about Monmouth County, but I'm wondering again, if it's a statewide problem -situations where they may find it necessary or convenient, for that matter, to dump raw sewage because of over-capacity at any given point? I know you said the answer was "no" for the secondary treatment plants, what about the primary?

MR. JARGOWSKY: I would think that that would be rather obvious. It's required under State law that if there's a malfunction of the plant, there must be notification to the State -- the DEP. You might want to petition the DEP records on plant malfunction -- on primary and secondary plant malfunction as reported to them and investigated; and you would get hard data on that.

SENATOR PALLONE: The reason 1 ask is only because I know that some environmentalists have suggested that because of problems with raw sewage at certain times of the year, it might be necessary to build holding tanks or have some kind of temporary measures to deal with the necessity for sewage discharge at some point, until plants are completely upgraded. And I'm just wondering whether you see that as a problem or necessity? It doesn't seem like you do.

MR. JARGOWSKY: I think the issue is very close monitoring and surveillance; and having the flexibility within government to react to a wide range of potentialities, in a rapid fashion. I think that flexibility is extremely important. If a particular part of the system goes astray or awry, we can't allow weeks to go by; there has to be an immediate response.

SENATOR PALLONE: Senator, do you have any other questions?

SENATOR GAGLIANO: I think we all have a million questions, but we really have to hear from other witnesses. I just want to state publicly that we in Monmouth County are very proud of our Health Department, and especially of Lester Jargowsky, who's done a terrific job for the last -- what is it, eight or nine years, Lester?

MR. JARGOWSKY: Yes.

SENATOR GAGLIANO: He has really done an outstanding job, and you can hear from his testimony today how experienced he is and how he understands the problems -- and what serious problems we have. So, I thank you for being with us. We may ask you to come back again, I guess -- it's up to the Chairman -- but there may be another session where we'd want you to come back.

MR. JARGOWSKY: Fine.

SENATOR GAGLIANO: And one thing I'd like you to think about, Lester-- l've often felt that the shore communities.

from Senator Van Wagner's district on Raritan Bay all the way around to the Delaware Bay, do not speak with one voice, for a number of reasons. I have often felt that there should be some kind of an umbrella organization made up of two or three representatives of each county, which would be charged with the responsibility of meeting three, four, five, six times a year -- at least -- and discuss the problems of mutual concern, basically emanating from the fact that they're on the shore. Now, I mean, that includes shore protection and shore environment.

MR. JARGOWSKY: Yes.

SENATOR GAGLIANO: Those issues are so huge, and as Schmidt testified today, we're talking about а Mrs. multi-million dollar a year tourism industry, most of which is oriented toward the shore. And we don't speak with one voice. I think Senator Pallone and Senator Van Wagner will confirm that when we want to get something done, and we need financing for project -- or particular projects or whatever it might be, we're told, "Get the money." In other words, we're told, "Find the money, and you can do your project." Well, that's wrong. These are statewide problems that should be dealt with on a statewide basis, and until we speak with one voice -- with one organization representing the various counties involved -- 1 think we will continue to be looked upon in a second-class category; and 1 don't think it's acceptable.

So, I'd like you to think about that. From a health standpoint, maybe we could develop a committee, commission -whatever it is -- representatives of the shore and bay communities -- counties -- with representation; and not necessarily just health officers. I'm talking about lay people, someone representing the tourism aspects of it, maybe a mayor or two. But they can get together and speak with one voice on the problems of the shore, because if we all got together -- even the legislators that are directly involved --

we could introduce and pass legislation. We're not together on these issues, and I think the only way we're going to be together on these issues is to start from the bottom up, and get local counties involved in an overall organization. Ι'đ like you to think about it: I don't know if we have time to express thoughts about it, but it's just obvious to me that every time Senator Pallone or Assemblyman Villane or whoever it is comes up with an idea for shore protection, or to protect the environment -- whatever it is -- we have to fight like we're part of another state. And everybody says, "Well, you find the vehicle for funding, take it out of your pockets, and then maybe we'll do it." And it's wrong. We don't ask those questions of other parts of the State when they have a problem. We take State-budgeted money and we give it to them, on one basis or another. So, I'd like you to think about it for us.

SENATOR PALLONE: I guess we're going to cut you off here, Lester. I'm sure you could go on. 1 do appreciate your coming down, because I think that more than anyone else that 1 know, you have some innovative ideas about what needs to be done for these various New Jersey point sources, and as Senator Gagliano said, we're going to be continuing with various hearings, and we'll have more opportunities to hear from you, both privately and publicly.

There's one point, though, that SENATOR VAN WAGNER: I'd like to add to what Senator Gagliano said. And I hope the people in this room -- I know they largely represent coastal communities who have concerns, as we do--But one of the in barriers that we've hađ terms of getting coherent legislation in place to do the kinds of things that were referred to, has seemed to be the fact that inner or northern legislators, or legislators in areas other than ours, are not sensitive to what we're trying to do. And 1 think in large part what Senator Gagliano-- It's true. I think they're not

sensitive to that, because we have, in fact, not spoken with a unified voice. And when they do not see us together, then many times, it is the signal that, since we don't agree, then why should they bother to agree with any of us? And I'm not impugning any lack of sensitivity on their part at all. This happens with those of us who don't -- are not preoccupied with some of their problems. But I think, somewhere, we have to in this dialogue, a thread of commonality, also develop, particularly, as you pointed to infrastructure, repair, and maintenance. I think if there's a thread of commonality throughout every community in this State -- whether they're on a coastal area, where the problems may become more acute because of the waterways -- or whether they're in the inner areas of our State, their infrastructure problems are there. The older, urban communities suffer as much with infrastructure problems -- Asbury Park, in fact, being one of them, and Long Branch, and Keansburg, and those places -- Keansburg just recently upgraded its whole system, at a considerable cost.

But I think that if we address that common thread of attempting to assist municipalities, utility authorities, and people who are engaged in the process of transporting water and wastewater, then we will have served all the communities, and perhaps then we can coalesce around specific solutions to the shore problems. And I think that's the key, really -- finding that thread of commonality.

SENATOR PALLONE: Okay. Thanks again.

We want to have the officials from DEP next, and then maybe after that we'll take a short break. Is Mr. Dieso here? (affirmative response) Okay. (Unidentified person says they have a slide presentation) I don't know what kind of presentation, but I'd like to get into the monitoring program that they have in place now. (Brief pause while Senators Pallone and Van Wagner confer)

Don. could you tell me who's with you just so we know?

D O N A L D D I E S O: Mr. Chairman, of course. George McCann -- George McCann is the Acting Director of our Water Division; Eric Evenson, the Executive Assistant to the Director, and in most cases, is the one equipped with all of the facts.

SENATOR PALLONE: Fine. I know you have a presentation. Let me just say that I'd like to know about the existing monitoring program -- the details of it. Also, if you could touch on the announcement that was made, I guess today, about the situation with the sewer bans -- not necessarily with sewer bans, but with the problems that we've had in approval of sewer extension and what the DEP plans to do in that regard, too.

MR. DIESO: We would enter into the record the full testimony. Mr. Chairman, let me extend my full greeting to you, Senator Gagliano, Senator Van Wagner. I'm Donald Dieso; I'm the Assistant Commissioner for Environmental Management and Control with the Department.

We acknowledge the Chairman's, Senator Gagliano's, and Senator Van Wagner's contributions in assuring ocean quality; and we fully share all of your concerns and the commitment that you have expressed in the past. I hope we leave you today with a sense that progress is being made; and that in every matter, this Department is fully committed to this aspect.

This past winter season has been a busy time for the Department. A number of actions have been taken with regard to the point source discharges for municipal and industrial waste conditions treatment facilities. The which resulted in closures of the beach areas in the Wildwoods of Cape May County were of particular concern to us last year. To address these areas, the Department of Environmental Protection instituted a total sewer service hook-up ban. This measure is considered an extreme action but a necessary one, given the severity of the conditions that resulted last year. This ban would prevent the

hook-ups to sewerage systems from any new development and was coupled with the institution of a mandatory water conservation Additionally, capital improvements were made to the program. wastewater treatment systems, totalling \$4 million. These improvements resulted in substantial increases in have year's wastewater treatment plant performance during this We estimate, too, that there's been water summer season. conservation, in effect of about 20% in that area.

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Our efforts, however, have not been restricted to just one area of the coastline, but rather, the entire New Jersey This recognizes the need for increased environmental coast. protection or our bathing and fishing water in conjunction with our promotion of tourism as the second leading industry for the State. То accomplish this effort, during 1986 а full cooperative coastal monitoring program was instituted along 120 coastline. The cooperative coastal miles of New Jersey monitoring involves the efforts of municipal, county, and State agencies which monitor both ocean water quality and operation of wastewater treatment facilities.

first aspect of the program represents The the recreational bay area, ocean and bay monitoring program. In this program, 384 sampling stations, including 184 bathing area sampling stations in both ocean and back bay areas, are monitored weekly for fecal coliform bacterial levels. Samples are obtained from each station and analyzed by the four involved the cooperative coastal monitoring counties in These counties are sampled on Monday of each week, program. and any results exceeding the criteria are reported to the DEP immediately after analysis. Any station exceeding the criteria on the initial sample are re-sampled during the same week, along with a sampling station on either side of the high These confirmatory samples are reported to the DEP sample. along with any actions in regards to closing bathing areas. These sampling efforts are further augmented by helicopter

sampled by the US EPA, which are done mid-week in areas immediately off the beach.

the program involves The second aspect of the surveillance of coastal sewage treatment plants and reporting compliance with State permitting requirements. The of surveillance program involves the monitoring of one industrial eight primary municipal wastewater treatment facility, facilities, and 14 secondary wastewater treatment facilities in primary facilities are coastal region. The inspected the weekly, while the secondary facilities, including the one industrial facility, are inspected every two weeks. In this way, a fully integrated program identifying ocean water quality along with the wastewater treatment plant performance, is reported to us weekly.

The results have shown a very positive response to the improvements we've made at wastewater treatment facilities. То date, limited beach closings have resulted along the New Jersey coastline, none of which have been due to the malfunction of wastewater treatment facilities. Examples of the causes which have resulted in closings along the shore include: vandalism of a plastic waste line in the vicinity of Laird Avenue, in Long Branch City; two incidences of illegal connections to storm sewer systems in the Atlantic City area; and localized problems of floating debris washing ashore along the beaches in Monmouth County. 1 submit for your consideration a list of those beach closings -- they number 15 -- that have occurred this season; and you will note the causes Conspicuous by their absence of each of those. is the malfunction of any of the wastewater treatment facilities.

Even though substantial improvements have been made to the performance of our existing wastewater treatment plants, this does not negate the need for our primary municipal wastewater treatment plants to upgrade to secondary treatment. In this effort, a large amount of planning has been done in

both Cape May and Monmouth counties to eliminate primary wastewater discharges. Two planned wastewater treatment systems will be owned and operated by the Cape May County Municipal Utilities Authority in that county. The Seven Mile Middle facility is projected to be operational by June of 1987. and the Wildwood regional facility is projected to be in operation by June of 1988. In Monmouth County, the Asbury Park City wastewater treatment facility is projected to be upgraded to secondary treatment by June of 1988, through connection to regional facilities. These improvements will satisfy the needs of the environment while also meeting the statutory deadline of July 1, 1988 in the Federal Clean Water Act for compliance of municipal discharges with water quality standards.

In review of the Cooperative Coastal Monitoring Program, the Department feels that the program has resulted in an overall success to date. While we recognize that this program was not designed to address all aspects of ocean disposal, we believe it has provided a vehicle to monitor and identify where improvements are needed.

In regard to the ocean disposal of sewage sludge, currently six sewage authorities in the northeast portion of the State, comprising a consortium, utilize the ocean for of sewage sludge. The consortium is presently disposal evaluating the use of a contractor for the disposal of sewage sludge at the 106 mile site. While this practice would improvement over the current represent an ocean disposal practice, it does not represent a long-term solution. Numerous other land-based alternatives are aggressively being evaluated. given the vast differences in the quantities and however. characteristics of sewage sludge, each of the land disposal techniques represents its own unique problems. The Department will continue this effort to oversee the development of sound land-based alternatives for sewage sludge disposal.

The Department is also concerned about the disposal practices of our neighboring New York State, and especially New York City. We look for a cooperative effort by those parties along with the EPA, to assess the impacts of these actions.

In summary, and let me say, although millions of dollars have been spent to correct the treatment of wastewater along the New Jersey shore, the problem has not yet been completely solved. The total elimination of primary sewage treatment plants, which is projected for July of 1988, will correct the potential of pollution from these point source discharges.

The Department, in cooperation with local agencies, will continue to ensure that all facilities are operated and maintained at the highest level. However, we feel that our monitoring program has identified other sources of pollution which must be assessed and where necessary, have treatment provided. In particular, non-point runoff from storm sewers should be addressed. Monies have been made available for this purpose through stormwater management grants issued by the Department. Atlantic County has already taken the opportunity to initiate a study of management practices for the quantity and quality of the stormwater within their area. This effort needs to be undertaken by other communities in order to provide a proper evaluation and assessment of the needs.

We recognize, as do you, that perceptions, in many cases, can be quite damaging. We appreciate the opportunity to present the facts, and hope you'll join us in correcting the exaggerations and misconceptions. For example, to the best of my knowledge, it has been 10 years since our last fish kill in this State. An impression was created here today that fish kills are commonplace, and affect our coast routinely. Simply untrue. While I recognize the need, at times, to conceptualize and to describe conditions subjectively, let us not forget that good scientific fact must guide our actions.

Further, let me clarify some of the misconceptions expressed here today about the Fresh Kills landfill. First, garbage -- refuse -- has not been disposed of in the ocean since the 1950s. The solid waste from New York City is barged to the Fresh Kills landfill on Staten Island. There, the solid waste is landfilled. There is no resource recovery facility there, but rather, a landfill gas recovery system.

Any waste that appears on New Jersey shores -- if it is traced to the Fresh Kills operation, probably results from the spillage -- from the barges -- going to Staten Island. Dr. Allen Mytelka from the ISC -- the Interstate Sanitation Commission -- tends to--

SENATOR PALLONE: Could I just interrupt you there, Don? I know we don't want to get into this because we're probably going to devote a whole day on it, but I'm glad you mentioned that, because I know that it's true. But the problem is that, as you said, the barges as they come to the landfill -- and of course, there have also been reports that the material at the landfill is not well guarded, and that it falls off into the Arthur Kill and eventually comes down the shore.

MR. DIESO: Senator, on your first point, your concept is exactly right. If there is spillage, it comes from the barge in its transit to the Staten Island landfill. On the second point, it was one that New Jersey was very sensitive to several years ago. In response, New York City has installed a boom system at the landfill itself--

SENATOR PALLONE: But it's questionable how effective that is.

MR. DIESO: Well, we in recent inspections have found it to be in good repair, and operating as designed. And 1 won't say to you today that there isn't room for further action and further improvement.

SENATOR PALLONE: Okay. I'm glad you clarified that, though.

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MR. DIESO: We've appreciated the opportunity, and are here for any questions and anything we can elaborate for you.

SENATOR PALLONE: Thank you. That's the end of your presentation?

MR. DIESO: It is.

SENATOR PALLONE: Okay. 1 just wanted to mention one thing. When you mentioned about the fish kills, although I understand that the last fish kill -- the way Ray Bogan described it, which was on -- of a massive nature -- was in We, of course, have heard of isolated fish kills which is '76. why I was trying to get at the whole problem with Ray, because it does happen that the lake -- you'll have a fish kill, and people will mention -- I don't know if that's even a fish kill, if that's a correct term for it, but I mean, where you will see large amounts of fish in a lake or at a certain location, you know, dead -- floating on the surface, and we call it a fish kill. But you're right, there hasn't been the massive type of thing that Ray Bogan talked about, since '76, the way I understand it.

MR. DIESO: Senator, if we can address the issues of a fish kill, and I'll agree that we can use that terminology--Nature is extremely powerful, and in lakes, there's a process of eutrophication, where through nutrient addition, you find alga blooms (phonetic spelling). Algae will viciously use up that oxygen in the lake, depriving the fish of it and the fish, of course, suffocate in the process. It's a process that is naturally occurring, has occurred for many, many thousands of years in lakes throughout the world. It is one that is not linked to the pollution, and any discharge that we know. The red--

SENATOR PALLONE: But it does happen, for example, that you may have raw sewage going into a particular tributary, and that will cause fish to die and come to the surface. I've seen that.

MR. DIESO: Yes. SENATOR PALLONE: Okay.

MR. DIESO: That source of nutrient causing the alga bloom can be fertilizer, it can be naturally-occurring material, or it can be helped by man through a discharge. It's those fish kills, though, that we monitor very carefully. I would not -- and I think I'd be remiss -- to not point out that New Jersey does not have the fish kills that were once very common in this country. The fish kills we have are small and in many cases related to red tide, green tide, and other natural forces.

SENATOR PALLONE: Okay. Let me just run through some questions about the monitoring program, and some of the same things, I guess, that I asked Mr. Jargowsky. With regard to the monitoring program, the complaint that I've heard most often, of course, is, why is it only done once a week? Why is -- I guess you feel that Monday is sufficient. Residents in Monmouth County have said to me that is isn't, that they think it should be done more frequently. And just -- if you had a comment on that.

MR. DIESO: Director?

G E O R G E Mc C A N N: Yes. The program was designed, and Monday was purposely selected as the day to conduct our sampling because it is the day that we would expect to see the highest load contributing to the ocean. You will have just experienced the waste that would have been accumulated from the treatment plants from the weekend tourists, and increased residents for the weekend, period, which increases the flows to the treatment plants. And then, we would expect to see, if there is a problem, that it would appear on Monday.

I should note, and I think it was mentioned earlier, that Monday is not the only day; that the water is sampled, and that there is a weekly helicopter flight which provides confirmatory information. It's done mid-week by US EPA. It's

based, really, on the weather, as to whether they can fly on a Wednesday or a Thursday. But in addition, if there is any indication, by any of the samples collected on a Monday -which we would expect to be the worst-case situation -- that there are high counts, they're immediately re-sampled to confirm whether or not there is a problem.

SENATOR PALLONE: So, in other words, if there's any problem at all, then that monitoring continues every day until it's cleared up?

MR. McCANN: It's immediately gone out to reconfirm. And if the counts do not confirm that we really have a problem, then we would go back to the weekly basis. However, if there is a problem discovered, yes, we would continue to monitor it until we can determine that the beaches can be opened. And when we do that process, we not only re-sample the area that was identified to have the high count, we also bracket the area with sampling on either side of the high area.

SENATOR PALLONE: Now, the monitoring is not actually done by the area but by local officials.

MR. McCANN: Yes, that's correct.

SENATOR PALLONE: Does that mean the local municipal health departments, then, in most cases, or all cases?

MR. McCANN: Well, particularly the county health officials. There are some local municipal health officers involved, but it's mostly the local county health officers.

SENATOR PALLONE: Now, what about -- getting a little gross here, maybe, but one of the questions 1 had about the Long Branch area-- What types of things are being tested for? There was a question with regard to Kids' World of animal versus human waste. Are there a list of things that you're looking for, or what?

MR. McCANN: Well, the fecal coliform count is the measure for the indicator that we use to determine whether

there's a problem or not. Kids' World in particular, there were two occasions where there appears to have been vandalism to what was a plastic pipe that transported the waste, and it was broken and the waste material was directly finding its way into the water.

The other possible source that I believe you're referring to is, there's a small petting zoo that's across the street, and that the waste from the animal that are in the petting zoo is piled in -- at the zoo, and it runs off into what appears to be a catch basin that finds its way into the storm sewer, and then you can then have that as -- or that has been identified as a potential source.

SENATOR PALLONE: But you'd find that later? In other words, you're mainly looking for the high coliform counts.

MR. McCANN: Yes, correct. And then once that's identified, we have the source investigation process.

SENATOR PALLONE: You feel, though, that once a week in the existing monitoring system is sufficient, at this point? In other words, you wouldn't suggest increased numbers of days, or more investigations or more beaches being added -we are in fact investigating every bathing beach at this point?

MR. McCANN: Well, there's -- as we point out, if we were to look across the shore, given 120 miles with 384 sites, that represents nearly four sampling locations per mile. The 184 number that was mentioned earlier is actually in the bathing beaches, so we feel that it's an adequate amount. We also think that the sampling frequency is also adequate.

As Mr. Dieso mentioned, the program was targeted to insure the quality of the water and to look at the potential source from treatment plants. And we think that, based upon our vigilance through the inspection and corrections made by the number of treatment facilities, that the program has been a success. So, we think that we have an adequate amount.
SENATOR PALLONE: And we're testing treatment plants? In other words, outfalls from treatment plants -- we're testing bathing beaches? What about some of the other things that Mr. Jargowsky mentioned -- in other words, the storm drains, river source of pollution -- would those be followed up? In other words, if you-- I guess I'm saying, the monitoring itself is of the outfall for the municipal treatment plant, and then the monitoring is also for the bathing beaches. How do we get to these other sources that are not the outfalls of the treatment plants? How do we deal with the storm drains? How do we deal with the rivers that are carrying the pollutants?

MR. McCANN: Well, I think that one of the other benefits, from our perspective, of this monitoring program is that it has pointed out that there are other potential sources that can cause these problems. Mr. Jargowsky spoke about illegal connections to storm sewers. That was, in fact, the case which we experienced in Atlantic City. Beaches were closed in Atlantic City. Illegal connections to a storm sewer were the causes of those problems.

What I think is necessary is to have assessments and evaluations of impacts on storm sewers on the ocean, but I would point out that that is a major undertaking. Combined sewers and direct storm sewers are a rather expensive proposition to correct, even, in fact, if you could find the problem with them. The problem is very varied; it's related to the frequency of rainfall, and it's related to the particular drainage areas that storm sewers serve. So, although I think we've identified it as a potential source, I think it requires the attention in the upcoming year, to have local authorities, through a program which we've initiated, to begin studies of the stormwater management practices in their area.

It was also pointed out that Atlantic County has taken advantage of a grant, which was issued by the Department, to conduct such studies; and we would encourage others to do so.

SENATOR PALLONE: You see, my concern, I guess, is that I feel that you are now making the public aware that there's a public health problem with a bathing beach and that it should be closed, and therefore, performing a very vital last we wouldn't have service, because year, known. necessarily, if a bathing beach should be closed and shouldn't be swimmed in. But then, what's the next step? ln other words, okay, we closed the beach. To what extent is the State then involved -- or, what can be done in the future, through some kind of a program, legislatively -- with money or whatever -- to go the next step? In other words, once that beach is closed, do we then look to see if it's coming from an outfall pipe? Do we then look to see if it's coming from a river source? And what's the DEP's role in that?

DIESO: Senator, the program -- the beach MR. monitoring program -- took shape this summer. It's been formalized and it's on paper, and we have agreements. But that work actually went on many, many years -- for many, many years. It was done by the counties and the locals in the State and EPA, and it was done with maybe some inconsistency of This year, we've brought all the actors together, and rules. we speak with one set of rules, and you see it in a coherent fashion. And it's long overdue, and it's been very effective as our barometer.

SENATOR PALLONE: Yeah. The fact of the matter is, some people may say, "Well, we shouldn't have it," but at least now we have it -- we know where the problem is. And that's a big step.

MR. DIESO: We agree--

SENATOR PALLONE: But the next step--

MR. DIESO: In no case is it better to be ignorant of the facts. I think the important thing that we've recognized, and we offer for your consideration, is that with respect to the point sources, there is a plan in place. It's a plan that

has its roots back 10 or 15 years, of getting upgrading of those treatment plants, working with them on schedules and getting them the many millions of dollars necessary to make those upgrades. That's done. It's now at the point where they're going to see the fruit -- '88, '89 are the dates. And while two, two and a half years looks, I'm sure, through your eyes, as an unreasonable amount of time, you'll find that was necessary to lay the foundation for that accomplishment. So, we're quite proud of the plan that's in place, and it's about to jell.

The non-point sources are a subject that New Jersey, as any other state in this country, must begin to address. And if we're going to take it on, it's going to mean many billions of dollars worth of energy, investment, construction, and it's going to take many more years to address. But I wouldn't want the impression created that our beaches are in jeopardy until the non-source point program is in place. They're simply not. The water quality and the science in this matter show them as good today, or better today than they've ever been; and no different than any other beach in this country, certainly, East And sometimes you could be fooled by the Coast beach. subjective parameters of clarity of water and smell, and those are simply not scientific bases. The science shows that we're in very, very good shape.

SENATOR PALLONE: I understand what you're saying. You feel that in general, the quality of the ocean is getting better, at least, even though there may be a general perception out there that it isn't -- that scientifically, you feel it's getting better. But what do we have to do-- All right, the beach is closed -- maybe 1'm getting too graphic or specific, but the beach is closed now, and we find out that there are certain sources of pollutants. Maybe it's from a storm drain, maybe it's from the river, etc. What kind of -- what plans does the State have with regard to the municipal sewage

treatment plants? I mean, the type of thing that Mr. Jargowsky mentioned with Deal Lake, where we go around and plug up, in effect, these storm drains. Is there enough money? Is there a State program that could be envisioned for that type of thing? Obviously, there's a lot of that going on, whether it's from private individuals purposely, or unintentionally -- whatever. And I guess maybe that's the next step, and I'm wondering whether you have any ideas along those lines.

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MR. DIESO: It is the next step. Let me ask Director McGann to share a little of the stormwater management plans the Department has, and the actions we've encouraged of our counties.

MR. McCANN: In response to the first part of your question, we are very dependent upon the assistance of the local and municipal governments and county governments to make the corrections of -- require the corrections of problems where illegal sources have been tapped into the system. There are just simply too many miles of storm sewers for us as a State agency to be able to police. It's also the benefit of -- the knowledge of those sewers and the work that's been done on those is at the local level. So, we are very dependent upon them to provide that assistance in remedying the problem, which we cannot cover through beach monitoring programs, when high counts are found and investigations are performed, that the actions are taken to correct those types of sources.

But beyond the illegal connections, there is another problem that needs to be assessed, and that is the one of just stormwater runoff that is gathered from the street. The waste that accumulates in the streets, simply from animals -- your pets, dogs, and so on -- that can accumulate over a number of weeks, as we experience a period such as we have had in June of this year, where we are without rain for some 30-odd days, that when we do have a rainfall, the flush of the streets is significant -- has a significant impact. Those types of

situations need to be assessed in a very broad context, to look at stormwater management practices. Typically, things that are recommended to correct problems like that, that are cheaper in nature, are street-sweeping practices. However, street-sweeping practices are often the very first thing cut from a local budget because they have a high-cost related to them.

But we do have a program that has been developed, as I mentioned earlier, which can fund, through a grant, local communities, counties, to do an assessment of the -- what's collected in the storm sewers. That addresses the storm sewer aspect of the program. Beyond that, there is still another question, which is non-point runoff. That's the fertilizers that run off into the banks from farm areas and so on, that find ways into the streams, and the impacts of those.

The Department has been involved in a major non-point We program in the Navesink. expect to see considerable improvements and results from some of the actions we are proposing that need to be implemented. But it's a very large problem, and I think that we are moving in a step-by-step approach to it. The point sources, we feel that we are about to turn a corner -- 1988 is the date for the elimination of all Storm sewers now need to be assessed, and a the primaries. determination of their impacts and potentials for treatment and management is necessary; and then non-point source as the third phase. So, I think we're moving in the right direction. We do have some grant programs that are available. If we have more communities take advantage of that, we may need to come back and ask you for more money to be put in the program, but--

SENATOR PALLONE: What about the suggestion that was made with regard to the labs -- facilities, I suppose, so that a lot of this testing can be done. Is that a good point? 1 mean, is that something you'd support? 1 don't know if you were here when--

MR. McCANN: Yes.

MR. DIESO: We would very broadly support any action that enhances the County Environmental Health Act and its--

SENATOR PALLONE: Including the penalty provisions that were mentioned -- mandatory penalties, and that?

MR. DIESO: We would suggest, with respect to the laboratories -- and let me confine my remarks to that area -any action which gives the county more environmental background, personnel, and operating budget, we fully support. It's an expectation the Legislature had of the counties back in 1978, and we continue to have it today, working with the counties.

With respect to the enforcement suggestion, we enforce to the full limit of the authority granted us by the Legislature, and within those statutes, we move aggressively and our record is one that we're quite proud of.

SENATOR PALLONE: You don't feel the penalty provisions need to be upgraded? I mean, more strict or minimum fines, I guess, is what was suggested. I don't know about the jail term, but I suppose mandatory fines--

MR. DIESO: Well, there were several items that were suggested that appear to me to be ceremonial more than substance, and I won't discount them as having a place. But we've got considerable enforcement tools, and we would certainly work, and be very happy to work with you, on supporting and increasing, where we think it's necessary to increase the penalties.

SENATOR PALLONE: Let me just ask you -- l got the impression that you feel, with regard to the upgrading of treatment plants, that there basically wasn't a problem. In other words, you don't feel that this spectre that I suppose is on a lot of people's minds, where certain -- either secondary treatment plants, because they don't have enough capacity, or primary treatment plants, in certain circumstances, are

dumping, on occasion, raw sewage into the ocean. You don't see that happening at all?

MR. DIESO: Well, what we do see is that the corrective actions are not ones that are going to occur in a year or two years. This is the reason that our Department and the State has a wastewater treatment program and plan -- and we plan 10 and 15 years into the future.

SENATOR PALLONE: So, even if it does happen, even if it might happen within the next couple years in some circumstances, you don't see any remedial measures in the interim? The main thing is just to get them upgraded?

MR. DIESO: We don't see the -- and Director McGann would like to enhance-- We don't see, in the secondary treatment, that we're going to have a lack of capacity. With respect to primary, we look forward to the upgrading, for those facilities.

SENATOR PALLONE: And therefore, in the interim, there wouldn't be any measures that could be taken? Like for example, one thing that has been suggested is, if a particular sewerage authority may find it necessary, or would like to dump in the ocean, that we would have holding tanks, or that we'd have some kind of temporary measures so that that wouldn't happen.

MR. McCANN: As far as intermeasures -- and I want to address the primary plants, because I feel that the secondary plants have proven that they are operating effectively, and they're doing the job that they're intended to-- Primary plants in the Cape May area, specifically, Wildwood, where we had problems last year -- those problems were severe -- there was an expenditure of nearly \$4 million by the communities of North Wildwood, Wildwood Crest, and City of Wildwood to make interim measures, interim improvements, that could effectively be performed during the winter season. And those have been put in place, so in that case, that has been done.

The other primary plants in Asbury Park and Deal, have been operational improvements. We are closely there monitoring the solids removals, which is generally the problem that occurs at the primary plants. I mean, that's what they're designed to do, remove solids, and if they're not properly operating the plants, excessive solids go out the pipe; and I think the program that we have, both with our State inspectors as well as county inspectors, is insuring that the operation is being done as efficiently as possible, to the extent that the plant can operate as a permanent plant, and what its capabilities are -- we are seeing that. They are operating as best we could expect them to do, without major capital improvements. Now, the major capital improvements are absolutely the long-term answer, and those are being put into place in every one of the cases.

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SENATOR PALLONE: And there's no problem with funding? In other words, the Federal and State match are in place for those facilities?

MR. McCANN: The funding has already been in place. The grants for the physical construction of those projects have been awarded, and in most cases, the construction is already underway.

SENATOR PALLONE: A statement was made a couple of weeks ago by the Commissioner, that he might, in some circumstances, have to take over municipal treatment plants. I'm just wondering what prompted that, and what exactly he meant by that. Why isn't he here today, by the way?

MR. DIESO: He's actually in Washington, attending an EPA-State, two-time a year summit that is a program pergative (sic)--

SENATOR PALLONE: I see, okay. What did he mean by that statement?

MR. DIESO: and he does express his regrets that he couldn't be with you.

- The statement -- and Mr. Chairman, as you well know, sometimes it's taken out of context-- What his intent was in the statement was to offer the residents of the State assurance that if the locals do not do the job -- and we don't have that situation today -- but if we did, and it became necessary, the State would provide, on a full-time, consulting basis, expert advice to that local community. The thought and the impression that was created from the article was that we would come in as a SWAT team and immediately displace the local authority and take over -- not quite the case. In fact, we are in residence -- in many cases, in these local authorities, routinely. We visit them at least once a week. We just had a program with respect to three of them, in which we evaluated how to improve their performance. So, it's a very close relationship, and it's not one that 1 would say we would characterize as uncooperative on either party.

Wastewater treatment operators have a brotherhood. There's not many of them that share the same interest. It's not one of the more glamorous aspects of the environment. So, they have an alliance and it's one that's quite effective.

SENATOR PALLONE: Now, the law provides for that. In other words, there's no need for any legislation to allow the Commissioner to interject himself to take over, or whatever this means at this point -- clearly, you would have that authority under present law-- if someone was not cooperative, if a plant was not cooperative, and that step had to be taken?

MR. DIESO: We would-- We have the remedy of order, and we can order an authority to do certain things and to take certain actions; and within that context, we think it's broad enough to accomplish the goal.

SENATOR PALLONE: Senator, go ahead.

SENATOR VAN WAGNER: Thanks.

I'm interested in your comments-- Your jurisdiction, then, is primarily in the area of wastewater treatment facilities?

MR. DIESO: Water-- In this context, Senator, it's the Division of Water Resources, and that Division has the responsibility.

SENATOR VAN WAGNER: You would interact, then, with various utilities authorities -- municipal utilities authorities, county utilities authorities, regional authorities of that nature?

MR. DIESO: Routinely, yes.

SENATOR VAN WAGNER: And, in your comments, you indicated that what is left of the primary treatment facilities, which are -- how many, I didn't-- How many are left in the State?

> MR. McCANN: Eight, total on the coast. SENATOR VAN WAGNER: Eight? MR. McCANN: Eight on the coastline, total. SENATOR VAN WAGNER: On the coastline? MR. DIESO: Yes. SENATOR VAN WAGNER: How about statewide? MR. DIESO: Statewide, 1 believe the number is about

16.

SENATOR VAN WAGNER: Okay. So, as far as you're concerned, you have a handle on the long-range plans consistent with upgrading those plants to what -- secondary treatment facilities?

MR. McCANN: That's correct.

SENATOR VAN WAGNER: The secondary treatment facilities, of course, as you've indicated, are operating in an efficient fashion, but they're producing a byproduct, obviously, that's creating another problem for the environment. It's called sludge. There has been a great deal of controversy over the fact that now, the DEP is pursuing an the Department to by law, which requires require order. disposers to choose other than ocean disposal, to use alternative land-based disposal methods for getting rid of sludge.

So, what I'm saying to you -- Mr. Chairman, through you -- is that as we approach the solution to primary plant problems by upgrading to secondary treatment, and as the expansion of secondary treatment takes place with the tremendous building boom that we have going on in this State right now, that the creation of another problem begins to occur, and that's called sludge disposal -- which is perhaps, in the area of overall waste disposal, the most pervasive problem that we have to deal with in our society, in this small State that we call New Jersey -- third smallest.

Now, there are plans, I know, that the Department has developed, for sludge incineration. Have there been any other alternatives? I know some utilities authorities have been given grants for composting. That's created some other problems in some areas. For example, not every -- there aren't as many customers for composted materials as one would like, therefore, the material stays there, in a drying area, and emits a very pungent odor, in many cases.

MR. DIESO: Senator, that does occur, even with the euphemism of gardenite.

SENATOR VAN WAGNER: Even with the -- right. And the authorities have done a fine job in exploring ways to control the costs to their ratepayers, because you can imagine now, under this order, the cost that's being incurred by many of these authorities in transporting sludge many, many miles beyond what they were originally required to. What kind of relief and planning do you have for those problems? Because that is going to economically impact every authority in this State, every ratepayer in this State, and of course, requires an environmentally sound solution.

MR. McCANN: I would say that I think many of the authorities have already recognized that problem of the sludge disposal and the cost related to it. And many have already moved to acceptable methods of sludge disposal.

SENATOR VAN WAGNER: Which are?

MR. McCANN: Acceptable methods of sludge disposal -in some cases, we have incineration of the sludge.

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SENATOR VAN WAGNER: Where's that being carried out in the State of New Jersey?

MR. McCANN: There are a number of sites. Stony Brook Regional Sewerage Authority I know has one. Parsippany-Troy Hills also has a sludge incinerator, and there are a couple of others.

SENATOR VAN WAGNER: Now, who is in charge of monitoring the burning of the sludge?

MR. DIESO: Our Division of Environmental Quality -our air pollution folks.

SENATOR VAN WAGNER: Your air pollution? Okay.

MR. McCANN: There are also other options. There are composting operations, although some have had problems; there are operations where the sludge is being disposed of by land spreading and turning it into the ground. Application rates are monitored and designed by the Departments.

There's also the -- I think what you were referring to, the disposal of sludge outside of our State--

SENATOR VAN WAGNER: How much of the sludge presently generated in the State of New Jersey presently is being required to be disposed of outside of the State, due to the fact that an authority's -- you're at capacity in the in-state disposal?

MR. McCANN: I don't have those numbers. I could get back to you with them.

SENATOR VAN WAGNER: Do you know what the additional cost has been to those-- What I'm trying to fix on here, Mr. Chairman, if I might, is -- you've touched on the desire to get at some economic factors involving environmental protection. And we have people here from the county and municipal authorities, various people involved in the treatment of

waste; and I think it's important for us to get a handle on just what kind of increased costs have already occurred as a result of some of the environmental steps we've taken and what might be some of the long-range planning that we might have to engage in to provide assistance, perhaps, to communities that will have more and more difficulty. And I can tell you that some of the costs that are being incurred on a yearly basis to dispose of sludge out-of-State are considerable, in some cases. And I think the Commissioner and the Director would acknowledge that.

MR. McCANN: That's quite true. The sludge costs and the sludge disposal costs have been considered as a part of any funding programs that we have entered into.

SENATOR VAN WAGNER: They have?

MR. McCANN: Yes. Federal dollars and State dollars have gone to support sludge treatment and disposal options in the past, and we also expect that to be an eligible cost under our State's Wastewater Trust Fund.

SENATOR PALLONE: I think, Senator -- I think we should look into that as possibly the basis for a Committee meeting or hearing -- the whole question of sludge, the schedule--

SENATOR VAN WAGNER: It's an immense problem. You could never touch on it just here.

SENATOR PALLONE: Yes -- the schedule with regard to the North Jersey authorities.

SENATOR VAN WAGNER: It really is a big problem.

SENATOR PALLONE: Okay. Let me just ask a couple more things, because I know we've got to move on.

I asked you initially about the situation with these so-called rules to avert the sewer crisis. It's in today's paper, and the announcement with regard-- I'm not sure I understand how, on the one hand, we're being told that there doesn't seem to be a problem with over-capacity, but at the

same time, there seems to be some sort of crisis in terms of extensions being granted, and all that. If you could comment on that?

MR. DIESO: The sewer ban issue in philosophy goes beyond just the coast. It goes to many of our inland treatment plants, and those discharging directly to rivers. In very broad concept, we have a number of municipal treatment facilities that are over capacity. They're designed for perhaps two or three million gallons a day, and they're seeing seven and eight million gallons a day.

SENATOR VAN WAGNER: You are talking about secondary plants now, too.

MR. DIESO: In some cases -- and advanced treatment plants, and others.

Now, there are several ways in which we could effect a change in that community. We can say to them repeatedly that "you are in violation of your permit conditions," and that the discharge exceeds the limits that we consider appropriate. We can take enforcement action, and do take enforcement action. An added weapon in our arsenal for effecting the change was the sewer ban, and in the concept of the sewer ban, we say to that community, "There will be no further connections to the sewage treatment plant for sanitary waste." And in so doing, we apply something of an economic pressure; and if there is land that is developable, land that they would like to see used, then let's upgrade that treatment facility so that we have it performing as it should. And until such--

SENATOR VAN WAGNER: Yeah, well you have two governmental agencies: one the governing body, and one the local or municipal or regional utilities authority, having developers, builders, and everybody else pounding their doors down, saying, "Where are my approvals?" And they have to say, "We're under a ban, or a moratorium."

MR. DIESO: What they stop short of saying is that "we're under a ban, because we have not taken the action necessary to upgrade our facilities to be in compliance with State laws. And until we do, the ban will continue." So, it's an issue that gives us concern, because DEP is placed, now, in an awkward position. It appears as though DEP has been arbitrary in taking this action and imposing the ban, and it's simply not true. We've said to the treatment facility--

SENATOR PALLONE: But Don, this is not a problem in the coastal counties, then? This is--

SENATOR VAN WAGNER: Oh, it sure is.

MR. DIESO: George, I leave that to you.

SENATOR PALLONE: This is what I don't understand, exactly.

MR. McCANN: The bans have been placed on the areas where we have the primary facilities, so when we look at the coastal counties, yes, absolutely, it's a problem at the primary facilities. The secondary facilities -- we do not have the bans in place, because they are operating adequately and they do have available capacity.

> SENATOR VAN WAGNER: You have one in place? MR. McCANN: Excuse me? SENATOR VAN WAGNER: You have one in place, right?

MR. McCANN: All the Wildwoods are the primary--

SENATOR VAN WAGNER: You have one in place in Bay Shore Regional.

SENATOR PALLONE: But what I'm confused--

MR. McCANN: Oh, excuse me. Bay Shore Regional--

SENATOR VAN WAGNER: You have a few in place.

SENATOR PALLONE: On the one hand, you were saying that we don't have a problem with potential raw sewage because of -- we don't really have an over-capacity problem. But on the other hand, now you tell me you do have an over-capacity problem. SENATOR VAN WAGNER: You're eliminating your raw sewage problem, but now you're creating a bulge at the other end, you see. Because now, as you get these plants built -and some of them were built, you have to remember, in the '60s, and they were very modern plants when they were built in the '60s, and there were very few people living in any of the areas that you and I now represent. Now, there are thousands, if not tens of thousands, more people, using that facility.

Now, the options -- on a non-political basis, because of interruptions in funding at the Federal level, and the State's inability to get money from the feds when it was impounded back in the '70s, and delays and lags, and the creation of a great deal of debt on the part of authorities to build these facilities, to expand these facilities And then high interest rates, which made it almost impossible for any authorities to do any financing without going to ratepayers and charging them exorbitant amounts of money -- and don't forget, most authorities are appointed by governing bodies, who are political people who don't want the wrath of ratepayers on their backs -- and they're saying, "Don't you dare raise those rates." And meanwhile, they have to comply with the rules, regulations, and standards that we pass here in the Legislature, and tell the DEP to enforce. And what we create is a huge dilemma; and it's not easily solvable. And what 1 think they're saying is, to the extent that you're asking, on point source pollution on primary plants, in terms of what those plant are able to do, they're doing everything they can. And in those instances where they can't, we put in a sewer ban, because we don't want to risk the job we've given them, which is, protect the environment. They are regulators.

SENATOR PALLONE: Right, but in other words, you don't feel that--

SENATOR VAN WAGNER: It's a problem.

SENATOR PALLONE: I mean, the crisis is because there may be some sewer bans in place, and people may want to develop. But the crisis is not that these plants are at the situation where because of over capacity, they may have to dump raw sewage.

MR. DIESO: That's correct. In fact, the philosophy of the sewer ban was, "Let's get a jump on the issue before we have a plant that does -- that is seriously over capacitated, and is discharging outside of their permit limits."

SENATOR PALLONE: But then what are the new rules? What are you trying to accomplish with these new rules? Explain that to me.

MR. McCANN: The new rules that we're looking at is that we're concerned about -- and there's been recent articles extension program -- the confusion that about the sewer apparently, if one would believe entirely the articles that recently in the papers, that exists amongst local were officials as to what exactly a sewer extension permit means, We believe that there and what is required. is some considerable confusion out there, just by the sheer numbers of permits that are approved by our Department every year. If I were to tell you that that number, in this economy, onlv numbers less than 1000, there's something wrong, because there are considerably more developments going on in this state than 1000.

SENATOR PALLONE: So, you're talking about a basically public information program to prevent the crisis, not that there is, in fact, one, if I--

MR. McCANN: Well, what we're talking about is an--

SENATOR VAN WAGNER: Well, explain to him what you mean by what you just said.

MR. McCANN: Well, what I've just said is that there is illegal construction going on in this State. The appropriate permits are not being obtained, and we are most

concerned when they are not being obtained in areas where they tie into treatment plants that are either over capacity, or not being properly operated, or cannot properly treat their waste, because it adds to the degradation of the waters that they discharge into.

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SENATOR PALLONE: But so far, that problem is not of the crisis magnitude, that it would result in untreated sewage being released into the ocean?

SENATOR VAN WAGNER: What he's saying is that as plants delay in their ability to meet the standards -- because frankly, some of them have funding problems -- as they delay, the pressure on them builds. The economic pressure on that builder or developer builds, and the pressure to get that house up, and somehow or other, that hookup done, becomes more intense.

SENATOR PALLONE: And we could, theoretically, have a problem in the future.

SENATOR VAN WAGNER: You could have a real problem.

MR. McCANN: Yes. I think, to explain the term "sewer crisis" is the fact that the bans are in place in about one-third of the municipalities in this State. And the sewer crisis relates to the fact that the bans will stop the development to the extent that we can enforce those bans and be on top of the developments that are trying to be constructed. And until-- Yes?

SENATOR VAN WAGNER: That's one-third of the municipalities.

MR. McCANN: Yes. And until it's corrected, it won't change.

SENATOR VAN WAGNER: I have so many questions, I wish I had some answers. My problem is, I don't have any answers, other than, the big answer is, give us a ton of money, and we could fix anything. That's the big answer. But you've got people, I believe, in utilities authorities throughout this

State, who have done an absolutely marvelous job, in terms of what they have had to work with. And they have done it by charging very reasonable rates to users. And what the Department is eventually going to get to say to you is that what with the regulatory requirements we've placed on utilities authorities and municipalities -- NJPDES, and I could go on and on -- and the dollars that it costs them, not only in engineering but in application fees alone -- ultimately, is going to result in higher user fees. And that's the answer to the problem. The ultimate answer is that people are going to have to recognize exactly what the real cost is, in terms of protecting the environment. And that's a heavy cost.

MR. DIESO: Senator, let me underscore. You're 100% on the mark, in our opinion. The cost of wastewater treatment is very low, and doesn't reflect the real cost of that action.

SENATOR VAN WAGNER: It's very reasonable in this State.

MR. DIESO: And there is a time, and I think we're rapidly approaching, in which those costs are going to have to become a little closer to reality. And it's going to hurt, in most rates.

SENATOR VAN WAGNER: Sure. I remember seven years ago, attending meetings over solid waste disposal -- if I just might separate a little bit. And I said at that time that it would not be unusual that by the end of the 1980s into the early part of the 1990s, that an individual in a community would be paying \$550 a year to dispose of their garbage. Per By the maybe, end of '80s, mid-'90s. Five hundred, year. And I would say to you that if we're going to get to 450. where we want to get, in the area of upgrading our treatment facilities in this State, I would say it would be safe to say that by the end of this decade, that the average ratepayer and the average system throughout this State is going to pay somewhere between \$350 and \$375 a year on a service charge depending basis. and,

on how the utility is set up for its rate schedule, additional dollars for usage if they have heavy usage.

So, I think that's coming about. 1 think that's part of the answer, to create a situation where better cash flows are coming into utilities authorities and operating agencies; and where they can, in an orderly fashion and in accordance with the laws that we pass, can upgrade their facilities, get ready for additional hookups, do some planning, do the kinds of things you're talking about. And occasionally, we're going to have to inject some absolute capital money, through bond issues and so on, in order to even out the hitches.

MR. DIESO: We have the highest hope that the Trust Fund is going to go a long way to accomplish this.

SENATOR VAN WAGNER: That's a big start. I agree.

SENATOR PALLONE: I have a lot more things we can discuss, but I think we'd better cut it off here. I just have one question to ask you. This is a constituent request from my office. The coastal pollution or ocean pollution hotline -- a lot of problems with it. First of all, it only seems to operate on weekends. If you call Monday through Thursday, it doesn't answer. Also, it's a 609 number -- why isn't it an 800 number? Can't you do something to either make it an 800 number, and operate it every day, because a lot of people--

SENATOR VAN WAGNER: Remember, he's on duty 24 hours a day, so he's -- this guy's seven days a week.

SENATOR PALLONE: A lot of people call me and they say, "I can't get the hotline." And it's a valid and a very good service, but is there any reason why it's only operating on weekends, and why it's not 800?

MR. DIESO: The 800 -- no, I don't have a sound answer for you. Let me--

SENATOR PALLONE: Because if you're in Monmouth County and you have to dial Trenton, it's expensive.

MR. DIESO: The comments about weekends, I think it was the point at which we think the beaches were being used the most, and the point of greatest concern. Let me take both of those back, and let me see if I can change it. Your point's well taken.

SENATOR PALLONE: Thanks again.

MR. DIESO: Thank you.

MR. McCANN: Thank you.

SENATOR PALLONE: We have an option of taking a break or just going right through.

SENATOR VAN WAGNER: Why don't you go right through? You have some people--

SENATOR PALLONE: I think we're just going to continue right through, because we're not going to be here that much longer.

I'd like to have Dr. Ziskin, Assistant Commissioner for Local and Community Health Services, Department of Health.

Let me just take--Before Dr. Ziskin testifies, though -- Zizik? No, you can come up. But I just Ziskin? wanted to know by a show of hands who else we have here-first of all, who is here representing municipal Well, treatment facilities that would like to testify? (affirmative response from unidentified members of audience) Okay. Anyone else who would like to testify? (unidentified audience members indicates yes) And you're from the other county health departments?

J O S E P H I N E F R Y A R: (away from microphone) Shore tourism.

SENATOR PALLONE: Oh, and you're from shore tourism. I don't know, I think we're just going to have to make everything very brief after the Health Department, otherwise we won't get everybody in.

Okay, Doctor?

D R. L E A H Z I S K I N: Thank you, Senator Pallone, Senator Van Wagner.

In the interest of time, and because my colleagues in the Department of Environmental Protection I think covered the waterfront exceedingly well, I will digress from my written testimony, which I believe that you have, and go back to one of the points that you made earlier, or you questioned -- some of the questions raised. And that is, what happens when one of the bacterial counts from the ocean monitoring program is positive? And the work that the Department of Health has done over the past 10 months, I think, speaks to that, and hopefully will answer your questions.

We have put together a new chapter of the State's sanitary code, which is called -- it speaks to our standards for recreational bathing water. And what this does is, again, speak to the sampling or the ocean monitoring survey; and tells the health officer, or mandates that health officers, when they receive an account of a laboratory value exceeding the 20 fecal coliforms per 100 milliliter value, that then they are mandated to do this sanitary survey, and actually seek out the source of the pollution. That charge to them is actually part of the Department's regulations. These chapters of the Code that I'm referring to will actually become effective Monday, August the fourth.

And specifically, they not only apply to ocean--But just for your records, this citation is Chapter 8:26, 8.8, titled "Natural Bathing Waters." And this covers ocean, bays, lakes, rivers, etc. So, not only does this mandate the health officer to seek out the source of pollution for the ocean bathing beach, but does speak to your point about what happens if a lake is polluted, a river, etc. And the term that we use What this implies is then, is sanitary survey. he or she actually does a walk-through, looks at the environment that feeds into the ocean, the lake, the river, etc.-seeks out that broken sewer pipe, the storm sewer, the inappropriate connections that were spoken about, etc.

SENATOR PALLONE: I just wondered -- is that-- 1 guess we just don't have the time today, probably. I just really wanted to investigate, in general, what role the Department had in protecting the health of ocean bathers.

DR. ZISKIN: All right.

SENATOR PALLONE: Maybe you could give me a little more detail, a broad outline of exactly what the Department's functions are, in that regard.

DR. ZISKIN: What we have done is, we have worked in conjunction with the Department of Environmental Protection throughout this description, and I don't want to re-go over we have developed these recreational bathing that. But standards again, and we had called together -- 1 think it's important to realize, the input that went into developing this new chapter of the State Sanitary Code. And it pulled together both the municipal and county health department people. lt pulled together industry -- the treatment plant industry as well as other industries concerned with this problem. It pulled together authorities from the Environmental Protection Agency, and we came up with that standard of the 200 fecal coliforms. This was based on an extensive search of the literature. This is the value that appears to be the most recognized as a level of pollution that will be safe for people swimming in the ocean -- the lakes, the rivers, etc.

And so our -- what we have done is put our concerns into these recreational bathing standards. Again, not to belabor pieces that you've already heard -- we see these chapters as complementary to what DEP has done, and it gives the authority to that local health officer when he gets that result. It then gives him the authority to do the sanitary survey, and then act on it to close the beach.

> SENATOR PALLONE: To do the actual enforcement? DR. ZISKIN: That's correct.

SENATOR PALLONE: Okay. You know, I think what we may do is, take a look at these standards that you've given us -the written statement -- and then perhaps we can -- the Committee can address some written questions to you and to other Health Department officials, for the sake of time.

The other thing though, I did want to ask you, just in general -- in terms of -- and maybe this is something we would have to follow up with, also, but -- In terms of the quality of the ocean water in general, a statement was made by Don, 1 quess, Dieso, that in general, he thinks the ocean quality is getting better. At the same time, you know, I constantly hear complaints by individuals about health problems, when they swim in the ocean -- ear infections, nose infections, etc. I quess maybe two questions: on the one hand, do you feel that quality-wise, it is getting better? And secondly, what monitoring -- or what kind of surveys are being done of affect individuals health-related problems that who are swimming in the ocean?

DR. ZISKIN: The first question -- yes, I do think the ocean quality is getting better, and I think that the data that we will be collecting will help all of us document that it is.

You second question -- how do we know what the health effects actually are--

SENATOR PALLONE: And is there any kind of survey being done?

DR. ZISKIN: It's extremely difficult, because at the same time that people are going in the water and bathing, they're exposed to many other sources of infection, and so it's a multiplicity of cause kind of thing. How do you know where you picked up that organism that gave you the rash, or the gastrointestinal disturbance, or the respiratory -- the sore throat, etc.? The Department -- and this is another Division -- our Division of Epidemiology and Disease Control is undertaking a survey of lifeguards along the ocean in an

attempt to find out if levels of reported illness are increasing, or if they find especially peaks have increased. Just as you have difficulty following up on any individual complaint, it's extremely difficult for the Department to follow up on a single incidence -- reported incidence of illness. And so, our level -- or how we monitor illness -- is really based on a database, and if we get reports, especially clustered from a particular area, or the numbers especially increase, that sort of triggers a response to us. However, as I mentioned, our Division of Epidemiology is doing a survey of lifeguards now to attempt to get a baseline on reported illnesses.

SENATOR PALLONE: Could we have some sort of report or summary of what they're involved in, so that it would be available to the Committee?

DR. ZISKIN: I will ask them for that, certainly.

SENATOR PALLONE: One of the reasons that I ask that question is because I have lately been getting some letters --I guess there's this organization called Save Our Shores, which is in my district, and some of the physicians that are involved in that organization. Perhaps the organization is strictly physicians -- I'm not sure -- who have complained or basically, organized because of their concerns over the health effects of ocean bathing in some of the coastal waters that have been affected. And I just wondered what the Department was doing in that regard. But you've kind of outlined at least, basically, what you're doing. I don't know if more needs to be done, but--

DR. ZISKIN: I have no-- This is Mr. Monaco, who can speak a little more directly to that question.

ANTHONY T. MONACO: Basically, previous work done in this areas was sketchy. Local health departments didn't have one set of standards to go by for collecting samples, or how the samples were going to be analyzed. And the data wasn't currently available, uniformly, along the coast.

With these new standards, and the monitoring program, it uniforms how the samples are to be collected, when they are to be collected, and recording of these results to the State Health Department, so that we can get a historical perspective of problem areas, and also tie in the sanitary surveys which will give us an explanation for this event. With that information tied in with the work that epidemiology is currently pursuing, we may be able to determine higher incidence of illness due to polluted waters. But right now, we do not have the historical data necessary to make that statement right now.

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SENATOR PALLONE: I think what I'm going to ask is that the Committee members take a look at these new standards and at your statement, and then if we have follow-up questions, we'll proceed on that, only for the sake of time. (to Senator Van Wagner) Okay with you?

SENATOR VAN WAGNER: Fine.

SENATOR PALLONE: Okay. Thank you very much. Sorry you had to wait so long.

Could we have the county -- the other county health officers? I guess we started with Monmouth, do we have the Ocean County officer?

CHARLES KAUFFMAN: Yes.

SENATOR PALLONE: Could you please come up? I'm going to ask you to just briefly make statements, for the sake of time. I'm sorry that you had to wait all this time, but we wanted to invite you here today because we figured you had the most direct knowledge of what's going on.

MR. KAUFFMAN: I want to thank you very much for requesting me to come. I brought some information for you. 1 didn't prepare written testimony. I thought 1'd respond more to your questions than that, but I do have some comments as we move through the hearing process that have come to mind. But first I'll go over what is being distributed.

This is the Ocean County coast of -- cooperative monitoring programs for the ocean sites only. There are in excess of 50 sites in Ocean County that are being monitored on the oceanfront. There's 333 samples analysis here, and out of all those analysis, only three exceeded the standard of 200 fecal coliform; and when re-sampled, did not exceed. So, we're well within the limits.

But I'd like to get to -- you extensively questioned some of the people in regards to the monitoring program, and whether it should be expanded on a daily basis, and what's the importance of the monitoring program. And let me say that people shouldn't think of this monitoring program, in my opinion, as preventing people from swimming in mediate (sic) pollution. We take a sample on a Monday, we get the results back late Tuesday afternoon. We re-sample on Wednesday. We get those results back on Thursday. So, if a swimming area is polluted, if there is a problem, there is a one to four day spread before we stop the swimming.

importance of a monitoring program is to find The those sites that continually exceed the standard, or more adequately, more times exceed the standard than don't; and then, take corrective action to prevent it from getting to exceed the standard. And to look at it as a safety measure in advance -- you can't. You have to take this data, historically look at it, do your environmental surveys, make recommendations based upon data that you obtain, and you may need to close sites not based, necessarily, on the individual monitoring data from the day before, but a long-range amount of data. So, you look at the monitoring program as a lot different type of thing.

If you wanted to do an intensified monitoring program like you have talked about, people would say, "Do it on a daily basis." Even on a daily basis, for two days, there could be swimming in harmful waters. But you need to get the trends, you need to have to have an idea of what the quality is, and

then you have to take your action. I wanted to make that point, that monitoring in itself is not the end to the means; and it will not necessarily prevent somebody from swimming in polluted water, in advance of the pollution.

SENATOR PALLONE: That's very valid. That's what we're trying to get down to -- the effectiveness of the program.

MR. KAUFFMAN: What I would like to say now, the results that you see in this document that I provided for you is probably the results of the Ocean County Utilities Authority being in existence in Ocean County. The planning of an infrastructure such as an Ocean County Utilities Authority took place back starting in the early '60s, and is just showing fruition now, of what it can do. And it takes time, and it takes a lot of money. The only people that can put up the money that it takes is the State and Federal government. The local communities cannot support that kind of money.

The other thing -- and the last thing that I want to you with -- is the fact that monitoring and the leave protection of the environment costs money on a day-to-day In Ocean County, my environmental health budget for my basis. Health Department exceeds \$500,000. The amount of assistance I get through the Environmental Health Act from the State of New Jersey is less than 10%. So, gentlemen, you're going to make the laws -- if you're going to require us to do more, and you just saw brought before you more regulation that are going to increase locally the responsibilities, and you've heard DEP come here and say, "Oh, it's the county Health Departments that are doing this -- it is the local people who are doing the You've heard Lester come up here -testing"--Lester Jargowsky -- and say, "Hey, we need money for laboratories." Yes. You have the tools to give that to us through the Environmental Health Act -- the County Environmental Health Act, and yet, you don't fund it. You fund it to such a level that a county can get only about \$50,000 a year.

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SENATOR PALLONE: I should mention that we had, during testimony before our Appropriations Committee, requests along those lines, that there needed to be more funding of the County Environmental Health Act. And I don't know exactly what happened, but obviously, it's way insufficient in terms of what's actually needed.

and the second second

MR. KAUFFMAN: The only way that we can protect your shores is if we spend money.

SENATOR PALLONE: Yeah.

MR. KAUFFMAN: It costs. And Ocean County -- I'm glad I work for Ocean County, because Ocean County has expended the money. We do about three to four times more testing than Lester does in our lab, but our lab costs an awful lot of money.

SENATOR PALLONE: Well, thank you very much, and we're going to take that into consideration.

SENATOR GAGLIANO: Thank you, sir.

SENATOR PALLONE: Atlantic County? We're going from north to south.

T R A C Y MC A R D L E: Senator, my comments will be brief and positive, for a change.

My name is Tracy McArdle, and 1 am the Health Officer for Atlantic County, and am such am responsible for the overall implementation of all public health and environmental programs that are under the auspices of the county Health Department.

report briefly on I'm here today to the ocean monitoring activities of the County, and to congratulate the State for the establishment this year of its coastal monitoring program. Atlantic County has approximately nine miles of included coastline, and this the beach communities of Brigantine, Ventnor, Margate, and Longport. Our agency has been testing the waters along these beaches since 1980. Atlantic City beaches are tested by the Atlantic City Health Department. I believe they have a representative here today that will address Atlantic City beaches.

I'm pleased to report to you today that since the initiation of our ocean monitoring program six years ago, bacteria levels have never exceeded the 200 count limit for recreational waters. In fact, they've never gone over 50. We have a rather unique and fortuitous situation in the county, in that we don't have the usual array of potential sources of Atlantic County has a ocean pollution. relatively new, state-of-the-art sewage treatment plant whose outfall is several miles off the coast. The shore communities have few, if any, stormwater pipes directly discharging into the ocean. The area has a large tourist population, but it's predominantly residential. There are few piers or boardwalks, and a very limited number of beachfront operations.

While we don't anticipate any major water quality problems at our beaches in the near future, it is recognized that we will always be vulnerable to major plums of contamination migrating into our area. The vigilant monitoring will provide an early detection system needed to identify and hopefully, abate such problems.

The New Jersey Department of Environmental Protection has done а very fine job in providing direction and to the newly established monitoring organization State's We have an excellent working relationship with the program. staff at the Division of Water Resources. They are and have always been very supportive of our efforts. Although Atlantic County has enjoyed a history of favorable water test results, the highly visible, formalized system of monitoring and reporting initiated by DEP this year provides the public with added sense of assurance that their health is an being protected, and for this, the State of New Jersey is to be commended.

> SENATOR PALLONE: Thank you very much. MS. McARDLE: You're welcome.

SENATOR PALLONE: I'm not going to ask any questions for the sake of time, but I just want you to know, we do appreciate your coming, because all of this, of course, is being recorded, and we do intend to go back over it and probably meet you and the other health officials at the other hearings that we're going to be having around the State.

MS. McARDLE: Thank you very much.

SENATOR PALLONE: Thank you.

And the Cape May person? (Aide advises that he is not present) We have someone from Cape May, though, I take it. LEE BUD: (From the audience) No, I'm from Atlantic City.

SENATOR PALLONE: Oh, okay. There is no one from Cape May -- none of the health officials. So, now we're going into the-- You're from the Atlantic City Municipal Health Department? (affirmative response) Okay. That's Mr. Lee Bud?

MR. BUD: That's correct. I'm the Health Officer for Atlantic City.

We have, like most other communities along the shore, sampled the water quality for many years, 1 think, back to 1980. And basically, we haven't seen a difference in that historical data from our ocean samples between 1980 and now. We've had two beach closures this year, in response to the standard that's set. I think that the setting of the standards is a good thing. It forces us to act on problems, rather than just to rationalize them from going away.

Although the gentleman from DEP earlier attributed a cause to our recent closures, I'm not so sure that that's the cause. As a matter of fact, the problems that we have had in terms of surge counts -- counts that, for unexplained reasons, went larger and then reverted back to below the standard before there was substantial correction, at least in the one instance, the small sewer line was found about a week and a half after the water had returned to normal,

suggests that to me, at least, this is going to be an ongoing problem that we're going to see in Atlantic City because of the land use criteria that we have -- the heavy land use that we have, and because we're an aging city.

I think the thing that surprises me from the DEP comments this morning was that if, in fact the quality of the ocean water is getting better, and we're able to document that, to a certain extent, why are we holding the beaches hostage in terms of closures? And if it compares accurately to -- if our water standards compare accurately to the water level up and down the East Coast, are we taking a posture that's any different than what's happening in the rest of the coast? And that relates back to the initial comment by the recreation people -- are we creating a long-term negative image that would affect the New Jersey tourism? And I think that's something that you guys are going to have to address.

We see the problem coming from our storm drains. Our water samples over a period of time show that we have water quality averaging below 50, with the exception of three sites. And they are three areas that we have been able to address, where there's been an occasional peak. One's been the Chelsea Avenue area, the other's been the Arkansas Avenue area, and the other's been the Pennsylvania Avenue area. And those areas average higher, and we've gone out to conduct sanitary That's going to take awhile, because this surveys. is а labor-intensive problem.

And we see that, if we're going to go over this -- if we're going to do this in the long term perspective, we're going to need some additional funding for a least labor. 1 think, though, the real big bucks are going to be in infrastructure repair and storm drain extensions, particularly out past the ocean and into the bathing zones, and also in support of public works. We have pretty much tried, as much as we could, to clean the storm drains and to institute some sort

of program through public works. It is an interdisciplinary job, in a local community between public works, the health department-- We use the life guards a lot in terms of monitoring what's going on on the beaches.

That's basically what I wanted to say, and that I think that where you are going to have to put your money in terms of a program, is really in that infrastructure area.

I'd be glad to answer any questions, if you have them.

SENATOR PALLONE: You're basically going along, I guess, in that respect with what Mr. Jargowsky said, that there really is a problem with infrastructure, and that's where money should be spent over the long term?

MR. BUD: Because we're from a community, perhaps one of the things that you may want to consider is that as an older community, we have what's known as community sewer lines, particularly along that beach.

SENATOR PALLONE: Yes. Well, I think in many respects, Atlantic City might compare to, say, Asbury Park or Long Branch -- you know, the older urban areas along the shore.

MR. BUD: Yeah. And you left -- in any kind of legislation, you have to hold everybody accountable in that community line, not just where that line breaks, because it takes everybody to replace it. That's the most important thing, I think.

SENATOR PALLONE: Right. Okay, well, thanks a lot. You're hitting on a lot of the points that we're concerned about. I appreciate it.

Okay, who -- we have other-- Well, let me say this. Other than the municipal sewage treatment officers, or I guess, local health officers, I see that Dr. Mytelka is here also. Do you have a long presentation, or-- Let me ask you this way. Would you have a problem if we carried you over to the next hearing, when we're going to talk about the problems with the plastic disposables in Fresh Kills and that, or would you

rather make a presentation now? Only for the sake of time; I know you came down here today.

D R. A L A N I. M Y T E L K A: (From audience) Well, are you-- If you're going to be holding another session on Middlesex County--

SENATOR PALLONE: That's what we planned on --

DR. MYTELKA: (inaudible) no problem (inaudible).

SENATOR PALLONE: That's what we're planning, probably by the end of August.

DR. MYTELKA: That would be fine.

SENATOR PALLONE: Okay. And I appreciate your coming down.

And also I saw that the -- is it Miss Fryar, from the Tourism Council? Since we heard from Victoria Schmidt, would you mind if we held off on you also, for the sake of time? 1'm just concerned, because we only have about another 20 minutes or so, and 1'd like to hear the other municipal officers.

So, who are the other municipal officers, again? (confers with aide) Mr. Holland? 1s he still here? ROBERT HOLLAND: (From audience) Yes.

SENATOR PALLONE: Okay, could you give us your presentation at this time? (Mr. Holland's response is inaudible due to distance from microphone) You're the Ocean County Utility Authority's Executive Director.

MR. HOLLAND: Yes.

Thank you, Senator Pallone. I have a very brief presentation this afternoon. Listening to all the other presentations, I feel like a lonely little petunia in an onion patch.

The Ocean County Utilities Authority services all of Ocean County, which discharges, normally, into the Atlantic Ocean; plus it reaches up into Monmouth County. Ocean County's most significant geographical characteristic is its 42 miles of beachfront on the Atlantic Ocean.

The coastline runs from the Manasquan Inlet at Point Pleasant Beach, at the northerly extremity, to the Beach Haven Inlet at the southern tip of Long Beach Island. I'm having problems here because one of my lenses fell out of my glasses. addition to the ocean beachfront, the In county (pause) contains 125 square miles of sheltered bays and estuaries. Included with the estuaries are the Manasquan River, Metedeconk River, Toms River, Cedar Creek, Forked River, Oyster Creek, and Notable bays include the Barnegat Bay, the Mullica River. Manahawkin Bay, Little Egg Harbor, and part of Great Bay. 1n addition there are approximately 50 freshwater lakes.

The availability of prime recreational water bodies, in conjunction with Ocean County's proximity to the New York metropolitan area and Philadelphia, makes Ocean County's most valuable industry, tourism. In order to attract tourists, we must provide clean, recreational waters.

Prior to the creation of the Ocean County Utilities Authority, there were approximately 50 wastewater treatment facilities providing service developments to and municipalities. These facilities generally provided poor quality effluent, and discharged into upland waterways, the bays, or in the ocean close to the beach -- situations in other counties, which we were talking about this morning. ln some instances, it was common practice to store sludge in the summer at these facilities, and discharge it through those same outfalls, out in the ocean, approximately 1000 feet offshore, during the winter.

Septic tanks were used by about 60% of the residents in Ocean County. These septic tanks leached into lagoons and low-lying areas. Toward the end of the '60s, the capacity of the inland water to assimilate the wastewater was exceeded. Large areas of Barnegat Bay were closed to shellfishing, and bathing was restricted where contamination was detected. Building bans were imposed.

It was apparent to the Freeholders of Ocean County that action had to be taken by them to insure that the waters of the county were protected. In 1970, the Freeholders created the Ocean County Sewerage Authority, and charged that agency with the responsibility of insuring that adequate wastewater treatment was provided for the waters of the county.

Beginning in 1973, with the help and guidance of the New Jersey DEP and the EPA, construction of a regional interceptor system with associated pumping stations and three state-of-the-art wastewater facilities was started.

SENATOR PALLONE: Mr. Holland, could I just ask -- do you have a long written statement there? Because if you want, you could submit that to us and just comment on it -- it's up to you.

MR. HOLLAND: Well, all right, I'll submit the statement -- it's only another page. But I would like to make a little grass roots statement here if I may. I've been with the Authority for a number of years, and I thought, for the purpose of this presentation, I'd like to show you exactly what we're talking about -- exactly what the Authority does, exactly what wastewater is, what we do to it, and what we put out into the ocean.

So, I bought three samples of wastewater with me, and I'll leave them with you, if you'd like me to. The first sample is what comes into our facility. It's basically raw wastewater which comes from domestic residences. That has -that's the pollution that we're trying to take care of.

After treating the wastewater, we discharge out into the ocean in outfalls that are approximately one mile offshore in three locations, in 60 feet of water, with about 1500 feet of diffuser, an effluent that looks like that (holds up example). Ninety percent or better of the material that is in this wastewater is removed before we discharge that out into he ocean.
SENATOR PALLONE: So, there really isn't any particular matter in that at all, is there?

MR. HOLLAND: The suspended -- the settleable solids have virtually been removed. Some of the particular matter that's in dissolved form has been removed -- about 90% of that, and about 90% of the oxygen using a material which causes -the depletion of oxygen has been removed. This is a sample of the ocean, so you can see, there is some material still in there, but there's quite good clarity.

Now, in order to get from here to here, the more you get from here to here (gestures to samples), the more of this you produce.

SENATOR PALLONE: Senator Van Wagner's comment.

MR. HOLLAND: Senator Van Wagner's comments were appropriate.

So, I brought with me a small sample of what we call sludge. We don't smoke it. (laughter)

SENATOR VAN WAGNER: Makes great tomatoes.

MR. HOLLAND: Twenty-five percent solid material, 75% liquid material. The treatment of this since we have started our system has increased by about 16% per million gallons. The treatment of this since we have started our system has increased 1200 times. This used to be--Not 1200. Twelve times, I'm sorry. This used to be \$23 per thousand -- per million gallons; now this is up to \$300 per million gallons.

As long as you continue to provide adequate treatment and increase the levels of treatment, this product is going to increase. Senator Van Wagner's comments relative to the problems with sludge disposal are real. Fifty percent of the sludge from New Jersey is still going into the ocean. We're on the poor side of the 50% -- we're going to Pennsylvania.

I think New Jersey, if they're going to continue in their efforts to clean up the coastal pollution and clean up the inland pollution, is going to have to recognize that the State is going to have to foster the development of in-state, on-shore sludge disposal sites. People are going to have to recognize that they're going to have to pay more for their wastewater treatment than they've ever paid before. Our ratepayers are paying approximately \$130 per year for our system -- \$130 per home. Tacked onto the local collection system, that amounts to probably \$250 a home. Senator Van Wagner's comments about \$500 a home by the 1990s, are real. 1 think that's the number we're going to see.

I do appreciate the opportunity to speak before this Committee, and I'm proud to be one of those counties that does not have the beach closings -- we haven't had a beach closing in five years -- and one of those communities that has been going to bite the bullet, put out the dollars, and clean up the environment.

SENATOR PALLONE: Okay, thank you.

MR. HOLLAND: Thank you.

SENATOR PALLONE: We want to make your testimony -your statement there part of the record. Is that something that we could keep, or is this (laughter)?

MR. HOLLAND: You certainly may.

SENATOR PALLONE: 1 think I would like to have those, for, maybe further demonstration purposes.

SENATOR VAN WAGNER: You've got to be on a landfill sometime when they dispose of it, Frank.

SENATOR PALLONE: If you don't mind, we'll keep it.

MR. HOLLAND: You're welcome to it.

SENATOR PALLONE: Thank you.

All right. Going down the list, this gentlemen, I guess--

SENATOR VAN WAGNER: We have South Monmouth, you have Bayshore, and you have Middletown -- all utilities authorities.

SENATOR PALLONE: Okay, well, I'm just going by the ones who raised their hands.

W A L T E R Z I Z I K: (From audience) I have a written statement that I will submit for the record.

SENATOR PALLONE: Fine. And if you'd like to make some comments?

MR. ZIZIK: (From audience) My name is Walter Zizik, I'm with the South Monmouth Regional Sewerage Authority.

SENATOR PALLONE: Oh, Mr. Zizik. I've spoken to you on the phone, but I never met you in person.

SENATOR VAN WAGNER: Incidentally, I might add, Senator, these are the individuals who we're going to hear from, who, I think, are going to help us find the solutions.

SENATOR PALLONE: Sure.

SENATOR VAN WAGNER: Because they work with the problem, they face the wrath of everybody in creation, they've had to go out and expend the money -- I mean, they're going to be a key element in getting us to where we've got to go.

SENATOR PALLONE: I'm going to ask you to move over to that other chair, though, and speak into the two mikes, and just maybe bring the two closer to you. That one's recording you.

MR. ZIZIK: For the record, the South Monmouth Regional Sewerage Authority handles all of the sanitary sewage that is generated between the Shark River at the north and the Manasquan River to the south, including inland, the portion of Wall Township. We run from Belmar through South Belmar, Spring Lake, Spring Lake Heights, Sea Girt, Manasquan, and Brielle, and a portion of Wall Township.

We've been on stream since 1977, having put out of commission six small individually operated municipal plants which were primary treatment plants. In essence, you know from testimony the advantages of a secondary plant over a primary plant. We do, in effect, what Mr. Holland does on a much larger scale -- the same thing. We remove up to about 90% of the pollutants from the incoming sewage, and we discharge to the ocean the remainder.

Sludge is a problem. Right now, our method of disposing is by soil injection, into a sod pond. This, 1 understand, is starting to become a political issue, from the point of view that nobody wants to see these trucks rolling up and through their community, and discharging sludge, no matter how sound the environmental solution might be.

SENATOR VAN WAGNER: How much did your NJPDES cost you to do that, Walter?

MR. ZIZIK: I didn't get that?

SENATOR VAN WAGNER: I assume you had to apply for a NJPDES permit to discharge--

MR. ZIZIK: No, at the present time, the permit has to be held by the people injecting the sludge.

SENATOR VAN WAGNER: I see. Is that a private company?

MR. ZIZIK: Yes, it is. It's run by a firm named Soil Co., (phonetic spelling) which handles the sod farm itself, and Freehold Cartage, which does the transporting.

SENATOR VAN WAGNER: And they're required to obtain the NJPDES?

MR. ZIZIK: All the permits required to run that operation.

Just to get down to the bare parameters-- As 1 read in the paper, and as noted here, the beaches are being closed down only when the fecal coli count exceeds 200 per 100 milliliters. Fecal coli is not a problem for a sanitary sewage plant to solve. It's one of the easiest processes to control. Regardless of whether it's a primary plant or a secondary plant, fecal coli is destroyed by disinfection. That's only one little process heading the final effluent with a shot of chlorine. Any reasonably good operator in a sewage treatment plant can control this shot of chlorine, and there is equipment now that automatically tests the effluent for fecal coli, and adjusts the dosage accordingly. I cannot see -- I could never see the spotlight turned on to sewage treatment plants, whether

they be primary or secondary, so far as polluting the waters with fecal coli.

In summary, I'm going to read from what I would "It would be my opinion that if resources are recommend: strained" -- that's what we keep hearing, Monmouth County Board of Health needs more money, Ocean County Board of Health needs more money to run these tests -- "I would concentrate my investigation to pollution sources other than treatment plants which discharge into the ocean. I would check into the conditions of the rivers and lakes that empty into the ocean; and I would also check out major storm sewers that discharge directly into the ocean. If I were to find a problem in the rivers, then I would start tracing the storm drains falling into that river. Checking on discharges from ships" -- by the way, in my discourse, 1 note that a possible source of pollution is ship discharge or their accumulated waste before entering into port -- "but checking on discharge from ships would be rather difficult, since any such discharges would probably be done at night."

In essence, what I'm saying is, I don't think that the sewage treatment plants are your problems. Not for fecal coli. They might be a problem for depletion of oxygen, but that is not the reason you're closing the beaches.

SENATOR PALLONE: Well, I think we've established, as you say, that we do need to do a lot more work with regard to these other points sources, whether it be storm drains, sewer mains, any other pipes that are coming into the -- and also, into the rivers, because as Mr. Jargowsky mentioned, I remember last summer, when we were -- everybody in the Asbury Park-Ocean Township area was saying, "Oh, it's the local sewage treatment plants that are causing the beaches to be closed," whereas, from Mr. Jargowsky's testimony and the investigation that he did, it seemed that the largest problem was outfalls into Deal Lake, which were not properly connected and were therefore

coming from the flume out into the ocean. So, there's definitely a lot that needs to be done there.

MR. ZIZIK: Well, every treatment plant has to submit self-monitoring reports on a monthly basis.

SENATOR PALLONE: Yes.

MR. ZIZIK: It's very easy to check whether or not a plant is properly chlorinating. All you do have to do is find out how much chlorine they're buying. And you would be able to find how much chlorine today they're putting in their waste. But no storm drain has to file a report. No storm drain has chlorination facilities.

SENATOR PALLONE: Right.

MR. ZIZIK: And I believe your culprit will be found someplace in that area.

SENATOR PALLONE: Okay, well, thanks a lot.

MR. ZIZIK: You're welcome.

SENATOR PALLONE: And we have your statement for the record there. Thank you for coming down. Sorry you had to wait so long.

And-- Go ahead. (speaks to unidentified member of audience) I'm going to ask you to identify yourselves, even if I should know you.

D A V I D K N O W L E S: 1'm Dave Knowles from the Bayshore Regional Sewerage Authority. We treat sewage from 80,000 customers in -- along the coast of the Raritan Bay; and several industries.

We are the plant that Senator Van Wagner was referring to. We have a ban on sewer connections, even though we're only at 75% of capacity. We have a disruption from -- we happen to be the winner, I guess you could say -- we have as one of our customers the industry which has been offered the largest fine in the history of the DEP. And they have caused some problems for us, and we have asked the DEP to take action, and they have -- they gave us the sewer ban. (laughter) We're trying to work that out.

What 1'd like to speak to here is the--There's no that there's going to be a lot of work question on infrastructure. Out plant ---we've just completed а for upgrading our federally-funded project sludge-handling facilities and our incinerator. Since the inception in 1974, we've incinerated all our sludge.

We're currently starting a contract to upgrade our And, since the grant program has just about aeration system. out, we are using our own funds to do that. The run communities are paying for this project. We did not apply the infrastructure loan program because that is under not currently operating -- it's just getting started -and depending on how the program is set up, we may never apply. We have asked how this is going to be administrated, and have not, to this point, received an answer.

If this infrastructure grant program is going to be handled like the community block grants, we'd like to be the first applicant. The problem we have is that we noticed that the State already has a funding program set up with the municipal grants program in place, with all the paperwork there, ready to use. If that structure is used for the infrastructure loans, we wouldn't be able to afford to apply.

SENATOR PALLONE: In other words, you would be able to take advantage of the grant program, but not the loan program?

MR. KNOWLES: Yeah.

SENATOR PALLONE: We've heard that from many, and that's been the problem.

MR. KNOWLES: If it's a block grant -- if it's handled like the block grant program, where you propose a project, and if your project's approved, you get a check, then-- If there was, say, a four percent loan, we would be able to do that. If this is to be handled through the regular program, with the paperwork that's involved, and the delays -- the last time that was calculated-- I used to work at the Bergen County Sewerage Authority. We calculated somewhere around 18% as what it costs to administrate that.

and a second second

SENATOR PALLONE: Well, you're bringing up something that, again, was discussed during our budget hearings -- during our Appropriations Committee hearings, and I don't think has been resolved yet. So, I'm glad you're raising it. It's important.

MR. KNOWLES: What happens in that case is that places like the Passaic Valley Sewage Commissioners, who have attorneys, bookkeepers, and engineers on staff, can apply and will save money on a four percent grant. But smaller regional authorities like ourselves -- local authorities -- it would be cheaper for them to just go out on the open market, and float a regular bond. The difference is, they're going to get involved where -- for communities that can't afford, and don't have the (indiscernible) capacity. That's where the infrastructure loan program will work.

SENATOR VAN WAGNER: Excuse me, Dave. I'm going to take over.

SENATOR PALLONE: He's the Vice Chairman. Did you know you were the Vice Chairman?

SENATOR VAN WAGNER: Frank's got to go meet his public.

MR. KNOWLES: Okay. I was just harping on the infrastructure loan program, on if it's administrated under the construction grants program, we probably won't be able to afford to take the loans because of the administrative costs. But if they were administered like the community block programs, we could probably do that.

SENATOR VAN WAGNER: I don't mean to express ignorance, but the infrastructure loan program -- this is the environmental infrastructure loan program that we established a year ago?

MR. KNOWLES: Yes.

SENATOR VAN WAGNER: I wish we had somebody from DEP here, because I would love to find out what -- how much in the way of loans have been let out at this point, and at what interest rate.

MR. KNOWLES: At this point, I don't believe the procedures have been set up.

SENATOR PALLONE: It hasn't actually-- This went on -- I was just mentioning to him before that this went on during our budget process, the question of loans versus grants. And I don't believe it was resolved. I think that the budget ends up leaving it open, that it could be either a loan or a grant program; and that it's being left up to the Department, which hasn't decided or maybe will decide on an individual basis.

MR. KNOWLES: Well, what the Department's doing now is, they're taking two lists: people who want grants, and people who want loans, and you can't get on both lists.

SENATOR PALLONE: Right.

SENATOR VAN WAGNER: The money for the loans is generated out of the general fund?

SENATOR PALLONE: No, it's -- that's the--

SENATOR VAN WAGNER: Natural Resources Bond Issue?

SENATOR PALLONE: The Trust Fund that -- The Wastewater Treatment Trust -- the one that was discussed previously.

SENATOR VAN WAGNER: This was money formerly, that would come directly to the various utility authorities in the form of grants, which the State now receives -- throws into one pot?

SENATOR PALLONE: And the question-- In the process, there were many legislators who wanted the grant program. DEP was insisting on the loan program, and it ended up that it was both. And now you're saying -- in other words, it was either one or the other. What you're saying is that they're now

soliciting either a loan or a grant, and asking you which one you want to be on?

MR. KNOWLES: Without telling you how it's going to be administrated.

SENATOR PALLONE: What the consequences would be.

MR. KNOWLES: And if it's a zero percent loan, administrated the same -- through the same 414 steps of the Federal grant program, nobody can afford it, because it's going to take 10-18% to administrate it, and it's cheaper to just go down to the bank, borrow at seven percent, and build a project.

SENATOR PALLONE: You know who knows all about this but is not here is Senator Weiss. This was always his big concern. And I think the best thing is to just listen to it all and then we'll see what we can do about it.

SENATOR VAN WAGNER: I was deeply involved in the so-called original debate over the infrastructure bank concept. And one of the arguments I had against that concept was the fact that yes, it was a unique and creative way of recycling money, and it was a unique and creative way for the State to capitalize on grants and bond issues that it was going to float, and encapsulate it into one pot of money, if you will -- trust fund. But then, as you're pointing out now, once you begin to establish a program for lending that money, you are creating, on the part of the authority, a debt which could cost them more than if they simply went out and borrowed on their own -- and in most cases, would cost them more than if they went out and borrowed on their own. And meanwhile, you were taking away from them even the competitive aspect of being able to go for a grant, because at that point, I think the Department was adamant over, if you got a loan, you could not qualify for a grant. And I don't know if the same rules are applying.

MR. KNOWLES: So far, the same rule applies, right up to what list you want to be on. They are not accepting you for both lists.

SENATOR VAN WAGNER: Does one preclude you from the other?

MR. KNOWLES: Yes.

SENATOR VAN WAGNER: That's what I was afraid of. I'm sorry, I didn't meant to interrupt.

MR. KNOWLES: That's it. Other than to say, I think Dick Dewling's doing a very good job, and we have some problems with him, but he's got an open ear.

SENATOR VAN WAGNER: Well, as I said earlier, and we're going to hear, I guess, from Bob Eckert now, and the Middletown Sewerage Authority -- Mr. Ellison, are you here with the Bayshore, or--

R I C H A R D E L L I S O N: (From audience) Monmouth County Bayshore Outfall Authority.

SENATOR VAN WAGNER: Outfall, okay. And then we're going to hear from Rich Ellison on the outfall, maybe -- which is a different system in operation. But I believe, as l said earlier, that unless we develop a cohesive approach to dealing with the secondary problems, if you will, of treatment plant expansion, which is sludge disposal, assisting authorities in a way that is practical, we're going to be just like a dog chasing our tail. We're going to demand more and more in the way of treatment, and we've already seen, from Bob Holland's example of what-- You know, and the next step is tertiary treatment, and of course, everybody knows that that's very expensive, and that's going to just escalate disposal rates even higher, so--

MR. KNOWLES: And depending on the way the infrastructure program is set up, it would -- it could wind up as just a major municipality program, because it would be just people like the City of Camden, who have attorneys and engineers and auditors on staff, who can apply for that without costing them more than going to the bank. So, it could turn up as just a big city program. And there's -- I have nothing

against big city programs; you need big city programs. But it's not going to cure problems in Cliffwood Beach.

SENATOR VAN WAGNER: Thank you, Mr. Knowles. (To aide) Would you make a note that we should look into that whole administration of infrastructure loans?

Mr. Robert Eckert? Rich, you want to come up and sit, while we're waiting? Anyone else want to come up and testify? Sir, would you just state your name? (Respondent's name is inaudible due to distance from microphone) Dave, you want to come up -- just come up and sit in the front row for now, and we'll get everybody on.

R O B E R T E C K E R T: Senator, 1 have a short prepared statement; however--

SENATOR VAN WAGNER: I think we have a copy here.

MR. ECKERT: Yes, you do, and 1 gave a few to the secretary. However, ours is more of a positive approach, rather than some of the negative problems that I've heard.

I just want to briefly outline where we're started, and how we've progressed to this date. In 1970, the Township of Middletown Sewerage Authority began operation of a 6.5 secondary treatment facility with 11 pumping stations and a collection system consisting of more than 400 miles of trunk lines and mains to serve the sanitary needs of the residents of Middletown Township.

Middletown Township is located in the northeast portion of Monmouth County, bordering the Sandy Hook Bay, Atlantic Highlands, Rumson, Red Bank, Tinton Falls, Colts Neck, Holmdel, Hazlet, and Keansburg.

Initially, the Authority barged their sludge to the ocean and pumped their effluent into Comptons Creek in Belford.

In the middle '70s, the Monmouth County Bayshore Outfall Authority was established, and TOMSA now pumps their effluent to the outfall, which in turn pumps into the Atlantic Ocean off Sea Bright.

When the Clean Water Act was adopted by Congress in the late '70s, the members of Township of Middletown Sewerage Authority, unlike many other authorities in the metropolitan area, interpreted the act as a mandate to cease ocean dumping. The authority chose composting of sludge as an alternate to ocean dumping and constructed a compost facility at a cost of \$4.5 million; and began operation in 1981 and is presently operating very successfully. Among the present users of compost is the N.J. Department of Forestry, local country clubs, cemeteries, and sod farmers, and is used to restore their pastures. The Authority has received awards from the Monmouth County Planning Board, Friends of Clean Water, and "Biocycle," a national publication.

In 1984, the Township of Middletown Sewerage Authority began a \$5.7 million treatment plant expansion project that enlarges the plant to a 10.8 MGD facility. This expansion allows Middletown to accept Atlantic Highlands and Highlands as customers, and also to satisfy the future needs of Middletown through the 1990s.

The Authority and the Atlantic Highlands/Highlands Regional Sewerage Authority entered into an agreement that Middletown would treat their sewage, thereby eliminating two primary treatment facilities that previously dumped primary treated sludge into the Sandy Hook Bay and the Navesink River. Middletown has been accepting the AH/HRSA sludge since April 1986.

SENATOR VAN WAGNER: So, that eliminates one of the -or two of the point sources -- primary point sources -- that Mr. Jargowsky spoke about?

MR. ECKERT: Right. It eliminates probably all of Sandy Hook Bay now.

SENATOR VAN WAGNER: All the bay sources. MR. ECKERT: Right.

While our flow has increased, our effluent quality remains well below the fecal coliform count allowed by the NJDEP. In fact, our fecal count for the month of July was 0.

While our members have been very conscious of clean water and the environment, the quality of water in the Sandy Hook Bay and the Atlantic Ocean continues to be of unacceptable levels and continues to close beaches for swimming, mainly due to the continued ocean dumping of sludge very near shore, the dumping of hazardous waste, and dredging spoils.

I thank you for the opportunity to appear before your Commission.

SENATOR VAN WAGNER: Thank you, Mr. Eckert. I appreciate it, and as a resident of Middletown, I offer my congratulations to the Authority in being foresighted and farsighted, and having the capacity to face the expansion that our town has had.

MR. ECKERT: Really, the thing I think that bothers a lot of people -- at least, on the Authority -- is this composting project costs an awful lot of money to construct, and costs an awful lot of money to maintain. It's much, much cheaper to ocean dump. However, as 1 mentioned, our members felt it was a mandate when Congress passed it, and how they can just -- other authorities just get away with not doing anything, and continue to ocean dump, and continue to save money, just doesn't seem fair.

SENATOR VAN WAGNER: Well, I think, at least as of this year, or perhaps as of last year, really, I do not believe there are any authorities left in the State that are presently dumping in the ocean -- sludge. Who's left?

MR. ZIZIK: (From audience) Middlesex County.SENATOR VAN WAGNER: I thought they were incinerating.MR. ZIZIK: (From audience) Oh, no.

SENATOR VAN WAGNER: They're still barging? (response, if any, is inaudible) Who else?

MR. ZIZIK: (From audience) I think the northern counties -- Passaic County, I think, (remainder is inaudible due to distance from microphone)

SENATOR VAN WAGNER: Right. So, the northern counties are still dumping in the ocean.

MR. ECKERT: The problem seems to be, if you've done nothing, you're further ahead -- not environmentally, but I mean, financial-wise, with your authority, if you've done nothing, you seem to be further ahead than the people that have been conscientious and have done something about it.

SENATOR VAN WAGNER: Well, I know Ocean County, for example, was using a lined landfill for the disposal of its sludge, up until last year. And it was, as far as I know, dumping in accordance with the rules in terms of the mix of garbage versus sludge. And they are now forced to take their sludge to Pennsylvania, at an exorbitant cost -- I think it's \$10-12 million a year, or some such figure. And why these the other counties haven't been forced into same configuration -- I wish we had asked the DEP while they were here, because I do know that supposedly, five northern counties were entering into an agreement to take it out 106 miles, supposedly. I'm not so sure that's such a good idea. You know, an answer seems to be, "Move it further out." And how long will it be before that problem gets to be what the problem was further in?

So, again, I think we've got some hard points to make to the DEP on a number of fronts, in terms of the evenness of enforcement. Thank you, again.

Mr. Ellison? Why don't you come up now, sir? Do we have anyone else besides that?

MR. ELLISON: Senator Van Wagner, I'm Richard Ellison, the Executive Director of the Monmouth County Bayshore Outfall Authority. I'd like to thank you for the invitation to appear here, and I'm happy to represent the Authority.

I do have a copy of a small booklet which would describe our entire operation, which I'll leave with you. Briefly, I know that you're familiar with it. I believe that the Authority was established in 1969 by the Freeholders, and I think it was a farsighted concept they came up with. I believe the design goes into, possibly, the year 2000 or beyond, looking for, maybe 28 million gallons of secondary treated effluent a day.

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Right now-- Briefly, we have two pumping stations, and two customers. One pumping station is located in Union Beach, right next to the Bayshore Regional Sewerage Authority. The other is in Belford, right next to the Township of Middletown Sewerage Authority. Originally, we had agreements with three authorities, the other one being Atlantic Highlands Regional, which, as you are aware of now, has become a customer of Middletown. But we altered our agreement with them, where they would have to come directly into a pipeline. I believe that concept saved them maybe \$5 million in construction costs, because they didn't have to build their own plant, and Middletown did expand to take them in. And we have good cooperation between our two customers and ourself.

What we do have is a pipeline that travels possibly 14-1/2 miles from Union Beach down to the discharge point off of Sandy Hook. Our outfall line runs 4000 feet into the ocean, and all we do accept is secondary treated effluent. And I don't see any problems. I think you touched upon the one point -- tertiary treatment -- but that would be expensive and a long-range upgrading, where possibly, that water could be returned into the groundwater supply of the State.

Other than that, I really have nothing else to put forward, except maybe with the party boats. If they have holding tanks, maybe they can be pumped out on shore, into a holding area or sludge removal with trucks, because that's a source of raw sewage, as I heard testimony before.

But I think we operate fairly well. If we have any problems, we do have a monitoring station at Sandy Hook. It takes 24-hour samples. The DEP is very well aware of any time that we exceed our permit of what's being discharged into the ocean, and normally, that can be traced down to plant upsets -you had Bayshore due to an industrial customer, or possibly, in the past, Middletown, during their construction, because there were upsets naturally involved in that. But if they're meeting their limitations, I think the Bayshore is very well covered, and I'm sure we'd offer our facilities for inspection if anybody wanted to come down and see what the operation is all about, including officials from New York, or whoever.

And that's all I would have right now.

SENATOR VAN WAGNER: Thank you, Mr. Ellison. I appreciate your coming here today.

Sir?

D A V E R O B E R T S: Senator Van Wagner, my name is Dave Roberts. I'm the City Planner in Asbury Park. I apologize for not being the Director of Public Maintenance; I'm here in his place.

SENATOR VAN WAGNER: Oh, don't apologize for not being him.

MR. ROBERTS: (Laughs) I offer the regards from the Mayor, City Manager, and Council to the Senate Committee and yourself.

I'm not familiar, precisely, with the intricate operations of our own sewer plant. That is, our plant is basically operated by three or four individuals who are there on, I believe, a regulated shift. They're pretty much day-to-day, skeleton crew that is -- they're pretty much just sewer plant operators themselves. There's really no specific sewer department per se, anymore, in Asbury Park.

SENATOR VAN WAGNER: Well, let me get to the point with you, then. You were, earlier, identified -- if I remember correctly -- as one of the point sources?

MR. ROBERTS: (responds affirmatively)

SENATOR VAN WAGNER: And one of the existing primary treatment facilities on the ocean, okay? So, that kind of puts you a little bit in the spotlight, you might say.

MR. ROBERT'S: We are used to being in the spotlight in Asbury Park. In fact, we're used to being the popular scapegoat of most of the media and environmental groups in terms of being the cause of this.

SENATOR VAN WAGNER: The purpose of this meeting is not to--

MR. ROBERTS: I understand that.

SENATOR VAN WAGNER: --find scapegoats. How far along the way are you toward completing your secondary treatment facility?

MR. ROBERTS: Okay. If I will, as I said, I'd like to address those larger issues. And as far as that goes, I do have handwritten notes, which I would like to read and have copies made up and send to the Committee, if possible.

SENATOR VAN WAGNER: What you can do -- and this applies to anyone who may have rough notes of some type-- The record on these hearings will stay open for a period of time following the last hearing, and you will have the opportunity then, at any time during the hearing process -- which I think will include one or two more hearings -- and to submit whatever comments you make today in writing to the Committee, through the Staff, who is Mr. Cantor -- first name?

MR. CANTOR: Raymond.

SENATOR VAN WAGNER: Raymond Cantor -- attention, whatever this Committee is.

MR. ROBERTS: Okay, will do.

I'd like to say, first of all, before I read my comments, that this is one occasion where it doesn't -- I don't particularly mind being last, because I think a lot of what I'll read into the record has been substantiated by other

people, particularly Mr. Jargowsky -- a very fine Health Officer in Monmouth County -- and by several other gentlemen, 1 think one who's sitting directly behind me, when he made the very poignant point about the difference between a primary and secondary plant, in terms of the fecal coliform count.

With that in mind, 1'll just ready my statement and then I'll be happy to answer any questions with regards to our efforts in getting our secondary treatment plant in gear and on line.

Asbury Park has a history of being an oceanfront town whose economy is interlinked to the attraction of our greatest resource, which is the ocean. While the role of the city as a resort is expected to be subordinated by its future role as a year-round residential community with convention facilities, its economic success will be no less dependent on the amenities associated with the ocean and its beaches. Therefore, the City of Asbury Park has a vested interest in the quality of the ocean environment and the preservation of the marine ecosystem.

Despite the public image that has been unfairly painted by some of the media who have depicted Asbury Park as a disinterested discharger of raw sewage, the facts bear out a far different scenario. In 1982, the City was among the first in the State to actively oppose the grant of an EPA permit to Allied Chemical and National Lead, which allowed them to dump industrial waste at the "Apex Bite" area six miles off the beach of Asbury Park.

In terms of our efforts to deal with wastewater treatment and disposal in our own backyard, so to speak, in 1971 and 1972, the City assented to the State's decision that primary wastewater treatment plants were inadequate, and prepared plans to upgrade the existing plant to a secondary plant. Delays caused by studies required by the State -studies, incidentally, which ultimately recommended regionalizing with Ocean or Neptune Township facilities --

stalled progress on the upgrade until 1984, when the State declared the City in violation of its wastewater permit, and imposed a sewer connection ban.

Again, rather than disputing the State's failure to force Ocean or Neptune to accept Asbury's wastewater, the City chose to attempt to comply by embarking on a program to construct a new plant under a State-dictated schedule which is barely realistic, in fact, in a town which has neither the available land, or the economic resources to facilitate a traditional secondary plant, which, by our estimates, usually requires something on the order of seven acres of property.

All this happened at a time when the City, after more than 20 years of economic decline and social distress -- a fact which is well-known to people that live in Monmouth County -has successfully waited through a redevelopment process which promised to bring the private investment dollars into the City's waterfront that would finally mitigate many of its well-known socio-economic imbalances. The State's ban on construction permits, due to the lack of secondary treatment, came at precisely the time when the City had finally contracted with a developer to undertake a redevelopment of the oceanfront that offers its only hope for economic survival.

All the aforementioned, is meant to assert that rather than being a disinterested offender, the City of Asbury Park has resolved itself to build a \$24 million, state-of-the-art -which, by the way, has won two design awards, both State and national -- for innovative design. In less than two years -as was mentioned, we have to be on-line in June of '88 -- that will cost each Asbury Park household an estimated \$200 a year in user fees, and will cause the City to indebt itself to an estimated 18% of its assessed valuation -- 15% over the three percent cap. This burden will be carried by a municipality which already has the highest tax rate in Monmouth County, and which is losing significant Federal block grant funds in the bargain.

Although Asbury Park has made a monumental commitment to providing secondary treatment, and does not dispute its superiority over primary treatment, it is our position that the discharge from properly functioning primary plants is not the major cause of unnacceptable fecal bacteria levels in the near-shore ocean waters. It's no accident -- and I'll refer now to Mr. Jargowsky's comment -- that in the time period since he discovered -- and to his credit, it was his department that discovered the problem in Deal Lake -- In the time period since that discovery was made and corrected, the fecal coliform counts off our beach have been among the lowest along the shore, while the higher numbers have been taking in ocean waters receiving effluent from secondary plants which are over-capacity and which bypass their overflows into the ocean, untreated.

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Fecal coliform levels were satisfactory off the Deal primary plant until a June rainfall caused rainwater to flood the system and force raw sewage into storm drains, which emptied into the ocean. And all this goes back to a lot of the comments that were made regarding the fact that the stormwater systems and some of the infrastructure really are a problem that need to be addressed.

SENATOR VAN WAGNER: How far away are you from completion?

MR. ROBERTS: The plant right now -- this is one of the points -- one of the salient points I was hoping to bring out today-- We have-- Again, our schedule is very stringent. We've selected a site and prepared a design -- it's been approved by CAFRA, and it's being reviewed by the engineers in DEP -- and if anything, I would like to implore the Committee to do whatever it can to expedite this review process. We were just informed -- or the City Manager was just informed, I believe, yesterday morning -- that the DEP was not going to accept our engineer procurement, and this is a

involve the continuation of the procurement that would involvement of our consultant engineers who developed a design -- the design that won the awards -- who's most familiar with accept that engineering our process. They will not procurement, which means that we have to take the lower bidder, and I'm not familiar with the precise implications or the intricacies of those negotiations, but it points out an example of how we've been trying to do our best to get this thing going, and we need as much cooperation from DEP as possible.

SENATOR VAN WAGNER: Are you a municipal utilities authority?

MR. ROBERTS: No, I don't believe there is a utilities authority per se.

SENATOR VAN WAGNER: So, you're a municipally run utility?

MR. ROBERTS: We operate our--

SENATOR VAN WAGNER: So, you have to bid for all your services? You cannot negotiate the services of a consulting engineer, in other words?

don't believe we have ROBERT'S: I our own MR. authority. However, I do think that the consultant that was retained by the City was retained based on a consulting arrangement, which I don't think is subject to the bid However, 1 think the engineering -- actual requirements. engineering and construction drawings have to be bid, and there was one bid that was lower than the consultant that we had do the work up to now. And because of that reason and for several other instances, such as a staff member who's no longer with us, whose signature did not appear on several documents and some of the other --

SENATOR VAN WAGNER: So, you've had delays in the administrative process?

MR. ROBERTS: Right. Now we're waiting for our engineering procurements so that we can give our engineer the go-ahead to prepare the construction drawings.

SENATOR VAN WAGNER: But I-- If I can guess -- and I don't mean to cut you short-- What you're saying is that your efforts are not -- you're not a disinterested party.

MR. ROBERTS: That's correct.

SENATOR VAN WAGNER: You rely on that ocean. It doesn't help you to have fecal coliform counts that high. Apparently, you have a disclaimer in there that primary treatment is the major point source of fecal coliform counts, and we could probably argue--

MR. ROBERTS: Or is not.

SENATOR VAN WAGNER: --Is not, and we could probably argue that all day long. But the point is that at this point, you are preparing now to build, by 1988, a secondary treatment plant?

MR. ROBERTS: Right, at great expense to the City. The bond issue is for \$24 million, based as a comparison for Deal to connect into the Ocean Township regional plant, which is what we had tried to do originally, or we were told to do. It's going to cost them \$1.9 million, and Deal -- it's well known, the difference in the economic base between Deal and Asbury Park.

SENATOR VAN WAGNER: Why weren't you allowed to hook in there?

MR. ROBERTS: I've only been the City Planner since January of '85, but I've been told that the studies that were done recommended regionalization, but that neither Ocean Township nor Neptune would accept Asbury's effluent, or wastewater. And instead of forcing them to accept us, the State then turned around and required us to build or provide secondary treatment; and the choice was then to build a new plant rather than to try to upgrade the existing plant because of the engineering and the difficulties of trying to put today's technology in place in an old plant.

SENATOR VAN WAGNER: Right.

MR. ROBERTS: The plant that we finally had designed going to is be actually built on 1.5 acres, which is The site that we ended up having to find was actually-actually the road right of way of Eighth Avenue, immediately adjacent to the old plant. We're in the process of negotiating contracts, permanent easements, and so on, to make the site large enough to support the plant. We're having the process of getting the re-subdivisions required in order to adjust the lot lines--

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SENATOR VAN WAGNER: So, you're well under way.

MR. ROBERTS: --and we're in the process-- And we have to be under construction in September, and that's why these -- any delay in this schedule that we've been put on -and incidentally, we've been told that if we do not stay on schedule, the 50%, or thereabouts, grant then becomes a loan. And we have to advertise that into our budget. Therefore, it's critical that we stay on schedule.

SENATOR VAN WAGNER: Well, this Committee will communicate with the DEP--

MR. ROBERTS: We would appreciate that greatly.

SENATOR VAN WAGNER: --the fact that you appeared today, and that we would appreciate their doing everything possible to assist you in making sure that you can meet your schedule.

MR. ROBERTS: We appreciate that very much. And we will try to also -- if there's anything we can do as a City, in terms of working -- I heard some talk about a stormwater management program -- if there's any way that we can become involved in a county-wide program to monitor the sources of our stormwater drains. We have three lakes, two of which drain again, directly into the ocean, and I think that the demonstration in the Deal Lake example was very poignant, and I think that's really where the efforts should be concentrated.

Basically, I think the rest of my comments were that those sources such as the burning, and the dumping of sludge ---Incidentally, our sludge is all land-based disposed. We have no ocean disposal of our sludge -- should be the ones -- should be where the effort is concentrated on. And I think that when this plant finally is in operation, it's going to be a model plant. We have innovations such as the venting of -- not only are we going to have aeration in this plant, but any odor that is left is going to be vented through a line that will end up on the roof of a 15-story high rise that will hopefully be built some day next door. In the meantime, there's going to be a parking deck on top of it. It's going to be something that's never been done before, and that's one of the reasons why- We had to do that, because we don't have the land to build the treatment plant. This plant is right in the middle of where most expensive housing is planned for the waterfront the redevelopment, and we had to sort of mix apples and oranges to try to integrate it into the overall project. It involved coordinating our engineering consultants with our planning consultants, and so on and so forth. So, it hasn't been easy, and the conception that we're just sitting around, waiting for someone to force us to take care of the secondary problems is something that has had local officials upset for quite some time.

SENATOR VAN WAGNER: Well, we appreciate your coming today.

MR. ROBERTS: I appreciate your listening. Thank you very much.

SENATOR VAN WAGNER: Thank you, and I thank everyone who's come today. This will conclude this portion of the hearing, and we will be scheduling another hearing, probably somewhere in Middlesex County at some date later in August. Thank you again.

(HEARING CONCLUDED)

APPENDIX

SENATE RESOLUTION No. 21 STATE OF NEW JERSEY

PRE-FILED FOR INTRODUCTION IN THE 1986 SESSION

By Senator PALLONE

A SENATE RESOLUTION creating a special committee to study the causes and sources of coastal and Atlantic ocean pollution and to develop options to protect the public health and environment.

- WHEREAS, The New Jersey shore region, from Sandy Hook to Cape
 May, encompasses hundreds of miles of magnificent white sand
 beaches which are the base of the State's tourism business and
 which provide recreational opportunities and enjoyment for
- 5 millions of residents of, and visitors to, the region; and

WHEREAS, The adverse environmental and economic effects of the 6 7 ocean disposal of sewage sludge, inadequately treated wastewater, and other effluents, which have resulted in PCB contami-8 nation and the consequential closings of numerous beaches on 9 the New Jersey shore, present a danger not only to the public 10 health, safety and general welfare, but to the economy of the 11 shore areas and counties and municipalities of which these areas 1213 are part; and

WHEREAS, The causes and sources of the Atlantic ocean fouling and 1415pollution, whether by means of State permitted discharges of hazardous wastes emanating from onshore industrial and chemi-16 17 cal concerns, the ocean disposal of sewage sludge, and other toxic 18 substances at federally-licensed offshore dump sites, or from other onshore hazardous waste dumping practices which result 19 20 in groundwater contamination and eventual migration and shoreline degradation, are subjects of dispute between the State gov-21 22ernment and the various interstate and federal agencies with 23 responsibilities in these respects; and

WHEREAS, The public has the right to know why the New Jersey shore region continues to be plagued by both identifiable and nonpoint source pollution, and the public health and welfare require that the Legislature study the causes and sources of this Atlantic ocean fouling and pollution to ameliorate the situation and preclude further environmental degradation of one of New Jersey's most valuable natural resources; now, therefore,

1 BE IT RESOLVED by the Senate of the State of New Jersey:

1. There is created a committee, to be known as the "Special 1 Committee to Study Coastal and Ocean Pollution." The committee $\mathbf{2}$ shall consist of five members of the Senate to be appointed by the 3 President of the Senate. No more than three members of the 4 committee shall be of the same political party. The President shall $\mathbf{5}$ designate one of the members as chairperson. Vacancies in the 6 membership of the committee shall be filled in the same manner 7 as provided for the original appointments. The committee shall 8 9 study the causes and sources of both identifiable and nonpoint source Atlantic ocean pollution, investigate onshore hazardous 10 waste dumping practices which result in groundwater contamina-11 12tion and eventual migration and shoreline degradation, and shall study other related sources of both coastal and Atlantic ocean 13 14 pollution.

2. The committee shall organize as soon as may be practicable
 after the appointment of its members and designation of its chair person and shall select a secretary who need not be a member of
 the committee.

3. The committee shall be entitled to call to its assistance and 1 avail itself of the services of the employees of any State, county $\mathbf{2}$ or municipal department, board, bureau, commission or agency as 3 it may require and as may be available to it for this purpose, and 4 to employ stenographic and clerical assistants and incur traveling 5 and other miscellaneous expenses as it may deem necessary in 6 7 order to perform its duties and as may be within the limits of funds 8 appropriated or otherwise made available to it for these purposes.

4. For the purposes of carrying out the terms of the study, the special committee shall have all the powers granted pursuant to chapter 13 of Title 52 of the Revised Statutes.

5. The special committee may meet and hold hearings at any place or places as it shall designate during the sessions or recesses of the Senate and shall report its findings and recommendations for legislative action as soon as may be practicable to the Senate, whereupon it shall dissolve.

STATEMENT

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The purpose of this resolution is adequately expressed in its title and preamble.

COMMISSION SENATOR JOHN F. RUSSO Chairman ASSEMBLYMAN ROBERT E. LITTELL Vice-Chairman SENATE

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September 3, 1986

Donald A. Deieso, Director Division of Environmental Quality Department of Environmental Protection CN027 Room 1109, Labor & Industry Building Trenton, New Jersey 08625

Dear Mr. Deieso:

As you know, the Senate Special Committee to Study Coastal and Ocean Pollution held a hearing on July 30, 1986. Your testimony, and that of other witnesses, detailed a number of areas of concern concerning ocean pollution. However, several questions were not answered at the hearing. In order to clarify several areas of concern I would appreciate your answering the following questions or enclosing materials which supply the answers:

- How serious a problem are industrial ocean discharges? What is DEP's role in granting permits to discharge into ocean waters or waters that flow into the ocean?
- 2. Please comment on the ocean pollution contributions of Ciba-Geigy and International Flavors & Fragrances.
- 3. How effective are industrial pretreatment programs currently in place?
- 4. If industrial waste is not adequately pretreated, does the waste end up in the sludge, the wastewater, or both?
- How do ocean conditions that lead to beach closings differ from those that lead to fish kills and what causes those conditions.

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Donald A. Deieso, Director Division of Environmental Quality Page 2 September 3, 1986

- 6. Is it correct that dissolved oxygen levels can be low well before a threat to swimmers can occur, and if so, how significant is a threat of a fish kill although our beaches remain open?
- 7. What are the different types of algal blooms, what causes them, and what are their effect on swimmers and aquatic life?
- 8. To what extent do sewerage plants, especially primary treatment plants, contribute to low dissolved oxygen levels? What steps could these plants take to increase the removal of biochemical oxygen demand?
- 9. Is ocean water monitoring limited to fecal coliform counts or does it measure oxygen levels?
- 10. Explain the various sludge disposal methods in place. Which methods are used by which significant plants?

Please feel free to combine answers in the interests of efficiency.

Thank you for your cooperation in this matter.

Sincerely,

Raymond E. Cantor Associate Legislative Counsel

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State of New Jersey Department of environmental protection

DONALD A. DEIESO, Ph.D. ASSISTANT COMMISSIONER FOR ENVIRONMENTAL MANAGEMENT AND CONTROL

> CN 402 Trenton, NJ 08625 609 - 292 - 8058

November 3, 1986

Mr. Raymond E. Cantor Associate Legislative Counsel New Jersey State Legislature Office of Legislative Services State House Annex, CN-068 Trenton, NJ 08625

Dear Mr. Cantor:

RE: Coastal and Ocean Pollution

I am writing in response to your September 3, 1986 letter requesting additional information as a follow up to my testimony at the recent hearing held by the Senate Special Committee to Study Coastal and Ocean Pollution. Below, please find the responses to the questions in your letter.

 Ciba-Geigy is the only direct industrial discharger along the New Jersey coast. The Ciba-Geigy discharge is the most extensively monitored point source discharge in the country today. Monitoring results have shown that the facility and its effluent discharge are both within permit effluent limits.

Enclosed is a copy of the recent Department of Environmental Protection (DEP) publication entitled <u>Clean Water: A Look</u> <u>at the New Jersey Pollutant Discharge Elimination System</u> (NJPDES). This publication outlines the NJPDES permitting process and addresses the procedures for permitting discharges into ocean waters and waters that flow into the ocean.

2. International Flavors & Fragrance (IFF) presently discharges its industrial process wastewater to the Bayshore Regional Sewerage Authority (BRSA). IFF is regulated by a local permit and a State NJPDES/Significant Indirect User (NJPDES/SIU) permit to control its discharge. In the past,

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IFF has not met these permit limitations and has caused interference at the BRSA treatment plant due to its high strength wastewater. As a result, BRSA was not able to treat its influent as effectively as is required of a secondary treatment plant. Without full treatment, all of BRSA's users become contributors to ocean pollution. However, IFF has recently started to segregate the highly polluted segment of its discharge, and is now in compliance with its NJPDES/SIU permit.

3. The DEP is continuously assessing the effectiveness of the industrial pretreatment program. In general, the industrial pretreatment program has required many industrial users to control their toxic discharges to sewers. As an example, more than 70 percent of the State's electroplaters and metal finishers, which have in the past contributed the vast majority of metals to sewer systems, are now in compliance with United States Environmental Protection Agency (USEPA) and DEP rules and regulations.

Improvements in sludge quality are sometimes difficult to assess due to the lack of "before" and "after" data. Those publicly owned treatment works (POTW's) which have historical data do show significant improvement since pretreatment programs have gone into effect. Further improvements will be forthcoming as dischargers of volatile organic compounds are controlled.

- Industrial wastewater which is not adequately pretreated has 4. one of four potential fates, usually dependent on the type of compounds present. First, heavy metals will tend to aggregate in the POTW's sludge. Depending on the particular metal, 60 percent to 95 percent of the metal is deposited in the sludge, with the remainder in the effluent. Second, certain industrial compounds, such as phenol, can be biodegraded by the secondary treatment plant at the POTW. Third, volatile organic compounds may be emitted as part of the normal air release at the POTW collection system and/or treatment system. Fourth, non-volatile, non-biodegradable organic compounds may pass through the POTW into the receiving water. As you can see, this is why it is important for New Jersey to continue its aggressive pretreatment program.
- Ocean conditions leading to beach closures are related to bacteriological pollution from either natural or anthropogenic sources. Bathing beach closures are predicated on concentrations of fecal coliform bacteria (an indicator

organism present in fecal material from warm blooded animals) in the ocean waters of the surf zone along our bathing beaches. These bacteria can originate from human sources and can be carried into the ocean via inadequately disinfected sewage treatment plant outfalls, from direct boat discharges, from inadequate septic systems on rivers and estuaries leading to the oceans, or from leaking or broken sewage transmission lines discharging raw sewage directly or indirectly through stormwater outfalls. Fecal coliforms can also originate from pets, livestock, or wildlife (ducks, seagulls, geese, muskrats). Notably, ducks and seagulls contribute significantly to background levels and can be a major source of bacteria where populations are concentrated.

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Fish kills in the ocean have been associated with low dissolved oxygen levels in benthic or bottom waters. During summer months, prolonged periods of sunny weather with calm seas allow the development of a strong thermocline in coastal ocean waters. The thermocline (a sharply decreasing water temperature in a narrow depth range separating top from bottom waters) effectively becomes a barrier to mixing between warmer, less dense, oxygen rich top water and colder, more dense, oxygen poor bottom water. Oxygen is replenished in upper waters by phytoplankton photosynthesis and by wind and wave action created by the atmosphere. Oxygen is consummed in the bottom waters by decaying organic matter and dying phytoplankton settling through the water column; and by zooplankton, fish and other invertebrates' respiration. The longer the warm, sunny, quiescent conditions persist, the more severe the oxygen depletion in the benthic waters. Oxygen levels below 2 parts per million result in stress and death to some species. The condition can also be aggravated by the intensity of the algal phytoplankton bloom which consequently increases the amount of decaying organic matter falling into the bottom waters, by the introduction of organic solids into the benthic waters via sewage sludge or dredge spoils dumping offshore or through ocean outfalls of sewage treatment plants and river or inlet outflows from more turbid estuaries.

- 6. Dissolved oxygen levels in the ocean pose no threat to bathers, but the significance of low oxygen levels impacting fish or shellfish resources is of great importance to the recreational and commercial fish and shellfish industries of the state.
- 7. There are many species of algae which bloom in New Jersey's estuarine and coastal waters. Algal blooms are a natural

occurrence in all productive ocean waters, and are necessary to begin the food chain for all higher level fish or shellfish resources. Algal blooms are precipitated by environmental and nutritional conditions being such that one or several algal species outcompete all others and increase at a rate which allows their density to become visually apparent in the ocean waters. If there is an excess of nutrients available, and environmental conditions remain favorable, these blooms can color the water through the tremendous density of cells. In sufficient quantity, this may result in aesthetically objectionable conditions such as the brown and green tides observed in recent years. Depending on the species, the bloom may be toxic to fisheries or shellfish resources, may inhibit feeding by shellfish causing death by starvation, may be noxious due to their physical makeup (swimmers feel slimy due to gelatinous sheath of algae), may be irritants to humans ("swimmers itch" from dermal contact with certain red tide species) or cause acute human toxicity when consumed in shellfish ("paralytic shellfish poisoning" from red tide species Gonyaules excavata). The areal extent and duration of bloom conditions is dependent on the persistence of favorable conditions. It is important to note that algal blooms continue to be a subject of international concern and study.

8. Primary sewage treatment plants are the least efficient at removing organic solids from effluent of sewage treatment facilities. Primary treatment removes those solids that are settleable, and some of the dissolved solids. Effluent from all sewage treatment facilities exerts a biochemical oxygen demand (BOD) on the receiving waters. Depending on the relative volume of the discharge to the surrounding receiving water, the hydrologic characteristics of the receiving water, and the location and depth as well as the design of the outfall, the sewage treatment plant may have a significant or insignificant impact on dissolved oxygen levels through biochemical oxygen demand contributions. Nutrients contributed by sewage treatment facilities may exert an impact indirectly through stimulation of algal blooms, subject to the same variability and conditions associated with biochemical oxygen demand impacts. Steps that could be taken, if studies show the relative outfall impact warrants such steps, are modification of treatment processes to enhance solids removal, additional treatment processes to remove nutrients, or redesign or relocation of outfall discharges to a more favorable hydrologic location. Additionally, all primary sewage treatment plants that

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discharge to the ocean will be either upgraded or removed by July 1, 1988 pursuant to Clean Water Act requirements.

- 9. Ocean waters are monitored by DEP, county health agencies, and USEPA for fecal coliforms; and by DEP, USEPA, and the National Oceanographic & Atmospheric Administration (NOAA) on a limited basis for dissolved oxygen, nutrients and a variety of other physical parameters.
- 10. Sludge management by New Jersey sewage treatment plants is accomplished via the following means:

TYPE OF MANAGEMENT	PERCENTAGE
Ocean Disposal	52.6
Incineration	16.8
Out-of-State Management	13.5
Land Application	11.7
On-Site Storage	0.9
Undetermined	4.5

Enclosed is a table showing sludge management by county.

The following sewage treatment plants dispose of their sludge via ocean disposal:

Middlesex County Utilities Authority Bergen County Utilities Authority Passaic Valley Sewerage Commissions Joint Meeting of Union and Essex Counties Rahway Valley Sewerage Authority Linden-Roselle Sewerage Authority

If you have any further questions or require additional information, please feel free to contact George McCann, Acting Director, Division of Water Resources, at 292-1637.

Sincerely, Donald A. Deieso, Ph.D.

Assistant Commissioner

Enclosures

c: Commissioner Dewling Assistant Commissioner Graham Acting Director McCann Assistant Director Schiffman Chief Horzepa Chief Runyon Table 3-9:

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SUMMARY OF EXISTING SLUDGE PRODUCTION BY MANAGEMENT MODES (dry 1bs/day)

(as	of	June	1986)
(45	01	Julie	1300)

	Short Term	Long Term	Incineration	Incineration	Land	Ocean	Out-of-		County
	On-Site	On-Site	(as customer)	(owner)	Application	Disposal	State	Undetermined	Total
Atlantic	0	0	1,409	30,000	2,107	0	101	794	34.411
Bergen	0 0	0 0	13,745	15,380	0	59.367	4.384	373	93,249
Burlington	Õ	5 020	1,508	0	16.326	0	42.177	54	65,085
Camden	0	916	7,963	10,656	81,687	0	11,110	1.811	114,143
Cape May	0	2,600	6,463	0	9,666	0	0	156	18,885
Cumberland	6.208	0	313	0	10,787	0	0	1,066	18,374
Essex	0	1,137	21,212	0	0	581,537	0	0	603,886
Gloucester	0	0	0	0	712	0	30,032	2,067	32,811
Hudson	0	202	9,628	0	0	34	75,283	26,853	112,000
Hunterdon	0	0	1,406	0	2,837	16	2,449	60	6,768
Mercer	0	0	4,322	14,082	0	0	37,054	25,156	80,614
Middlesex	Ō	9	1,311	0	6,362	266,858	30,463	2,674	307,677
Monmouth	0	527	33,770	18,720	44,692	0	14,326	770	112,805
Morris	0	944	33,917	29,396	10,772	0	212	716	75,957
Ocean	0	0	36	0	14,664	0	0	19,942.	34,642
Passaic	0	0	7,856	11,693	2,403	0	670	29	22,651
Salem	0	0	55	0	4,539	0	462	• 23	5,079
Somerset	0	0	7,114	19,085	4,245	0	0	568	31,012
Sussex	0	0	83	0	5,214	17	49	308	5,671
Union	0	0	2,588	0	0	73,926	0	0	76,514
Warren	0	0	8,997	0	1,015	0	2,737	12	12,761
TOTAL	6,208	11,355	163 ,696	149,012	218,028	981,755	251,509	83,432	1,864,995
% TOTAL	0.3%	0.6%	8.82	8.0%	11.7%	52.6%	13.5%	4.5%	100%

NOTE: 1980 N.J. population = 7,364,823 therfore existing sludge production per capita equals 1,864,995 + 7,364,823 or .253 pounds per capita per day. This per capita figure will increase as the primary treatment plants are upgraded to meet more stringent treatment requirements. ASSEMBLYMAN ROBERT E. LITTELL Vice-Chairman . SENATE DONALD T. DIFRANCESCO MATTHEW FELDMAN WALTER E. FORAN S. THOMAS GAGLIANO JAMES R. HURLEY CARMEN A. ORECHIO LAURENCE S. WEISS

LEGISLATIVE SERVICES

COMMISSION SENATOR JOHN F. RUSSO Chairman

GENERAL ASSEMBLY BYRON M. BAER WILLIE B. BROWN JOHN PAUL DOYLE CHUCK HARDWICK DENNIS L. RILEY ANTHONY M. VILLANE, JR.



New Jersey State Tegislature

OFFICE OF LEGISLATIVE SERVICES STATE HOUSE ANNEX, CN-068 TRENTON, NEW JERSEY 08625

> ALBERT PORRONI Executive Director (609) 292-4625

> > August 25, 1986

GLENN E. MOORE. III

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GLENN E. MOORE, III Director of Central Staff (609) 984-4811

> Section Chief (609) 292-7676

Mr. Christopher Daggett Regional Administrator U.S. Environmental Protection Agency Region II 26 Federal Plaza, Room 900 New York, New York 10278

Dear Mr. Daggett:

During a recent public hearing held by the Senate Special Committee to Study Coastal and Ocean Pollution, testimony was given which detailed very serious problems with the Environmental Protection Agency's interim designated wood burning site located 17 nautical miles from the coastline of Point Pleasant, New Jersey. This testimony stated that timber, usually partially burnt, is floating off the New Jersey shore, and often washes up on beaches, forcing their closure. The danger to boaters and swimmers presented by this floating debris is obvious and unacceptable.

The committee wishes to indicate its displeasure with the current state of affairs, which is the result of noncompliance with past permits coupled with insufficient enforcement and monitoring activities by the underfunded Coast Guard and other responsible agencies.

The committee urges the Environmental Protection Agency to seek a long term solution to this problem. While the committee recognizes the need to carry out pier maintenance and harbor improvement activities and projects along the New York City waterfront, the committee believes that land-based disposal alternatives provide a satisfactory alternative to incineration at sea. If wood burning is permitted, sufficient monitoring and enforcement must be in operation. Mr. Christopher Daggett Page 2 August 25, 1986

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Recreational and navigational use of the New Jersey shore is vital to our State. We are sure that you understand and appreciate the seriousness of our concerns and will do whatever is necessary to rectify this situation.

Thank you for your cooperation.

Sincerely,

Frank Pallone, Jr., Chairman Special Committee to Study Coastal and Ocean Pollution

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FP/REC/gh cc. Richard T. Dewling



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 11 26 FEDERAL PLAZA NEW YORK. NEW YORK 10278

SEP 1 6 1986

Frank Pallone, Jr., Chairman Special Committee to Study Coastal and Ocean Pollution New Jersey State Legislature Office of Legislative Services State House Annex, CN-068 Trenton, New Jersey 08625

Dear Mr. Pallone:

I am in receipt of your August 25, 1986 letter written on behalf of the Senate Special Committee to Study Coastal and Ocean Pollution regarding woodburning at-sea activities. Your letter has been incorporated into our public record file for the current woodburning permit applications. All of the concerns raised in your letter will be addressed in our hearing officer's report. I will rely heavily upon the findings of the hearing officer in making my final decision on whether to grant woodburning at-sea permits to the Corps of Engineers (COE) and the City of New York. Your name has been placed on our mailing list to assure that you will receive a copy of the hearing officer's report when it is available later this Fall.

During the period in which our administrative review is being conducted to determine whether a new woodburning at-sea permit should be issued, the COE is operating under an interim permit extension. In accordance with the terms of this extension, I have limited the amount of wood to be burned during any one event to 3500 tons of material. I have also required that the COE institute a plan prior to any further burning which should significantly reduce the danger posed by wood falling off the barges. As another protection, part of the plan involves the use of an additional boat to patrol and retrieve any wood that might fall overboard. The COE is the only permittee which has received a permit extension and is currently conducting woodburning operations in the New York Bight.

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Thank you for your concern.

Sincerely, Dayit

Christopher J. Daggett Regional Administrator



THE OCEAN COUNTY UTILITIES AUTHORITY

501 HICKORY LANE PO BOX P

BAYVILLE N J 08721

August 5, 1986

201/269 4500

Please	address	reply	to
1 10 1 30	-00.093	iep.y	

 Northern Water Poliution Control Facility 255 Mantoloking Road Bricktown, New Jersey 08723 201-920 1301

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Southern Water Pollution Centrel Fachity Cedar Run Dock Rd. West Creek, NJ 08092 609-597-4105

JACK MEYER, CHAIRMAN EDWARD J MORAN, VICE CHAIRMAN STANLEY H SEAMAN HELEN N. LAWRENCE PETER BUTERICK JOHN C PARKER GERARD W LYNCH GERALD LEVINE KENNETH A. MATTHEWS VINCENT J. DVORAK

> Mr. Raymond E. Cantor Committee Aide New Jersey State Legislature Office of Legislative Services State House Annex CN-068 Trenton, New Jersey 08625

> > Re: Public Hearing - July 30, 1986 Senate Special Committee Study Coastal and Ocean Pollution

Dear Mr. Cantor:

Enclosed is a copy of the full text of the paper that I partially presented at the above-referenced hearing.

We share your concerns that coastal pollution is an extremely important subject and all efforts should be made to prioritize the sources and develop and implement solutions.

If I or the Authority can be of further assistant, please let me know.

Sincerely yours,

Robert S. Holland, P.E. Executive Director

RSH:fah Enclosure

PREPARED STATEMENT FOR SENATE SPECIAL COMMITTEE TO STUDY COASTAL AND OCEAN POLLUTION -

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REGARDING EFFORTS BY THE OCEAN COUNTY UTILITIES AUTHORITY

TO ELIMINATE POLLUTION

Ocean County's most significant geographical characteristic is its 42 miles of beachfront on the Atlantic Ocean. The coastline runs from the Manasquan Inlet at Point Pleasant Beach at the northerly extremity to the Beach Haven Inlet at the southern tip of Long Beach Island. In addition to the ocean beachfront, the county contains 125 square miles of sheltered bays and estuaries. Included with the estuaries are the Manasquan River, Metedeconk River, Toms River, Cedar Creek, Forked River, Oyster Creek and the Mullica River. Notable bays include the Barnegat Bay, Manahawkin Bay, Little Egg Harbor and part of Great Bay. In addition there are approximately 50 fresh water lakes.

The availability of prime recreational water bodies in conjunction with Ocean County's proximity to the New York Metropolitan area and Philadelphia makes Ocean County's most valuable industry tourism. In order to attract tourists the county must protect the quality of the recreational waters which necessitates the provision of adequate Water Pollution Control Facilities.

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Prior to the creation of The Ocean County Utilities Authority, formerly the "Sewerage Authority," there were approximately 50 wastewater treatment facilities providing service to developments and municipalities. These facilities generally provided poor quality effluent and discharged into upland waterways, the bays, or in the ocean close to the beach. In some instances it was the practice to store sludge in the summer and discharge it through the outfall in the winter.

Approximately 60 percent of the residentail areas utilized individual septic sytems. Many of these residential areas were on lagoons or in low-lying areas which leached into the waterways.

Towards the end of the 1960's the capacity of the inland water to assimilate the wastewater was exceeded. Large areas of Barnegat Bay were closed to shellfishing and bathing was restrictd where contamination was detected. Building bans were imposed.

It was apparent to the Freeholders of Ocean County that action had to be taken by them to insure that the waters of the County were protected. In 1970, the Freeholders created The Ocean County Sewerage Authority and charged that agency with the responsibility of insuring that adequate wastewater treatment was provided for the waters of the County.

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Beginning in 1973, with help and guidance from the NJDEP and the EPA, construction of the regional interceptor system with associated pumping stations and three state of the art wastewater facilities was started. When completed the total system would cost almost 1/2 billion dollars. These facilities provided a total capacity of 72 MGD of secondary treatment. The treatment plants went on-line in 1976, 1977, and 1979. Portions of Monmouth County were later connected to the system.

We now provide treatment of 90 percent or better for the users in these counties including septage and leachate from our countylined landfill. This high quality effluent is discharged away from the sensitive inland waterway and estuaries approximately one mile offshore into 60 feet of water.

Since 1976, areas on inland waterways and off the coast, that had been previously condemned for shellfish harvesting, have opened up. These wastewater facilities allowed for continued growth throughout the County without putting stress on the aquatic ecology system.

It should be noted that, although there have been problems along the coastal line north and south of Ocean County, there have not been any ocean beach closing in Ocean County for the past five years. On occasion when the tides are running from the north, some signs of pollution do turn up on Ocean County beaches, but the source of the debris is not Ocean County.

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Ocean County's efforts have not come cheap. In fact, the average homeowner pays about \$130/year for our costs plus they must pay for the local system's cost.

The people of Ocean County have literaly banned together to turn the tide for the future.

The introductory statements by the committee demonstrate the awareness of the legislatures of the major causes of coastal pollution. My personal comment concerning a program for the abatement of these problems would include upgrading all systems to at least secondary treatment and moving those discharges further offshore, the completion of the relocation of the ocean dumping of sludge from the 12-mile site to the 106-mile site until permanent on-shore sites are developed, and adequate treatment of all New York State and New York City wastewater discharges.

Again, thank you for this opportunity to present the views of the OCUA to the important Senate Committee.

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OCEAN COUNTY COASTAL COOPERATIVE MONITORING PROGRAM

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OCEAN SITES

APRIL 5, 1986 THROUGH JULY 21,1986

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water Sample Report: 07/28/85 11:19:16 Freshwater and Saltwater Sites *** Sorted by Community ***

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	CCNP	- Municipality	Locatio	n			Date	E. Collifo	nis R		
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•				OUE		-	AFIAFIA				
	CCMPUC1080	BEACH HAVEN	LEEWHRU				05/05/85	م موجع بر از مربع مربع	- 		
-	CCMPUC1080	BEACH HAVEN	LEEWHRL				05/12/86	J. States			•••
	CUMPUL1080	BEACH HAVEN	LEEWHRD				05/19/86	.'	4	K	
	CUMPUC1080	BEACH HAVEN	LEEWHRD				05/2//86		5	K Third are T	
	CCMPDC1080	BEACH HAVEN	LEEWARD) AVE			05/29/86		10		¥.5
	CCMPUC1080	BEACH HAVEN		HVE		•	06/02/86		5.49	A. A.	
	CUMPUC1080	BEACH HAVEN	LEEWHRU				06/09/86		10	K	
	CURPUC1080	BEACH HAVEN	LEEWHKU) HVE			06/16/86		_ <u>5</u>	K Street Sta	
	CUMPUC1080	BEACH HAVEN	LEEWAXD	AVE	÷.		06/23/86	14) <u>a</u>		
	CCMPUC1080	BEACH HAVEN	LEEWARD	HVE			06/30/86		10	- K	
	CCMPUC1080	BEACH HAVEN	LEEWAKD				0//0//86		10		2 han
		BEACH HAVEN	LEEWHRU		-		0//14/06	A STATE OF STATE	30		
	CCMPUC1080	BEACH HAVEN					0//21/85		10		• •
	0000000000	BEACH HAVEN	BERKELE				03/03/85	and a state of the second	•	N	
•	CUMPUC1092	BEACH HAVEN	- BERKELE	Y AVE			05/12/85		.	K · ·	
	CCMPUC1092	BEACH HAVEN	BERKELE	Y HVE			05/19/86		4	ĸ	
	CCMPUC1092	BEACH HAVEN	BERKELE	Y AVE	-		05/2//86		10		
	CCMPUC1092	BEACH HAVEN	BERKELE	T HVE			05/02/85		2	ĸ	
	CCMPUC1092	BEACH HAVEN	BERNELE				05/09/85		10	K V	
	CEMPUEIOS2	BERLH HAVEN	BERKELE				06/16/86		2	K .	
	CCHPUC1092	BEACH HAVEN	BERAELE	T HVE			06/23/86		2		
	CCMPUC1092	BEACH MAVEN	DERKELE	Y HVE			06/30/86		10		
	CCRP8C1092	BEACH HAVEN	BERAELE				0//0//85	· ·	10	K	
	CUMPUC1092	BEACH HAVEN	BERKELE	T HVE			0//14/86		10		
	CCMPUC1092	BEACH HAVEN	BERKELE	Y AVE			07/21/86		10		
	CCMPUC1093	BEACH HAVEN	WEBSIER	AVE			05/05/86		12		
	CCMPUC1093	BEACH HAVEN	WEBSIER				05/12/86		4	K -	h 2
	CCMPUC1093	BERCH HRVEN	WEBSIER	AVE			05/19/86		4	К	
	CURPUE1093	BEACH HAVEN	WEBSIEN	HVE			05/2//86		10		
	CCMPUC1093	BEACH HAVEN	WEBSIER	(HVE ,			06/02/86		5	K	
	CCMP0C1093	BERCH HAVEN	WEBSIER	AVE			06/03/86		10	ĸ	
	CCMPUC1093	BEACH HAVEN	WEESIEN				06/16/86		10		
	CCHPUL1093	BEHCH HHVEN	WEBSIER				06/23/86		2		•
	CCMP0C1093	BEALK MAVEN	WEBSIER				05/30/85		10	ĸ	•
	CCHPUC1093	BEHUH HHVEN	WEBBIEN				07/07/86		10	K	
	CCHPUCIU93	BEHLH HHVEN	WEBSIEN				07/14/85		10	ĸ	
		I DNC DEACH /N DEU	NEDIER LUAU 1ATU CT	DEET			V//21/00		10	N .	
			000 1410 31 000 1410 51	DEET			03/03/06		10	, v	
			1417 31 1400 1410 CT	RECI			05/12/00		4	N N	
	CCH0001102		1917 1917 31 1000 1470 CT	NEEI			V3/13/00		•	N ·	
		LUNG DENLA/N DEA	1917 DI	NEE I			03/2//85		5	K V	
		LUNG BEHURIN BUR	HHV 141H SI	REEI			05/02/85		5	K ·	
	CCMP0C1102	LUNG BEHCH/N BLH	HHV 141H 5:	NEE			06/03/86		10	ĸ	
	UCHPOLI IVE	LUNG DCHUM/A BUH	1911 SI				00/16/86		3	n	
	Number of Ot	servations: 44									
			•	r						v	
	CUMPUC1046	BERKELEY (SO SEAS	10E) 23RD AV	E			05/05/86		4	ĸ	
	CCMPOC1046	BERKELEY (SO SEAS	IDE) 23RD AV	E			05/12/86		4		
	CCMPOC1046	BERKELEY (SO SEAS	1DE) 23RD AV	E			05/19/86		4	K	
	LCMPUC1046	BERKELEY (SO SEAS	IDE) 23RD AV	E			05/27/86		5		
	CCMPOC1045	BERKELEY (SO SEAS	IDE) 23RD AV	E			06/02/86		5	K	
	CCMPOC1046	BERKELEY (SO SEAS	IDE) 23RD AV	E			06/09/86		10	K	*
	CCMPOC1045	BERKELEY (SD SEAS	IDE) 23RD AV	'E			06/16/85		5	K	

12x

12	Water Sample F	Report: 07/25/86 15:3	:35 Freshwater and Saltwater Sites are sorted by Community +++	
	2 Million Street	and part of the second		
] 4++	CCMP	Municipality	Location Date F. Coliforms Remarks Other	•
		AND NOT THE		
3	CCMPOC1046	BERKELEY (SO SEASIDE)	23RD AVE 06/23/86 5 K)`
a da casa	CCMPDC1046	BERKELEY (SD SEASIDE)	23RD AVE 05/30/85 10 K 0)
	_CCMPOC1046	BERKELEY (SO SEASIDE)	23RD AVE 07/07/86 10 K)
)	CDMPDC1046	BERKELEY (SU SEASIDE)	23RD AVE 07/14/86 0.0000 10 0.00000 00)
	CCMPOC1045	BERKELEY (SU SEASIDE)	23RD AVE 07/21/86 40 0	
	CCMPUC1084	BERKELET/ISLHND BUH	H-23 END OF RUAD 00/00/86 4 N	,
)	CCMPUL1004	DERNELET/IDLHNU BUH) - \
2.5		BERKELEY/ISLAND BCH	$P_{23} = 23 END DF ROOM 05/27/85 5 K 0$	Ś
1	CCMPOC1084	BERKELEY/ISLAND BCH	A-23 END DE ROAD 06/02/86 5 K 0	ý
9 .	CCMP0C1084	BERKELEY/ISLAND BCH	A-23 END DF RDAD 06/09/86 10) .
	CCMPOC1084	BERKELEY/ISLAND BCH	A-23 END DF RDAD 06/16/86 5 K)
	CCMPDC1084	BERKELEY/ISLAND BCH	A-23 END DF RUAD 06/23/86 5)
	CCMPOC1084	BERKELEY/ISLAND BCH	A-23 END DF RDAD 06/30/86 10 K)
. bur	CCMPDC1084	BERKELEY/ISLAND BCH	A-23 END DF ROAD 07/07/86 10 6)
	CCMPOC1084	BERKELEY/ISLAND BCH .	A-23 END OF RDAD 07/14/86 10 K)
	CCMPDC1084	BERKELEY/ISLAND BCH	A-23 END DF RDAD 07/21/85 10 K)
	CCMPOC1085	BERKELEY/ISLAND BCH	OCEAN BATHING AREA 1 05/05/86 4 K)
	CCMPOC1085	BERKELEY/ISLAND BCH	DCEAN BATHING AREA 1 05/12/86 Several Area 1 05	,
•	CCMPUC1083	BERKELEY/ISLHND BUH	ULEHN BHIMING AREA 1 UD/19/86 4 R U	1
	CCHPULIOD	DERNELET/ISLHNU BUN		, ,
	CCMPOC1085	BERKELEY/ISLAND BCH	DCEAN BRITHING AREA 1 06/02/00 06/02/00 10 K 0	,)
	CCMP0C1085	BERKELEY/ISLAND BCH	OCEAN RATHING AREA 1 06/15/65 10 10 0	Ś
	CCMP0C1085	BERKELEY/ISLAND BCH	OCEAN BATHING AREA 1 06/23/86 5 K C	5
•	CCMPOC1085	BERKELEY/ISLAND BCH	DCEAN BATHING AREA 1 06/30/86 10 K 0)
	CCMP0C1085	BERKELEY/ISLAND BCH	DCEAN BATHING AREA 1 07/07/86 10 0)
•	CCMPOC1085	BERKELEY/ISLAND BCH	OCEAN BATHING AREA 1 07/14/86 10 K 0)
,	CCMPOC1085	BERKELEY/ISLAND BCH	OCEAN BATHING AREA 1 07/21/85 10 K 0)
	CCMPDC1086	BERKELEY/ISLAND BCH	COAST GUARD STATION 110 05/05/86 4 K 0)
•	CCMPOC1086	BERKELEY/ISLAND BCH	CDAST GUARD STATION 110 05/12/86 4 K 0)
,	CCMPOC1086	BERKELEY/ISLAND BCH	COAST SUARD STATION 110 05/19/86 4 K 0)
	CCMPUC1086	BERKELEY/ISLAND BUH	CURSI BURKU STATION 110 05/2//86 5 0) \
)	CCM00C1085	BERKELET/ISLAND BUH) ^
		BERKELETTISLAND BCH		, \
	CCMPDC1086	BERKELEY/ISLAND BCH	COAST SUARD STATION 110 05/16/85 5 K (Ď
)	CCKPOC1086	BERKELEY/ISLAND BCH	COAST GUARD STATION 110 06/23/86 5 K)
	CCMPOC1086	BERKELEY/ISLAND BCH	COAST 6UARD STATION 110 06/30/86 10 0)
	CCMPOC1086	BERKELEY/ISLAND BCH	COAST 6UARD STATION 110 07/07/86 10 K 0)
,	CCMPOC1086	BERKELEY/ISLAND BCH	COAST GUARD STATION 110 07/14/85 10 K)
	CCMPOC1086	BERKELEY/ISLAND BCH	COAST GUARD STATION 110 07/21/65 10 K)
)	CCMPDC1090	BERKELEY/ISLAND BCH	ACCESS ROAD 05/05/86 4 K)
-	CCMPUC1090	BERKELEY/ISLAND BCH	ACCESS RUAD 05/12/86 4 ()
	CCMPUL1090	BERKELET/ISLAND BUH	HULESS KUHU VJ/19/66 136 ()
1 -	CCH00C1030	DERRELET/ISLAND DUR)
		BERKELEVISEND DER		2
		RERKELEY ISLAND BUT	ACCESS ROAD 06/11/85 150 (,
	CCNPOC1090	BERKELEY/ISLAND BCH	ACCESS RDAD 06/15/86 15 0	0
	CCMPDC1090	BERKELEY/ISLAND BCH	ACCESS RDAD 06/23/86 5 K	0
	CCMPOC1090	BERKELEY/ISLAND BCH	ACCESS R0AD 05/30/86 10 K	0
	CCMPUC1090	BERKELEY/ISLAND BCH	ACCESS RDAD 07/07/66 10 K	Ď
	CCMPDC1090	BERKELEY/ISLAND BCH	ACCESS R0AD 07/09/85 10 K	0
	CCMPDC1090	BERKELEY/ISLAND BCH	ACCESS ROAD 07/14/86 10 K	0
	CCMPOC1090R1	BERKELEY	REEDS ROAD [RESAMPLE SITE] 06/25/86 10	0

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		Lonation		5 Coli Forme Banania
	nunicipality		Jac Vate	F. CUILIOTES REMARKS COMMENT
CCMPDC1090R2	BERKELEY	BIRDERS PATH LRESAMPLE	SITE] 06/26/86	10
Number of Ob	ervations: 64			
CCMPOC1019	BRICK	BRICK BEACH	05/05/86	AT A
CCMPOC1019	BRICK	BRICK BEACH	05/12/86	
CCMPOC1019	BRICK	BRICK BEACH	05/27/86	5 K K
CCMPUC1019	BRICK	BRICK BEACH	06/02/86	5 K
CCMPUC1019	BRICK	BRICK BEACH	06/09/86	10 K C.
CCMPUC1019	BRICK	BRICK BEACH	06/16/8b	
CCMPOLIDI9	BRICK	BRICK BEACH	05/30/85	10 A
COMPOCIALD	BRICK	BRICK BEHLH	0//0//06	
CONDOD1019	BUICK	BRICK BEHUN	0//14/8b	
CCN00C1019	BRICK	BRICK BEHCH		
	DRICK -	TH HVE	V3/V3/80	Ţ.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
CCN0001020	BRICK	TTH OUC	05/12/00	5 K
	BRICK	TTH AVE	VJ/21/00	5 K
CCMDDC1020	BRICK		20/20/20	10 K
CCM0001020	BRICK		AL 31 / 30	5 K
	BRICK	TH OVE	OK/23/AA	5 K
	BRICK	7TH AVE	06/30/86	10 K
CCMPRC1020	BRICK	7TH AVE	07/07/85	10 K
	BRICK	7TH AVE	07/21/85	10 K
Number of Ch	ervations, 20			
				-
CCMPBC1033	DOVER	NORTH BEACH DRIVE	05/05/86	152
CCMPOC1033	DOVER	NORTH BEACH DRIVE	05/12/86	4
CCMPDC1033	DOVER	NORTH BEACH DRIVE	05/19/86	56
	DUVER	NUKIH BEACH DRIVE	05/19/86	4U E V
CCMPUC1033	DUVER	NUKIH BEHCH DRIVE		J N 25
	DUVER	NURTH BEHUR DRIVE		20
CCHPUC1033	DOVER	NORTH REACH DRIVE	00/03/00 06/16/02	30
	DOVER	NORTH BEACH DRIVE	06/16/86	20
	DOVER	NORTH BEACH DRIVE	06/17/86	10
CCMPOC1033	DOVER	NORTH BEACH DRIVE	06/18/86	10 K
CCMPDC1033	DOVER	NORTH BEACH DRIVE	06/18/86	10
CCMPOC1033	DOVER	NORTH BEACH DRIVE	06/19/86	10
CCMPOC1033	DOVER	NORTH BEACH DRIVE	06/23/86	5 K
CCMPOC1033	DOVER	NORTH BEACH DRIVE	06/23/86	5 K 2
CCMP0C1033	DOVER	NORTH BEACH DRIVE	06/24/86	55
CCMPOC1033	DOVER	NORTH BEACH DRIVE	06/25/86	10 K altrue
CCMPDC1033	DOVER	NORTH BEACH DRIVE	06/26/86	10 K
CCMPDC1033	DOVER	NORTH BEACH DRIVE	06/30/86	10 K
CCMP0C1033	DOVER	NORTH BEACH DRIVE	06/30/86	10
CCMPDC1033	DOVER	NORTH BEACH DRIVE	07/02/86	190
CCMP0C1033	DOVER	NORTH BEACH DRIVE	07/03/86	10
CCMPDC1033	DOVER	NORTH BEACH DRIVE	07/07/86	10 K
CCMPOC1033	DOVER	NORTH BEACH DRIVE	07/07/86	10 K
	DOUER	NOPTH PEACH DOTUS	07/08/85	10 K
CCIPUC1033			01,00,00	10 1
CCMPOC1033	DOVER	NORTH REACH DRIVE	07/08/86	10 K

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2	Part and the			苏祥				
*	Water Sample	Report: 07/25/86	15:31:35 Freshwate	r and	Saltwater Sites	### Sorted by	Community ###	
200	and Franklar	······································				-	and a start of the	T.
	CCMP	Municipality	Location		Date	F. Coliforms	Remarks	Uther
: _ T	CCN00C1077	DOUCD	NORTH REACH DRIVE	· ·	20/01/70	10		0
)		DOVER	NORTH BEACH DRIVE		07/14/86	10	K K	0
	CCHPBC1033	DOVER	NORTH BEACH DRIVE		07/14/86	20	an ann an Earlinn	0
-	CCMP0C1033	DOVER	NORTH BEACH DRIVE		07/15/86	10	K	0
•	CCMPOC1033	DOVER	NORTH BEACH DRIVE		07/16/86	10	K	0
	CCMP0C1033	DOVER	NORTH BEACH DRIVE		07/17/86	10		0
•	CCMPOC1033	DOVER	NORTH BEACH DRIVE		07/21/86	10		0
	CCMPDC1033	DOVER	NORTH BEACH DRIVE		07/22/86	20		0
	CCMPOC1033	DOVER	NORTH BEACH DRIVE		07/23/86	10	Kur Kur	0
	CCMPOC1033	DOVER	NORTH BEACH DRIVE		07/24/86	- 40		0
87	CCMPDC1089	DOVER (CHADWICK)	EAST TUNA WAY		05/05/86	4	K A	.0
	CCMPOC1089	DOVER (CHADWICK)	EAST TUNA WAY		05/12/85	4	X	0
	CCMPOC1089	DOVER (CHADWICK)	EAST TUNA WAY		05/19/86	16		0
7	CCMPOC1089	DOVER (CHADWICK)	EAST TUNA WAY		05/27/86	- 5		0
•	CCMPDC1089	DOVER (CHADWICK)	EAST TUNA WAY		06/02/86	5	N.	0
	CCMPOC1089	DOVER (CHADWICK)	EAST TUNA WAY	(\cdot, \cdot)	05/03/86	- 10	X	0
	CCMPOC1089	DOVER (CHADWICK)	EAST TUNA WAY		06/16/86	5	K	0 -
	CCMPDC1089	DOVER (CHADWICK)	EAST TUNA WAY		06/23/86	5		0
	CCMPDC1089	DOVER (CHADWICK)	EAST TUNA WAY		05/30/86	10	K	0
	CCHPUC1089	DUVER (CHADWICK)	EAST TUNA WAY		07/07/86	10	N THE REAL PROPERTY AND	0
مىسى تەرەپىتى	CCMPUL1089	DOVER (CHHDWICK)	EHSI IUNH WHY		07/14/85	10		U A
	CCMPUC1089	DUVER (CHHDWICK)	ENDI JUNH WHY		0//21/86	10	K Star	
•	CCMP0C1129		FIELDER HVE		05/10/85	28	U	0
			FIELDER HVE		VJ/12/00	4 75	N	- U - A
		DOVER	FIELDER AVE		05/27/85	30	100 (100 (100 (100 (100 (100 (100 (100	0
F	CCMP0C1129	DOVER	FIELDER AVE		05/02/85	15		0
	CCM00C1129	DOVER	FIELDER AVE		05/03/86	10		
	CCMP0C1129	DOVER	FIELDER AVE		05/15/85	5	n i i	0
	CCMP0C1129	DOVER	FIELDER AVE		05/18/85	10	K	Ō
	CCMP0C1129	DOVER	FIELDER AVE		06/23/86	5	K	0.
	CCMPOC1129	DOVER	FIELDER AVE		06/30/86	10	استریمهٔ به افغانس این او او این	0
	CCMPOC1129	DOVER	FIELDER AVE		07/07/86	10	K	0
	CCMPOC1129	DOVER	FIELDER AVE		07/14/86	10	K	0
•	CCMPOC1129	DOVER	FIELDER AVE		07/22/85	10	K	0
	CCMPOC1130	DOVER	4TH AVE		05/05/86	20		0
	CCMPOC1130	DOVER	4TH AVE		05/12/85	4	ĸ	0
· ·	CCMPOC1130	DOVER	4TH AVE		05/19/86	8		0
	CCMPDC1130	DOVER	4TH AVE		05/27/86	10		0
	CCMPOC1130	DOVER	ATH AVE		06/02/86	35		0
,	COMPOCIII30	DOVER	ATH AVE		06/09/86	10	K	0
	CCMPUC1130	DUVER	ATH AVE		06/16/86	1410		0
ŧ	CCMPUL1130	DOUCO	ATH AVE		06/15/85	3	K	. 0
		DOVER	ATH AVE		05/17/85	10	n V	0
		DOVER	ATH OUE		V0/10/00 05/10/05	10	N MARK	0
۰. ا	CCN00C1130	DOVER	ATH AVE		20/01/00	10	n ₁₂₂	0
	CCN0001130	DOVER			20/21/00	10	ĸ	0
	CONPOCT130	DOVER	ATH OVE		00/23/00 05/27/02	J r E	X	0
	COMPOCI 130	DOVER	ATH OVE		06/25/00	2	K	0
	COMPACT 130	DOVER	ATH DUF		00/24/00 06/25/86	10	X	0
	CCMPDC1130	DOVER	ATH OVE		70,52,90	10	K ·	0
	CCHPDC1130	DOVER	ATH OVE		00/20/00 02/20/02	10	K	0
	CCMPDC1130	DOVER	ATH AVE		20/00/20	10	K	0
	CCMPOC1130	DOVER	ATH AVE		07/01/86	10	ĸ	0
	CCMPOC1130	DOVER	ATH AVE		07/01/86	10	ĸ	õ

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675° 1. A. A.		and the second second second									en e		
3			14	12-10-24		the second		Sector -			and the		- 2 5
	Water Sampl	e Report: 0	7/25/86	15:31:35	Freshwater	and Saltw	ater Sites		HA Sorted by	Community	7 () · · ·		
		Anter the	م الإي الإسم مع		- 6. M - 10 - 1		10 The The I		and a sugarday and				100
<u>J</u>	CONP	Municip	ality	Location			· · · · · · · · · · · · · · · · · · ·	Date	F. Coliforms	Renarks		Other	
	COMPOC1130	DOVER	· •	4TH AVE				07/02/85	120	75 × 24 24		0	
•	CCMPOC1130	DOVER		4TH AVE		1 ¹		07/03/86	40		-	0	
· ·	COMPOCI130	DOVER		ATH AVE				07/07/85	10	K	1 ef	9 0.7	
1	CCMPUC1130	DUVER		ATH AVE				07/07/86	10	K 🐨		0	*.
	CCMPUC1130	DUVER		41H AVE		·.		07/08/85	10	K	A service	0	
		DUVER		ATH AVE				07/109/85	10	K		0	-
1		DOUED	- -	ATU OUC				07/14/05	10	K - a		U, 1	-
1		DOUCD						07/14/00	10	ĸ	-	U	
		DUVER					· ••.	V//14/00	10	<u>,</u>	Sec. 1		
3	CCND0C1130	NOUCO	· ·	ATH AUE			en sta	07/15/05	10	n ge			
-	CCND0C1130	NOUCD						07/10/00	20				
	CCN0001130	DOVER						07/21/85	10	K		A.	
Ĵ	CCMD0C1130	DOVER		ATH OVE				07/21/85	10	ĸ	2.4	0	
	CCMPOC1130	DOVER		ATH AVE				07/22/85	10	K.	eg fa fa	ŏ	
	CCNP0C1130	DOVER	•••	ATH AVE				07/23/85	10	x	er.		2
	CCMPOC1130	DOVER		ATH AVE				07/24/86	10			õ	
			~									-	
	initae 1 Tit											•	
	Number of D	bservations	: 100	-									
									- 				
	CCMPOC1054	HARVEY	CEDARS	75TH STRE	ET			05/05/85	4			0	
•	CCMPDC1054	HARVEY	CEDARS	75TH STRE	ET			05/12/85	4	K		0	
	CCMPOC1054	HARVEY	CEDARS	· 75TH STRE	ET			05/19/86	4	K		0	
h	CCMPOC1054	HARVEY	CEDARS	75TH STRE	ET 			05/27/85	5	K		0	
,	CCMPOC1054	HARVEY	CEDARS	75TH STRE	ET		-	05/02/85	5	K		0	
	CCMPOC1054	HARVEY	CEDARS	75TH STRE	ET			06/09/85	10	к		0	
1	COMPUCI054	HARVEY	CEDARS	7518 51RE				06/16/85	5			0	
,	CUMPUC1054	HHRVET	CEDAKS	701H SIRE				05/30/85	10	ĸ		0	
				/DIM BIKE				07/0//85	10	K		0	
)	CCMP0C1034		CEDHKO	75TU 6705	E1 57			07/21/00	10	К. У		0	
	CCM00C1054	LODUEV	CEDARS	DEDGEN OU				05/05/05	10	n V		ő	
	CCHP001058	HORVEY	CEDARS	BERGEN OU	Ē			03/03/05	4	к 2		õ	
)	CCMPOC1058	HARVEY	CEDARS	BERGEN AV	F			05/19/85	Â	N		õ	
-	CCMP0C1058	HARVEY	CEDARS	BERGEN AV	E			05/27/85	5	x		ŏ	
	CCMP0C1058	HARVEY	CEDARS	BERGEN AV	E			06/02/86	. 5	ĸ		ŏ	
)	CCMPOC1058	HARVEY	CEDARS	BERGEN AV	E			06/03/85	10	K	•	Ó	
	CCMPOC1058	HARVEY	CEDARS	BERGEN AV	E			06/16/85	5	К		Ō	
	CCMPOC1058	HARVEY	CEDARS	BERGEN AV	E			05/23/85	5	ĸ		0	
ر	CCMPOC1058	HARVEY	Cedars	BERGEN AV	E			06/30/86	10	к		0	
	CCMP0C1058	HARVEY	CEDARS	BERGEN AV	E			07/07/86	20			0	
、	CCMPOC1058	HARVEY	CEDARS	BERGEN AV	E			07/14/85	20			0	
ر	CCMPDC1058	HARVEY	CEDARS	BERGEN AV	Ε			07/21/86	10	ĸ		0	
	CCMPOC1097	HARVEY	CEDARS	ATLANTIC	AVE			05/05/86	- 4	к		0	
	CCMPOC1097	HARVEY	CEDARS	ATLANTIC	AVE			05/12/86	4	K		0	
ر	CCMP0C1097	HARVEY	CEDARS	ATLANTIC	AVE			05/19/85	4	к		0	
	CCMP0C1097	HARVEY	CEDARS	ATLANTIC	AVE			05/27/86	5	ĸ		0	
	CCMP0C1097	HARVEY	CEDARS	ATLANTIC	ave			06/02/86	5	к		0	
)	CCMPOC1097	HARVEY	CEDARS	ATLANTIC	AVE			06/09/85	10	К		0	
	CCMPOC1097	HARVEY	CEDARS	ATLANTIC	AVE			06/16/86	5	к		0	
	COMPOC1097	HARVEY	CEDARS	ATLANTIC	AVE			06/23/86	15			0	
)	CCMP0C1097	HARVEY	CEDARS	ATLANTIC	AVE			06/30/86	10	К		0	
	CCMPOC1097	HARVEY	CEDARS	ATLANTIC	AVE			07/07/85	10	K		0	
	CCMPOC1097	HARVEY	CEDARS	ATLANTIC	AVE			07/14/85	10	к		0	
)	COMPOC1097	HARVEY	CEDARS	ATLANTIC	AVE			07/21/85	10	K		0	

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Water Sample Report: 07/25/86 15:31:35 Freshwater and Saltwater Sites F. Coliforns Remarks

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	Number of O	bservations: 35			م مر من من المراجع الم مراجع المراجع ال		Pro Carlos	3 y 1 x
~					55 W 9		Fin Plant	19 . 19 . 1
	CCMPOC1024	LAVALLETTE	BROOKLYN AVE		05/05/86	4	K	0
•	CCMPOC1024	LAVALLETTE	BROOKLYN AVE	-	05/12/86		1000	0
· .	CCMP0C1024	LAVALLETTE	BROOKLYN AVE		05/27/86	5	K	0
2	CCMPOC1024	LAVALLETTE	BROOKLYN AVE		06/02/86	5	K	0
	CCMP0C1024	LAVALLETTE	BROOKLYN AVE		06/09/86	10	K	0
	CCMPOC1024	LAVALLETTE	BROOKLYN AVE	المستندية. محمد المستند	06/16/86	5	K	. 0
	CCMPOC1024	LAVALLETTE	BROOKLYN AVE		06/23/86	5	K	Ō
	CCMPOC1024	LAVALLETTE	BRODKLYN AVE	¥	06/30/86	10	K	0
	CCMPDC1024	LAVALLETTE	BROOKLYN AVE		07/07/86	10	K	0.
	CCMPOC1024	LAVALLETTE	BROOKLYN AVE		07/14/86	10	- Carrier Margaret	0
	CCMPDC1024	LAVALLETTE	BROOKLYN AVE		07/21/86	10		0
1.11	CCMPOC1025	LAVALLETTE	GUYER AVE		05/05/86 Cx	176		
	CCMPDC1025	LAVALLETTE	GUYER AVE	4 -2	05/12/85	20	a fina a	0
	CCMP0C1025	LAVALLETTE	GUYER AVE		05/27/85	5		Ō
-	CCMPDC1025	LAVALLETTE	GUYER AVE		06/02/85	5	K	Ő
	CCMP0C1025	LAVALLETTE	GUYER AVE		06/09/85	10	K	0
	CCMPDC1025	LAVALLETTE	GUYER AVE		05/15/85	5.	K C	Ö
•	CCMPOC1025	LAVALLETTE	GUYER AVE		05/23/85	5	ĸ	0
	CCMPOC1025	LAVALLETTE	GUYER AVE	•	06/30/85	10	К —	0
	CC/P0C1025	LAVALLETTE	BUYER AVE		07/07/85	10	K .	0
	CCMP0C1025	LAVALLETTE	BUYER AVE		07/14/85	10	x State	0
	CCMP0C1025	LAVALETTE	BUYER AVE		07/21/85	10	K	0.
	CCHP0C1027	I QUALLETTE	JERSEY CITY AVE		05/05/86			0
	CCMP0C1027	LAVALLETTE	JERSEY CITY OVE		05/12/85	20		0
	CCHPGC1027	I AVALLETTE	JERSEY CITY AVE		05/27/85	5	X	0
	CCMP0C1027	LAVALETTE	JERSEY CITY AVE		06/02/85	5	K SATE ST	
	CCMP0C1027	LAVALLETTE	JERSEY CITY AVE		05/09/85	10	K	
	CCHPRC1027	I AVAL I FTTE	JERSEY CITY AVE		05/15/85	5		Ŏ
	CCNP0C1027	I QUQLI ETTE	JERSEY CITY AVE		05/23/85	5		0
	CCMPDC1027	I AVALLETTE	JERSEY CITY AVE		06/30/85	10	K	ŏ
	CCMP0C1027	LAVALLETTE	JERSEY CITY AVE		07/07/85	10	K .	
	CCXP0C1027	LAVALLETTE	JERSEY CITY AVE		07/14/85	10	ĸ	0
	CCMPOC1027	LAVALIETTE	JERSEY CITY AVE		07/21/85	20		Ŏ
	CDXP0C1029	LAVALIETTE	TRENTON AVE		05/05/85	4		Ő
•	CCMP0C1029	LAVALLETTE	TRENTON AVE		05/12/86	4	ĸ	. 0
•	CCMPOC1029	TAVALLETTE	TRENTON AVE		05/27/86	5		0
	CCMPOC1029	LAVALLETTE	TRENTON AVE		06/09/86	10	ĸ	0
	CDMP0C1029	LAVALLETTE	TRENTON AVE		06/16/86	5.	K	. 0
	CCMPOC1029	LAVALLETTE	TRENTON AVE		06/23/86	5	K	Ő
·	COMPOC1029	LAVALLETTE	TRENTON AVE		06/30/86	20		0
	CCMPOC1029	LAVALLETTE	TRENTON AVE		07/07/86	10	K	Ő
	CCMPOC1029	LAVALLETTE	TRENTON AVE		07/14/85	10	K	Ó
-	CCNP0C1029	LAVALLETTE	TRENTON AVE		07/21/86	20		
	CCMPOC1094	LAVALLETTE	BRYN MAWR		05/05/85			Ň
	CCMPOC1094	LAVALLETTE	BRYN MAUR		05/12/86	4	К	Ň
	CCMPOC1094	LAVALLETTE	BRYN KAWR		05/27/85	5		0
	CCMPOC1094	LAVALLETTE	BRYN MAWR		05/02/85	5	K	0
	CCMPCC1094	LAVALIETTE	BRYN MOUR		06/09/86	10	ĸ	0
	CCMD0C1094	LAVAL FTTE	RRVN HOUR		06/16/86	5	ĸ	0
	00000000000				06/23/46	5	N N	0
	CONDECTOR				06/20/06	10	ĸ	0
	CCMDDC1034		DOTA PAWA DOVN WAND		07/07/00	10	n V	0

	Water Sample	Report: 07/25	/85 15:31	:35 Fre	shwater and	Saltwater Site		sti Sorted	by Commun	157 EEE	
27	CONP - 22	Municipalit	y	Location			Date	A Collic	ns Anta		
	CCMPOC1094	LAVALLETTE		BRYN MAWR			07/14/86		10 👾 K		- 103
Ə 🐩	CCMPDC1094	LAVALLETTE		BRYN MAWR			07/21/86	and the second second	10 K	····	0
	-						et en				
	Number of Obe	mustioner	54					-			
7	NURDER OF DDS	ervations:	34					1		·	
	CCMPDC1052	LONG BEACH		LOVELADIES			05/05/86		≜ ² 2 - 2		0 -
3	CCMPOC1052	LONG BEACH	LOVELADIE	LOVELADIES			05/12/86	·	4 K		0 *
-	CCMP0C1052	LONG BEACH	LOVELADIE	LOVELADIES		• *	05/19/86		4 K		0
	CCMPOC1052	LONG BEACH	LOVELADIE	LOVELADIES		- 7	05/27/86		15		0
	CCMPOC1052	LONG BEACH	LOVELADIE	LOVELADIES			06/02/86		5 - K		0
	CCMPOC1052	LONG BEACH	LOVELADIE	LOVELADIES			06/09/86		10 K		0
	CCMPDC1052	LONG BEACH	LOVELADIE	LOVELADIES			06/15/85		5 K	e se transfer e transfer	0
I. A. Star	CCMPUC1052	LUNG BEACH		LOVELADIES			06/23/86		5 K	an An ann agus a	0
		LUNG BEHCH		LUVELHUIES		•	05/30/85		10		. V
3	CCHPOC1052	LONG BEACH		LOVELHDIES	×		07/14/95	137	10 K	1.3 Y	0
	CCNP0C1052	LONG BEACH					07/21/85		10 K		0
	CCMPOC1072	LONG BEACH/	BH CREST	STOCKTON STRE	ET	-	05/05/86		4 K		0
7	CCMPOC1072	LONG BEACH/	BH CREST	STOCKTON STRE	ET		05/12/85	•	4		0
	CCMP0C1072	LONG BEACH/	BH CREST	STOCKTON STRE	ET		05/19/86		4 K		0
	CCMPDC1072	LONG BEACH/	BH CREST	STOCKTON STRE	ET		05/27/85		10 .	Stran .	0
)	CCMPOC1072	LONG BEACH/	BH CREST	STOCKTON STRE	ET		06/02/86		5 K		0
	CCMPOC1072	LONG BEACH/	BH CREST	STOCKTON STRE	ET		06/ 09/86		10	•	0
•	CCMPOC1072	LONG BEACH/	BH CREST	STOCKTON STRE	ET		06/16/86		5 K		0
)	CCMPOC1072	LONG BEACH/	BH CREST	STOCKTON STRE	ET		05/23/85		10		0
		LUNG BEACH/	BH CREST	STUCKTUN STRE	21 77		05/30/85		10 K		0
•	CCHPUL10/2	LUNG BEHLH/	DH CREDI	STULKIUN SIKE	51 57		07/16/85		10 K		0
,	CCHPOC1072	LONG BEACH/	BH CREST	STOCKTON STRE	51 57		07/21/86		10 K		0
	CCMPDC1076	LONG BEACH/	HAVEN BCH	NEW JERSEY AV	F		05/05/86		4 K		õ
)	CCMPDC1076	LONG BEACH/	HAVEN BCH	NEW JERSEY AV	Ē		05/12/85		4 K		Ó
2	CCMPOC1076	LONG BEACH/	haven BCH	NEW JERSEY AV	Ē		05/19/86		4 K		0
_	CCMPDC1076	LONG BEACH/	haven BCH	NEW JERSEY AV	E		05/27/86		5 K		0
)	CCMPOC1076	LONG BEACH/	haven BCH	NEW JERSEY AV	E		06/02/86		5		0
	CCMPOC1076	LONG BEACH/	HAVEN BCH	NEW JERSEY AV	E	-	06/03/86		10 K.		0
•		LONG BEACH/	HAVEN BCH	NEW JERSEY AV	E		06/16/86		5 K		0
J .	CCMDDC1076	LUNG BEHLH/	HOVEN BUH	NEW JERSET HY	E E		06/23/85		א כ א כ		0
	CCMPOC1076	-tong BEACH/	HAVEN BCH	NEW JERSEY AV	F	-	07/07/85		10 K		0
)	CCMPOC1076	LONG BEACH/	HAVEN BCH	NEW JERSEY AV	Ē		07/14/86		10 K		0
	CCMPOC1076	LONG BEACH/	HAVEN BCH	NEW JERSEY AV	E		07/21/86		30		0
	CCMP0C1082	LONG BEACH/	s BCH Hav	JOAN ROAD			05/05/86		4 K		0
)	CCMP0C1082	LONG BEACH/	s BCH hav	JOAN ROAD			05/12/86		4 K	and the	0
	CCMPOC1082	LONG BEACH/	s BCH hav	JOAN ROAD			05/19/86		4 K		0
	CCMPOC1082	LONG BEACH/	s BCH Hav	JOAN ROAD			05/27/86		10	athe of	0
),	CCMPOC1082	LONG BEACH/	S BCH HAV	JOAN ROAD			06/02/86		5 · K		0
	CCMPUC1082	LUNG BEACH/	S BCH HAV	Joan Road			06/09/86		10 K		0
		LUNG BEACH	S BLH HAV	JUHN KUHD			06/16/86		2 K		0
	CCNPUC1V82	LUNG BEACH	C DCH HHV	JUHN KUHU			05/30/85		10 K	1. A.	0
	CONPOCIOSE	I ONG REACH	S RCH HAU	TOON POOD			07/14/05		10 K		0
	CCMPDC10A2	LONG REACH	S RCH HOV	JOAN ROAD			07/21/86		10 K		0
-	CCMPOC1091	LONG BEACH/	BRANT BCH	SOTH STREET			05/05/86		4 K		0
	CCMPDC1091	LONG BEACH/	BRANT BCH	SOTH STREET			05/12/85		4		0
)	CCMPDC1091	LONG BEACH/	BRANT BCH	SOTH STREET			05/19/86		4 K		0

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Water Sample	Report: 07/25/86 15:31	:35 Fre	shwater and	Saltwater Sites		+++ Sorte	d by Co	munity H	5
	Alter The User								
CCNP	Municipality	Location	-4- B.E.		Date 2	. Colif	ores I	enarks	و الله
0040001001	I ONE DEACH / DOANT DOW	SATH STREET			05/27/86			A State	
CCH00C1091	LUNG DEHUN/DRAW DUN	SOTH STREET			05/02/85		5		0
CCND0C1001	LONG BEACH/BRONT BCH	SOTH STREET			05/09/85	4.000 100,000	10	K	0
CCMP0C1031	LONG BEACH/BRANT BCH	SOTH STREET			05/15/85	1.4	5 3.5	- K (1949)	
	I ONE REACH/REANT RCH	SOTH STREET			06/23/86		5 5	ner strasse	0
CCMD0C1091	LONG REACH/RRANT RCH	SOTH STREET		Se 1	06/30/86		10	K	0
CCHPOC1031	LONG REACH/BRANT BCH	SOTH STREET		-	07/07/86		10	ĸ	0
CCM00C1091	LONG REACH/BRANT BCH	SOTH STREET			07/14/86		10	1.	. 0
CCMPDC1091	LONG BEACH/BRANT BCH	SOTH STREET		- 1 246,	07/21/86		10	K	0
CCMPDC1098	LONG BEACH/NORTH BCH	ROXIE AVE			05/05/86		4		. 0
CCMPOC1098	LONG BEACH/NORTH BCH	ROXIE AVE			05/12/86		4	K	0
CCMPOC1098	LONG BEACH/NORTH BCH	ROXIE AVE		Na	05/19/86		4	K MAR	0
CCXP0C1098	LONG BEACH/NORTH BCH	ROXIE AVE		7	06/02/85		5	K	0
CCMPOC1098	LONG BEACH/NORTH BCH	ROXIE AVE			06/09/86	A. S. S.	10	K	0
CCMPDC1098	LONG BEACH/NORTH BCH	ROXIE AVE			06/16/86	1	5	K	12 0
CCMPOC1098	LONG BEACH/NORTH BCH	ROXIE AVE			06/23/86	, de	5		0
CCMPOC1098	LONG BEACH/NORTH BCH	ROXIE AVE			06/30/85	-	-10	K 🔊	0
CCMPOC1098	LONG BEACH/NORTH BCH	ROXIE AVE			07/07/86		10	K	0
CCMPOC1098	LONG BEACH/NORTH BCH	ROXIE AVE			07/14/85		10	K .	0
CCMPOC1098	LONG BEACH/NORTH BCH	ROXIE AVE			07/21/86	•	10	K	0
CCMPOC1101	LONG BEACH/HAVEN BCH	FLORIDA AVE			05/05/85	· · · ·	4	K	0
CCMPOC1101	LONG BEACH/HAVEN BCH	FLORIDA AVE			05/12/86		4		0
CCMPOC1101	LONG BEACH/HAVEN BCH	FLORIDA AVE			05/19/86		4	K	0
CCMPOC1101	LONG BEACH/HAVEN BCH	FLORIDA AVE			05/27/86		5	K	
CCMPOC1101	LONG BEACH/HAVEN BCH	FLORIDA AVE			06/02/86		5	К	- 0
CCMPOC1101	LONG BEACH/HAVEN BCH	FLORIDA AVE			06/03/86		10	K	0
CCMPOC1101	LONG BEACH/HAVEN BCH	FLORIDA AVE			06/16/86		5	K	0
CCMPOC1101	LONG BEACH/HAVEN BCH	FLORIDA AVE			06/23/86		10		0
CCMPOC1101	LONG BEACH/HAVEN BCH	FLORIDA AVE			05/30/86		10		0
CCMPOC1101	LONG BEACH/HAVEN BCH	FLORIDA AVE			07/07/86		10	K	0
CCMPOC1101	LONG BEACH/HAVEN BCH	FLORIDA AVE			07/14/86		10	K	0
CCMPDC1101	LONG BEACH/HAVEN BCH	FLORIDA AVE			07/21/86		10	K la	0
CCMP0C1102	LONG BEACH/N BCH HAV	14TH STREET			06/23/86		10		0
CCMPOC1102	LONG BEACH/N BCH HAV	14TH STREET			05/30/85		10	K	0
CCMPOC1102	LONG BEACH/N BCH HAV	14TH STREET			07/07/86		10	ĸ	0
CCMPDC1102	LONG BEACH/N BCH HAV	14TH STREET			0//14/85		10	K	
CCMP0C1102	LONG BEACH/N BCH HAV	14TH STREET			0//21/86		10	ĸ	0
Number of O	servations: 87								a.
CCMPDC1012	MANTOLOKING	LYMAN AVE			05/05/86		4	 K´ 	0
CCMPOC1012	MANTOLOKING	LYKAN AVE			05/12/86		4		a. 0
CCMPOC1012	MANTOLOKING	LYMAN AVE			05/27/86		5		0
CCMP0C1012	MANTOLOKING	LYMAN AVE			06/02/86		5	ĸ	0
CCMP0C1012	MANTOLOKING	LYMAN AVE			05/09/85		10	ĸ	0
CCMP0C1012	MANTOLOKING	LYMAN AVE			06/16/85		5	K	0
CCMPOC1012	MANTOLOKING	LYMAN AVE			05/23/86		5		0
CCMPDC1012	MANTOLOKING	LYMAN AVE			06/30/86		10	K	0
CCMPDC1012	MANTOLOKING	LYMAN AVE			07/07/88		10	ĸ	0
CCMP0C1012	MANTOLOKING	LYMAN AVE			07/14/8E		10		0
CCMPOC1012	MANTOLOKING	LYMAN AVE			07/21/86	•	10	K	. 0
CCMPDC1014	MANTOLOKING	PRINCETON AVE			05/05/88		4		0
CCMPOC1014	MANTOLOKING	PRINCETON AVE			05/12/88	•	4		0
CCMPOC1014	MANTOLOKING	PRINCETON AVE			05/27/88		5	К	0
CCMDDC101A	MANTOLOKING	PRINCETON AVE			05/02/88		5		0

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Water	Sample Report	07/25/86 1	5:31:35	Freshwate	ir and	Saltwater	Sites	### So	rted by C		Is att		-
COMP	Munic	inality	Locat	ion			Data						
					-, · · · ·			F. L0					
CCHPO	C1014MANTO	LOKING	PRINC	ETON AVE		المعالمين المكريني 1934 مع مالي الم	06/05)/86	10	n a r			
CCMPO	C1014 🛄 MANTE	LOKING	PRINC	ETON AVE			06/16	5/85	5	X		0	-
CCMPOL	C1014 MANTE	LOKING	PRINC	ETON AVE			06/23	3/86	5	K		0	E.'.
		LUKING	PRINC	ETON AVE			06/30)/85	10	K		0 ****	
			PRING	LIUN HVE			07707	/85	10	K		0	
	CCMPOC1014	MANTOLOKING		PRINCETON AV	-	•		07/14/85		10	K		0
3	LUIPULIVI4	MANTULUKING		PRINCEIUN HV				V//21/00		10			0
												100) - 10 (11)	
	Number of Obs	ervations:	22			<u>.</u>	:					and the second	
1		•										525 - Avr.	
	CCMPOC1001	PT PLEASANT	BEACH	BROADWAY AVE		Ř.	•	05/05/86		4	K		0
3	CCMPOC1001	PT PLEASANT	BEACH	BROADWAY AVE				05/12/86		- 4	K		0
-	CCMPUC1001	PT PLEASANT	BEACH	BROADWAY AVE		·.		05/19/05		- 4. . 5			0
	CCMP0C1001	DT DI FOGONT	BEHLM	BKOHDAHI HAF	1			05/02/85		5	K		õ
J. Star	CCMP0C1001	PT PLEASANT	BEACH	BROADWAY AVE				06/09/86	· · · ·	10	· · · ·		ō
	CCMPOC1001	PT PLEASANT	BEACH	BROADWAY AVE				05/16/86		5	K		0
	CCMPOC1001	PT PLEASANT	BEACH	BROADWAY AVE				06/23/86		5	- K		0
	CCMPOC1001	PT PLEASANT	BEACH	BROADWAY AVE				06/30/86		10			0
-	CCMPOC1001	PT PLEASANT	BEACH	BROADWAY AVE				07/07/ 86		10	К		0
	CCMPOC1001	PT PLEASANT	BEACH	BROADWAY AVE				07/14/86		120			0
	CCMPGC1001	PT PLEASANT	BEACH	BROADWAY AVE			· ·······.	07/21/85		40	ч. И		0
	ECHPUC1002	PT PLEASANT	BEACH	CENTRAL AVE				05/05/86	8.	- 4 - 5	K		0
)		DT DI EGEONT	BEHLM	CENTROL AVE				05/12/05	,				0
	CCMP0C1002	DT DI FOGONT	BEACH	CENTRAL AVE				03/15/00		5	K .		õ
	CCMP0C1002	PT PLEASANT	BEACH	CENTRAL AVE				06/02/86	'	5	K		õ
)	CCMP0C1002	PT PLEASANT	BEACH	CENTRAL AVE				06/09/86		10	K		0
	CCMPDC1002	PT PLEASANT	BEACH	CENTRAL AVE				06/16/86		5	К		0
`	CCMP0C1002	PT PLEASANT	BEACH	CENTRAL AVE				05/23/86		5			0
)	CCMP0C1002	PT PLEASANT	BEACH	CENTRAL AVE				06/30/86		10	K		0
	CCMPDC1002	PT PLEASANT	BEACH	CENTRAL AVE				07/07/85		10	K		0
)	CCMPGC1002	PT PLEASANT	BEACH	CENTRAL AVE				07/14/86		120			0
	CCMP0C1002	DT DI FOSONT	BEHCH	SED OUE				05/05/86		0C 4			Ň
	CDMP0C1003	PT PLEASANT	BEACH	SEA AVE				05/12/86		4	K		õ
2.	CCMP0C1003	PT PLEASANT	BEACH	SEA AVE				05/19/86		4	ĸ		0
:	CCMPOC1003	PT PLEASANT	BEACH	SEA AVE				05/27/86		5			0
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	CCMPOC1062	SURF CITY	23RD STREET		07/14/86	10 K	0
	CCMPOC1062	SURF CITY	23RD STREET	•	07/21/86	10	0
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Number of Observations: 26

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Number of Observations: 633



CITY OF NORTH WILDWOOD

Thomas W. Flud, City Administrator

Post Office Box 499 Wildwood, N.J. 08260

August 5, 1986

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Mr. Raymond E. Cantor, Committee Aide Office of Legislative Services State House Annex, CN-068 Trenton, N.J. 08625

RE: Coastal & Ocean Pollution.

Dear Mr. Cantor:

In lieu of testifying at the recent public hearing, the City of North Wildwood has authorized me to forward the enclosed report which was submitted to us on October 15, 1985.

Should you desire any additional information concerning this report, please contact City Engineer Ralph Patrella at (609) 465-2600.

Very truly yours,

is. W. Ilu

THOMAS W. FLUD CITY ADMINISTRATOR

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CITY OF NORTH WILDWOOD

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INVESTIGATION OF AUGUST 1985

BEACH POLLUTION INCIDENT

OCTOBER 15, 1985

PREPARED BY:

CHYUN ASSOCIATES 429 WALL STREET PRINCETON, NEW JERSEY

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ALBERT R. ROY, N. J. P. E. #19718

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I. INTRODUCTION

The purpose of this report is to examine the situation surrounding the August 1985 beach pollution incident of the Wildwoods in order to assess the probable cause or causes of the problem.

Beaches in the Wildwoods were closed to swimming from August 22 through August 28, 1985 by County and State officials due to unusually high counts of fecal coliform, many of which, except for previous isolated cases, were observed on August 19, 1985. The high counts of August 19th for the most part were equal to or greater than 2400 fecal coliform per 100 ml of water for sampling stations extending from Hereford Inlet in North Wildwood City and south along the beaches through Wildwood City and Wildwood Crest. This compares to a state limit of 50 per 100 ml for coastal ocean water (CW-1) and 200 per 100 ml for back bay waters (CW-2).

The basis of this study is from information supplied by the Cape May County Department of Health (CMCDH) of selected bacteriological analysis of the Wildwoods' beaches, information of the North Wildwood sewerage facilities from the City Engineer (Van Note-Harvey Associates), newspaper reports, and a literature search of appropriate documents pertinent to this study.

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II. EXISTING SEWERAGE SYSTEM

The existing system consists of a gravity sewer system and a 10th Street Pumping Station approximately 60 years old. Sewage is conveyed from this pump station to a 2.1 MGD wastewater treatment plant having an influent pumping capacity of 4.5 MGD. The plant provides primary treatment by the use of gravity sedimentation followed by chlorination and discharge of the treated waters by outfall to the Hereford Inlet in the vicinity of Oak Street. During the summer season, the average daily flow to the treatment plant is approximately 3 MGD (dry weather flow) with a peak of 3.8 MGD. Under present operating conditions (dry weather), the plant is operated at a maximum flow of 3.8 MGD with diurnal flow peaks of approximately 2-3 times the daily average flow temporarily stored in the collection system. This is done to prevent flooding at the Oak Street plant due to plant limited hydraulic capacity especially during high tides.

During rainfall events due to gravity sewer storm water infiltration (inflow), a considerable flow increase, estimated by a County study as 0.18 MGD (approximately 0.5 MGD peak), results in exceeding the capacity of the plant influent pumps. When the storage capacity of the sewers is exceeded, wastewater is no longer contained in the collection system. Upstream of the 10th Street pump station, the gravity sewer on 11th Street has surcharged to the point of overflowing. These overflows, when they occur, are conveyed by street drainage to sterm sewers which discharge into back bay areas (See Figure 1).

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III. WASTEWASTER PLANT OPERATION

The operation of the treatment plant in regard to flow and disinfection by chlorination is summarized in Table I for the month of August 1985. The daily average flow was 3.1 MGD with a range of 2.0 - 3.4 MGD. The peak flow was 3.8 MGD. The chlorine residual measured every two (2) hours from 8 AM to 12 Midnight averaged 1.23 milligrams-per-liter (mg/l) with a range of 0.7 to 2.67 mg/l.

The effluent fecal coliform level, analyzed once per week, was in all cases reported as less than 4 MPN per 100 ml of sample. Effluent limits for this parameter is 200 average monthly and 400 average weekly. The 4 per 100 ml value is well below these Federal and State discharge limits including the State CW-1 and CW-2 standards. The measured chlorine residuals and fecal coliform analytical results show a good consistent effluent disinfection process. A review of operating reports for June and July 1985 reflect the same judgement.

The facility was issued Interim Effluent Limitations effective July 15, 1984 wherein limitations for maximum load allocations, maximum concentrations and minimum percent removals were specified (Table II). The average monthly flow was not to exceed 2.1 MGD. Subsequent State inspections resulted in unacceptable facility ratings. The results are summarized below:

September 10, 1984 - BOD and S/S removals not met plus equipment deficiencies.

March 1, 1985 - BOD and S/S effluent and removals not met, plus equipment deficiencies.

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August 21, 1985 - BOD and S/S effluent and removals not met plus equipment deficiencies. 2.10 MGD flow exceeded.

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It should be noted that the disinfection requirements were met at the time of the above inspections even when the system was hydraulically overloaded. BOD and S/S effluent removal deficiencies were caused by primary clarification sludge collector mechanical problems currently under repair.

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TABLE I

NORTH WILDWOOD SEWAGE TREATMENT PLANT OPERATING DATA*

MONTH				
(1985)	DAILY FLOW	DAILY FLOW	EFFLUENT CHLORINE	EFFLUENT FECAL
AUGUST	AVG, MGD	MAX, MGD	RESIDUAL, AVG, MG/L	COLIFORM, MPN/100 ML
1	3.3	3.8	0.90	
2	3.2	3.8	1.13	
3	3.2	3.8	0.91	
4	3.1	3.8	0.92	
5	3.0	3.8	0.70	
6	3.0	3.8	0.81	
7	3.0	3.8	0.89	Less Than 4
8	3.3	3.8	0.83	
9	3.4	3.8	0.94	
10	3.3	3.8	0.86	
11	3.3	3.8	1.00	·
12	3.1	3.8	1.19	
13	3.0	3.8	0.98	
14	3.0	3.8	0.90	Less Than 4
15	3.0	3.8	1.32	
16	3.0	3.8	0.97	
17	2.9	3.8	0.91	
18	3.3	3.8	1.08	
19	3.3	3.8	1.14	
20	3.4	3.8	1.41	
21	3.4	3.8	1.00	Less Than 4
22	3.3	3.8	1.02	
23	3.1	3.8	1.42	
24	3.0	3.8	1.27	
25	3.1	3.8	2.67	
26	3.1	3.8	1.50	
27	2.9	3.8	1.61	
28	2.9	3.8	2.44	Less Than 4
29	2.9	3.8	1.00	
30	2.0	3.8	2.59	
31	3.0	3.8	2.05	
Average	3.1	3.8	1.23	Less Than 4
Range	2.0-3.4	3.8	0.7-2.67	Less Than 4

* Data obtained from operator's monthly State reports.

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TABLE 11 INFLIGH EFFLUENT LINITATIONS

EDP to June 30, 1988** . Minimum Percent Removal Maximum Load Allocations* Maximum Concentrations* Limitations* Effluent Average Monthly Average Weekly Average any four (4) Average Mo. Average Weekly Characteristics Discharge Limitation Discharge Limitation Discharge Discharge Monthly hour period kg/day kg/day Limitation Limitation (mg/1)(mg/1)5-Day-20°C 135 35 90 1074 716 Biochemical Oxygen Demand ' Suspended 45 75 50 597 398 Solids Fecal Coliform ** Organisms 400 200 Number per 100 ml.

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AWhichever is most stringent *Geometric mean

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PART I Page 4 Permit No. NJ0023515

IV. AREA BACTERIOLOGICAL RESULTS

The County of Cape May performs a comprehensive analysis of the County's bathing areas on a weekly basis during the recreation season. Sampling stations are shown on Figure 2 of the beach sample sites. Table III basically summarizes the data for the Wildwoods during the month of August 1985. July 1985 data for North Wildwood beaches is also included.

For the period in question, it can be seen that on August 19, 1985 all of the beach samples, except the North Wildwood samples of Walnut and Central and 2nd Avenue and JFK Boulevard, were equal to or greater than 2400 fecal coliform per 100 ml of water. A comparison sample obtained near the North Wildwood treatment plant outfall was reported at 540 per 100 ml. The Walnut and Central Avenues sample, slightly to the southeast of the outfall, had a value of 63 per 100 ml. It is significant to note that for a period of approximately 10 days prior to the incident, there was no unusual variation in the North Wildwood bacteriological data. In fact, for a 6-day period (August 12 thru 17), all stations met the CW-1 criteria of 50 per 100 ml. The same could be said for Wildwood and Wildwood Crest except for a flare-up at Montgomery and Bennett Avenues and Ocean Avenue in Wildwood. The flare-up was obviously due to subsequent discovery of sewage in storm sewers as reported in The Press, Atlantic City, dated September 7, 1985 (attached).

Subsequent to the high fecal coliform counts, the beach waters were near normal within 2 days except for the five Ocean Avenue sampling sites of Maple, Schellenger, Montgomery, Bennett and Forget-Me-Not.

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On the third day after the incident all beach sites were essentially back to normal (Table III) and of good water quality except for a flar -up on August 29 at the Wildwood Montgomery and Ocean Avenues beach site. It is important to note that the North Wildwood outfall tested very satisfactory as seen in Table III with values of 240, 17, 8, 2 and 7 MPN per 100 ml, respectively for the subsequent 5-day period after the incident.

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It is recognized that no single sample is conclusive in assessing pollutional sources, however, in the short term, considering adjacent sampling sites, it appears that the Ocean Avenue sites, especially Bennett Avenue, is a serious candidate.

The most glaring conclusion one may reach based upon the data in Table III is that a sudden dramatic event took place to severely pollute the Wildwood beaches. It is also important to realize the methodology employed in the analysis for fecal coliform gives a maximum value <u>equal to or greater than</u> 2400/100 ml. Therefore, it is reasonable to assume that the coliform value can be much higher and is most probably. The fact that the values are essentially all reported at 2400 per 100 ml prevents an assessment of the potential sources in addition to the dilemma of having only one data point to analyze. Recognizing a generalized north to south prevailing current, the Ocean Avenue sites were still the last beaches to cleanup which may reflect the previous storm drain situation.

Two events occured which, in combination or singly, were the probable cause of the massive August 19, 1985 beach pollution

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problem. The first is the intensive rainfall event on or about that date and the New Jersey Department of Environmental Protection (NJDEP) Office of Coastal Engineering dredging operations in Hereford Inlet.

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V. DISCUSSION

Rainfall and associated runoff from storm sewers is recognized by the Cape May County Board of Health as an event which "will elevate bacterial counts across the boards" as reported in undated announcement (attached) concerning their water quality testing for the bathing season. Each Wildwood community has its particular problems which may contribute to back bay pollution from numerous sources during rainfall events. Additional sources of back bay pollution include recognized sources such as yacht toilets, individual residences with no sewage service and faulty or malfunctioning systems. After rainfall events, back bay coliform levels rise significantly and have a tendency to remain high due to low tidal flushing. An example is presented in Table III of the Hoffman Canal near the 10th Avenue pump station which is typical of high coliform counts. As mentioned previously, North Wildwood sewage overflows from the collection system flow to back bay waters not to the ocean beaches.

There is no doubt that the rainfall event on or about August 19, 1985 generated a significant storm water discharge to the beach areas. Based upon the data in Table III, only three of the thirteen beach sites reported values less than or equal to 2400/100 ml. These were the North Wildwood plant outfall (540), Walnut and Central (63), and 2nd Avenue at JFK Boulevard (1600). These data taken on the same day indicate that the source of pollution was somewhere southeast of the North Wildwood treatment

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plant and outfall line. The plant, therefore, was not the source of pollution which is clearly evident by a review of the data on Table III. The Walnut and Central Avenue data never exceeded 220 per 100 ml and was mostly at 60 per 100 ml or below.

The beach closings as previously discussed were effective on August 22, 1985 which, unfortunately, was at a time when the beaches were actually clean (See Table III). This was due to the 3-4 day delay in analysis of the samples by the MPN method and also ignoring the "five polluted samples required" by the CMCHD (announcement attached) "before waters might be posted or closed to recreation." Although the MPN method is the primary method accepted by regulatory agencies, the filter membrane technique (FMT), requiring only 24 hours for analysis, is also an acceptable, certified laboratory procedure. The FMT method can be used to assist in beach pollution analysis if closings are considered. A sample of FMT analysis, which essentially correlates Table II data, is attached.

The issue proposed by some of bacterial "aftergrowth" does not stand up to test since the August 19, 1985 samples and subsequent samples obtained on the same days did not indicate any regrowth (Table III). Rather, a cleansing or dilution effect can be seen in the direction of prevailing currents southwardly.

The "aftergrowth" theory and the problems associated with the interpretation of the results of many investigations on bacterial viability in sea water has been discussed in terms of the "wide variety of experimental conditions" employed and the

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"unfortunate circumstances which did not adequately represent (conditions)" obtained in nature.*

The NJDEP Coastal Engineering dredging operation of Hereford Inlet reportedly resulted in channel "breakthrough" on or about the peak pollutional period surrounding the August 19th date. It is conceivable that the combination effect of back bay contaminated waters flushed out by very high rains and stirred up bottom deposits at "breakthrough" caused resuspension of coliform organisms from the inlet bottom deposits. It is well known that populations of fecal coliform can exist in sediments to levels of 35,000 MPN per 100 ml.**

**Goyal, et al. Publication Bulletin, Vol. 10, pp. 25-27, 1979

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[&]quot;Gerald T. Orlob, UCAL, Berkeley, Calif., Sewage & Industrial Wastes, Vol. 28, No. 9, 9/1956.

VI. CONCLUSIONS

Based upon the data presented and the discussion of the pollutional situation of the Wildwood Beaches, we conclude the following:

- 1. Operating data (Table I) and State inspections of the North Wildwood treatment plant demonstrate that the plant has the ability to consistently and effectively disinfect the sewage effluent even when hydraulically overloaded. The plant performed the same before as during the pollutional incident.
- 2. The bacteriological data provided by the CMCDH indicate a problem area at the Ocean Avenue sampling sites especially at Bennett Avenue. This problem surfaced before and after the pollution incident of August 19, 1985 and may have contributed to the overall problem.
- 3. A sudden dramatic event severely polluted the Wildwood Beaches. Although it is difficult to assess from the limited data, the data does indicate the source did not occur at the North Wildwood Treatment Plant or directly from the systems' collection system. Further, that the source of pollution was located southeast of the plant.
- 4. The rainfall event of August 19, 1985 discharged significant storm waters to the beach areas. These storm waters in combination with back bay flushing and the NJDEP Coastal Engineering dredging operations may have contributed to the gross beach pollution.

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ATTACHMENTS

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SELECTED FECAL COLIFORM LEVELS CAPE MAY COUNTY DEPARTMENT OF 1

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,	NORTH WILDWOOD			WILDWOOD					
			,						
	DATE	WALNUT &	2ND AVE S	4TH AVE 5	15TH ST. 6	MAPLE 6	SCHELLENGER 6	MONTGOMERY &	BENNETT
.,	(1985)	CENTRAL	JFK BLVD.	JFK BLVD.	OCEAN AVE.	OCEAN AVES.	OCEAN AVES.	OCEAN AVE.	OCEAN AVI
	JULY 1	350	5	110	11				
	8	70	140	130	1 30				
	17	540	926	926	540				
	22	540	33	170	8		,		
,	29	540	130	49	33	49	130	33	110
	AUGUST 6	540	926	1600	*2400	1600	926	1600	1600
	9	33	240	79	79	350	350	110	240
	10	350	540	240	5	220	140	926	540
	11	79	350	33	* *2	8	11	49	23
	12	27	33	22	**2	1 30	4	+2400	*2400
,	13	70	5	4	* *2	33	8	*2 400	*2 400
	14	33	7	7	7	17	130	26	13
	15	22	33	**2	4	79	220	1 30	79
	16	33	23	17	11	22	33	33	33
	.17	13	11	17	14	27			
	18	170	350	140	240	350	79	540	79
3	19	63	1600	* 2 400	*2 400	*2 400	*2 400	*2400	*2 400
	20	220	1600	240	540	926	350	926	*2400
	21	13	2	12	130	926	1600	926	*2 400
	22	1 70	49	170	33	33	70	79	140
	23	43	79	79	49	33	23	1 30	27
	24	17	33	22	8	11	46	11	49
,	25	17	21	22	11	11	17	17	11
	27	2	46	350	110	8	31	280	2
	28	4	21	7	79	49	33	11	11
	29	5	13	8	8	13	33	*2400	22
	30	23	49	70	220	70	23	49	13

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Health Officer Dr. C. Health Coordinator GERALD M. THORNTON, Freeholder Director, Department of Health

Department of Health

COUNTY OF CAPE MAY

CREST HAVEN COMPLEX ON PARKWAY CAPE MAY COURT HOUSE, NJ 08210 AREA CODE (609) 465-7911



Dear

As you have no doubt recently read within our newspapers, the Cape May County Health Department has once again begun our comprehensive water quality testing in Cape May County's bathing areas.

1984 Marks the 12th year in which we have monitored our bathing waters to ensure that these areas are safe for swimming for our residents and visitors.

This comprehensive monitoring program is broken into a number of "sub-programs".

- OCEAN WATERS - 44 Sites, ranging from Ocean City, around Cape May Point and north to the Villas, will be sampled weekly from now until mid-September.

- BACK BAY WATERS - 92 Sites, also will be collected weekly until mid-September. All sites are within the various lagoons and basins behind the barrier beach municipalities. Most sites are popular swimming areas.

- WASTE WATER TREATMENT PLANTS - In addition, all of Cape May County's Treatment Plants are inspected and tested weekly to ensure a quality level of treatment and that these facilities are not degrading bathing areas.

- FRESH WATER - Lakes and rivers. Finally, an additional 10 "inland" sites are sampled weekly, all areas which see considerable recreational utilization.

MONITORING PROGRAM

As in the past, the applicable data for your municipality will be forwarded to you on a weekly basis. Samples are normally collected on Mondays, Tuesdays and Wednesdays. All samples are analyzed here in our Health Department Laboratory and results will normally be mailed to you on Fridays.

To help you in understanding this data please remember:

- All data is reported as: MPN (Most Probable Number) of FECAL COLLFORM BACTERIA per a 100 milliliter sample.

- Fecal Coliform is widely regarded as the standard test for human sewerage pollution, the only major water pollutional concern in Cape May County.

- The New Jersey Department of Environmental Protection establishes standards as to the maximum amount of pollution allowed in bathing waters:

- for <u>OCEAN WATERS</u>, the upper limit is 50 MPN/100 ml., sample, fecal coliform bacteria.

- in the <u>BACK BAY</u> the upper limit is 200 MPN/100 ml., sample, fecal coliform bacteria. These figures are established by the state as the "Surface Water Quality Standards".

Finally, a few specifics must be remembered by anyone reviewing and analyzing this data.

- No <u>Single</u> sample which shows a high bacteria count constitutues a problem. Indeed, a series of five "polluted" samples are rquired before waters might be "posted" or closed to recreation.

- We, therefore, are looking for <u>Trends</u> in water pollution. Each sample is reviewed in relation to <u>previous data</u> as well as adjacent sites. Charts which show previous sample results are reviewed weekly by our staff. Only <u>repeated</u> high bacterial counts at a given site would be construed as a public health hazard.

- This approach is the nature of the science of bacteriology. Indeed, any given sample takes 4 days for analysis. Due to wind and tidal action, any given bacterial count may well be "diluted" and have disappeared long before the data is published. Therefore, figures which are forwarded can easily yield a false sense of alarm (or possibly a false sense of security, for that matter).

- It must also be remembered that a number of the sampling sites are not bathing areas and represent sites established in order to assess the performance of a waste water treatment plant. Therefore, data for those sites, near <u>effluents</u>, while perhaps over the established limits, <u>do not</u> necessarily imply that nearby bathing areas are polluted. Again, all data must be reviewed in regards to time and tidal effects.

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مراجع والمحافظ فيحاد مطلات بالكلامية والمعاصر وترمي

MONITORING PROGRAM

- <u>Rainfall</u> and associated <u>runoff</u>, will contain fecal matter and will elevate bacterial counts "across the boards". This is usually very short-lived and does not constitute an ongoing health hazard. For this reason, data for samples following major rainfalls must be regarded as inconclusive. Normally "resampling" will be scheduled as soon as possible.

In summary, our weekly sampling data must <u>always</u> be regarded as inconclusive by itself, and must be reviewed in comparison to the many variables discussed above. No one should be unduly alarmed at a single high count of bacteria.

Please be assured that any potential problems will be followed up immediately by this department. Many pollution "incidents" are simply along the lines of a sewer line break or equipment failures at our treatment plant facilities that are easily corrected (usually long before the sample data indicates the problems). Your County Health Department assigns top priority to the resolution of potential problems, and the full resources of this department will be assigned if a problem is encountered. Such is the way in which we keep Cape May County's beaches and bays among the cleanest in the state.

One precaution should be considered by the municipal governing bodies, however. As in the past we recommend, as a matter of policy, that the areas surrounding <u>all treatment plant outfalls</u> be posted as, <u>NO SWIMMING</u> areas. This is a precaution to prevent the possibility of water-borne diseases being transmitted to bathers. While generally bathing does not occur in these areas, we must concede that it can and does happen and the unenlightened vacationer must be protected. Such posting should generally occur within one quarter mile of the outfall, but this can vary with tidal currents and water way configurations. Please call us regarding specific requirements for your area. We recommend that this posting be done with permanent signs, and before the date of JULY lst.

We hope this review helps in your weekly analysis of bathing water quality in your area. Should any questions arise, please feel free to call either myself or Mrs. Jeanne Hansen, Senior Environmental Planner, at 465-3181, Extension 217. Please feel free to refer any citizens or vacationers to us for updated water quality findings.

Best wishes for a pleasant and safe summer season, and we thank you for your ongoing interest in clean water in Cape May County.

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Sincerely,

Clay C. Sutton, Jr., Environmental Program Administrator

CCS:jem

cc: L. J. Lamanna, MA., H.O., PHC J. E.Hansen, Sr. Env. Planner Mac Malloy Memorial Laboratories 2301 NEW YORK AVENUE . . .

2301 NEW YORK AVENUE NORTH WILDWOOD, NEW JERSEY - 08260 522-9000

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City of Wildwood 4400 New Jersey Ave. Wildwood, N.J. 08260 Attn.: Mayor Vic DiSylvester August 22, 1985

DATE	LOCATION	TIME	COLLECTOR	<u>F.C.</u>
8-21-85	Juniper Ave./Poplar Ave			
0 01 0E	outfall - ocean	7:12p 7:15p	vam-ngm	160/1 00
0-21-05	Wildwood Ave Ocean	1:100	vam-mgm	360/100
8-21-85	Spencer Aveoutfall-			
	ocean	7:20p	vam-mgm	220/10 0
8-21-85	Young Ave outfall-			-
	ocean	7:22p	vam-mgm	240/10 0
8-21-85	Davis Ave outfall-	~ ~ ~ ~		
0.01.05	OCCAD	7:25p	vam-mgm	180/1 00
8-21-85	Burke Ave Outiall-	7.09-		190/100
8-21-85	Terlor Ave _outfall_	7:20p	vam-mgm	180/100
	ocean	7:30p	vam-mem	240/100
8-21-85	Rio Grande Aveoutfall-	· · · · · · · · · · · · · · · · · · ·	t and mBm	
	ocean	7:32p	vam-mgm	140/10 0
8-21-85	Hand Aveoutfall-			•
	ocean	7: 33p	vam-mgm	280/10 0
8-21-85	Leaming Ave outfall0			
0.01.05	ocean	7:34p	vam-ngm	320/1 00
8-21-85	Bennett Ave Outiall-	7.26-		100/100
8-21-85		7:30p 7:40p	van-mgm	200/100
0-21-00	CIESSE AVE OCEAN	1.40h	A stru-inKin	200/100

The Above are preliminary readings. A 1:20 dilution was made to produce less than 35 colonies per plate.

Mae Malloy Memorial Laboratories

2301 NEW YORK AVENUE NORTH WILDWOOD, NEW JERSEY - 08260 522-9000

City of North Wildwood 10th & Atlantic Aves. N.Wildwood, N.J. 08260 Attn.: Councilman Aldo Palombo August 22, 1985

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DATE	LOCATION	TIME	COLLECTORS	<u>F.C.</u>
8-21-85	South Side N.W. Blvd. by	0.55-		960 /1 00m
0.01.05	BORCD CTOOK	2:550	van-ngm	200/1000
3-21-85	Beach Creek	2:57p	vam-mgm	200/10 0m.
8-21-85	North Wildwood Sewage			
	Plant-outfall line	3:0 0p	vam-mgm	120/1 00m
8-21-85	Maryland & Chestnuts Sts			
	strøee end	3:04 p	van-mgm	200/1 00m
8-21-85	10th & Hoffman's Canal-			
	north side of pumpong			
	station	3:10 p	van-ngm	240/100r
8-21-85	15th & Virginia	3:12 p	vam-mgm	80/1 00m)
8-21-85	18th Ave.N.W. &			
	Maryland-Midway Otten;s			7 7
	Cananl	3:1 5p	vam-mgm	600/1 00m.
8-21-85	15th & Ocena Aveocean	3:2 2p	vam-mgm	120/100
8-21-85	4th & H.F.Kocean	3:2 8p	vam-mgm	140/1 00m
8-21-85	2nd & J.F.Kocean Welput & Centrel Ave -	3:3 0p	vam-mg m	160/10 0m
0-21-00	left side of Marine Police	3:35p	vam-mgm	140/100 m

The above results are preliminary readings. A 1:20 dilution was made so that colonies on plates were less than 35.

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BATHING BEACH CLOSURE REPORT

DATES	CLOSINGS	CAUSES	AREA
5/5 - 9	None		
5/12 - 16	None		
5/19 - 23	None		
5/26 - 30	None		
6/2 - 6	Baywyn Road; Lower Twp.; Cape May	Non-point Source	D.B.
6/9 - 13	Wildwood Ave.; Lower Twp.; Cape May	Non-point Source	D.B.
	Baywyn Road; Lower Twp.; Cape May	Non-point Source	D.B.
	Cox Hall Creek; Lower Twp.; Cape May	Non-point Source	D.B.
6/16 - 20	Kids World Beach; Long Branch; Monmouth	Broken Waste Pipe	0
6/23 - 27	Fifth Street: Seaside Park; Ocean	Non-point Source	B.B.
	Arkansas Ave.; Atlantic City; Atlantic	Trash Compactor Drain	0
	Fern Road; Lower Twp.; Cape May	Non-point Source	D.B.
6/30 - 7/3	None	• • • • • • • • • • • • • • • • • • • •	
7/7 - 11	Illinois Ave.; Atlantic City Atlantic	Storm Sewer Cross- Connection	0
7/14 - 18	Kids World Beach; Long Branch; Monmouth	Broken Waste Line	0
	Fifth Ave.; Seaside Park; Ocean	Non-point Source	B.B.
	Beachway and Oceanview; Keansburg; Monmouth	Non-point Source	R.B.
7/21 - 25	15th and Ocean; North Wildwood; Cape May	Non-point Source	0
	Walnut and Central; North Wildwood; Cape May	Non-point Source	0

Wildwood Ave.; Lower Twp.; Cape May Non-point Source D.B.

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(CITE 18 N.J.R. 1576) ENVIRONMENTAL PROTECTION_HEALTH

ADOPTIONS

I. (No change in text.) 2. Designated wildlife management areas: Assunpink Berkshire Valley Black River Clinton Colliers Mills Dix Flatbrook-Roy Glassboro Greenwood (including Pasadena-Howardsville) Heislerville Mad Horse Manahawkin Medford Bevan-Cedarville (Millville) Nantuxent Peaslee Pt. Republic Stafford Forge MacNamara (Tuckahoe-Corbin City) Walpack Winslow Whittingham Pequest Fort Dix Manasquan River Delaware Water Gap Nat'l Recreation Area 3. (No change in text) 7:25-5.34 Controlled hunting wildlife management areas (a) No wildlife management areas have been selected for limited hunter density for the 1986-87 season. (b) (No change in text) 7:25-5.35 (No change in text.) 7:25-5.36 (No change in text.)

7:25-5.37 Fish and Game Law Enforcement Region Headquarters (a) North—No. Region Office, R.R. 1, Box 383, Hampton, N.J. 08827 (201-735-8240)

(b)-(d) (No change in text.)

7:25-5.38 (No change in text.)

HEALTH

(a)

PUBLIC HEALTH COUNCIL New Jersey Campgrounds State Sanitary Code—Chapter XI

Adopted New Rules: N.J.A.C. 8:22-1

Proposed: May 19, 1986 at 18 N.J.R. 1038(a).

Adopted: July 14, 1986 by Evelyn Geddes, Chairperson, Public Health Council.

Filed: July 14, 1986 as R.1986 d.329, without change.

Authority: N.J.S.A. 26:1A-7.

Effective Date: August 4, 1986.

Expiration Date: August 4, 1991.

Summary of Public Comments and Agency Responses: No comments received.

Full text of the expired rule adopted as new appears in the New Jersey Administrative Code at N.J.A.C. 8:22-1.

(b)

PUBLIC HEALTH COUNCIL ENVIRONMENTAL HEALTH SERVICES Chapter IX—State Sanitary Code Public Recreational Bathing

Adopted New Rule: N.J.A.C. 8:26

Proposed: May 19, 1986 at 18 N.J.R. 1040(a).

Adopted: July 14, 1986 by Evelyn Geddes, Chairperson, Public Health Council.

Filed: July 14, 1986 as R.1986 d.328, with substantive and technical changes not requiring additional public notice and comment (see N.J.A.C. 1:30-4.3).

Authority: N.J.S.A. 26:1A-7.

Effective Date: August 4, 1986.

Operative Date: August 4, 1986 for subsections of subchapters 7 and 8 which relate to tidal bathing waters.

Operative Date: November 4, 1986 for remaining rules contained in this chapter.

Expiration Date: August 4, 1991.

Summary of Public Comments and Agency Responses:

Typographical errors as published in the New Jersev Register have been corrected at sections 8:26-3.15(b), 8:26-3.15(g), 8:26-3.16(d), 8:26-3.17(a), 8:26-3.20(c)8, 8:26-4.6(b), 8:26-4.8(c), 8:26-5.2(a)2, 8:26-5.6(e), 8:26-5.7(c)8, 8:26-5.9(a)4, 8:26-6.5(e)2, 8:26-7.12(a)1, 8:26-7.13(c), 8:26-7.19 and 8:26-8.5(d)1i.

At a public hearing on June 9, 1986, 30 people were present and comments were received on various general and specific aspects of the proposed new rules. In addition, a number of written comments were received by the Department of Health. The oral and written comments and the Department's responses follow, in summary form. (The commenters have received individual responses from the Department on the issues of particular interest to them.)

COMMENT: Several comments regarding the adequacy of the notice were received.

RESPONSE: The Department made extensive efforts to contact and solicit responses from as many interested parties as possible. In fact, approximately 55 people actively participated in the five subcommittees who authored these new rules. The aforementioned actions taken in drafting these rules far exceed the adequate notice procedures required by the N.J.S.A. 52.14(b) 1 et seq. and N.J.A.C. 1:30-1.1 et seq.

COMMENT: Several comments were received regarding the differentiation between public and private recreational bathing places.

RESPONSE: This issue has been addressed by the New Jersey Superior Court in *Raponotti vs. Burnt-Mill Arms, Incorporated* (113 N.J. Super 173, 5 273 A.2d. 372 (A.D. 1971). The court decided that only such swimming pools maintained for use by a family and its guests shall be considered private.

COMMENT: Several comments were received regarding the date by which public recreational bathing places must comply with these rules.

RESPONSE: While the rules are effective on the date of publication, the Department will not require compliance until the operative date.

COMMENT: A comment was received regarding a possible conflict between N.J.S.A. 5:1-1 to 5.4 and these rules.

RESPONSE: The Department was careful to avoid conflict in this area, and the current rules do not contain any conflicts.

COMMENT: A comment was received requesting information on suppliers of test kits and equipment required by the rules.

RESPONSE: The Department cannot make recommendations on specific suppliers, however, such information can be obtained from one's Yellow Pages under Pools. Supplies. Safety Equipment or Scientific Supply Houses. Further guidance, if necessary, can be obtained from the Department.

8:26-1.2 COMMENT: A comment was received from the New Jersey County Sheriff's association regarding the addition of sheriff's departments to this section.

RESPONSE: This has been done on adoption.

COMMENT: A comment was made that this regulation does not address persons who choose to swim outside the designated bathing area.

RESPONSE This is correct. It was not the Department's intent to regulate these areas outside the designated bathing area.

by writing to the Department of Environmental Protection, Bureau of Potable Water, CN 029, Trenton, New Jersey 08625.

8:26-6.8 Drinking fountains

Drinking water fountains shall be constructed according to the New Jersey Uniform Construction Code, N.J.A.C. 5:23.

8.26-6.9 Food service

All food service, and milk supplies shall comply with Chapter XII of the New Jersey State Sanitary Code, N.J.A.C. 8:24.

8:26-6.10 Plumbing

The installation, maintenance, repair and control of plumbing shall be in conformance with the regulations set forth in the New Jersey Uniform Construction Code, N.J.A.C. 5:23.

8:26-6.11 Insect, rodent and weed control

(a) The application of pesticides shall be in accordance with the provisions of the New Jersey Pesticide Control Regulations (N.J.A.C. 7.30-1 promulgated by the Department of Environmental Protection.

(b) Effective control measures shall be utilized to minimize and or eliminate the presence of rodents, flies, roaches, and other vermin on the premises. The recreational bathing place shall be kept in such condition as to prevent the harborage or breeding of vermin.

(c) All buildings shall be rodent and insect proofed. Storage areas shall be maintained in such a manner as to minimize the possibility of rodent harborage.

(d) Poison ivy, poison oak, poison sumac and ragweed shall be controlled at all times.

8:26-6.12 Recreational equipment

Recreation equipment, including playground devices, shall be inspected not less than once per week during the use season for defects and a permanent record of the inspections shall be maintained for a minimum period of 1 year. Equipment shall be maintained in safe operating condition at all times.

SUBCHAPTER 7. SAMPLING AND WATER QUALITY CRITERIA

8:26-7.1 Water source

(a) Fresh water for swimming pool, wading pool, hot tub or spa use shall be taken from a potable water source, approved by the New Jersey Department of Environmental Protection, Division of Water Resources, the New Jersey State Department of Health, Division and Local and Community Health Services, Environmental Health Services or the Local Health Department.

(b) Salt water for use in salt water pools shall be from a source which meets the water quality criteria for a salt water bathing beach found in N.J.A.C. 8:26-7.19 and 7.21.

8:26-7.2 Microbiological sampling for recreational bathing facilities.

(a) All microbial analyses for recreational bathing facilities shall be performed by a laboratory certified by the New Jersey Department of Environmental Protection, pursuant to the Regulations Governing Laboratory Certification and Standards of Performance, N.J.A.C. 7:18. (Information concerning laboratory certification may be obtained from New Jersey Department of Environmental Protection, Division of Fiscal and Support Services, Bureau of Collections and Licensing, CN 402, Trenton, New Jersey 08625.)

8:26-7.3 Sample containers

(a) A 125 milliliter sample shall be used for microbiological sampling. The container shall be filled with a minimum of 100 milliliters of water to allow adequate space for mixing of the water sample. All sample containers must be sterilized and treated with sodium thiosulfate to reduce the chlorine (or other halogen) present in the water at the time the sample is collected.

8:26-7.4 Collection of samples for swimming pools, wading pools, hot tubs, and spas.

(a) "[Time of collection of]" Samples shall be collected only when the swimming pool, wading pool, hot tub, or spa is in use and preferably during periods of heaviest use. The hour of the day and the day of the week shall be varied to obtain, over a period of time, a representative sampling of the sanitary quality of the swimming pool, wading pool, hot tub, or spa.

(b) Sampling frequency shall be at least once every week during periods of heavy bathing load.

1. For swimming pools using disinfection and filtration, sampling frequency may be changed to biweekly (every other week), based on three months of consecutive satisfactory samples.

(c) The place of collection shall be in the vicinity of groups of bathers and between return water inlets.

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(d) The following technique shall be followed when taking a water sample: Carefully open the container without touching the inner surfaces. Hold the sterile container near its base and downward at a 45 degree angle. Fill in one slow sweep down through the water with the mouth of the container always ahead of the hand. Care shall be taken to avoid contaminations of the sample by floating debris. Close the container without touching the inner surfaces. The container must not be rinsed in the swimming pool or the sodium thiosulfate will be removed.

8:26-7.5 Disposition of water samples from recreational bathing facilities

The sample shall be taken to a certified laboratory within 30 hours for processing. "[preferably within 6 to 12 hours.]" "for swimming pools, hot tubs and spas and 6 hours for processing for bathing beaches." The sample shall be refrigerated immediately upon collection or kept in an ice chest and "[hold]" "beld" at "[least than 50]" "45" degrees Fahrenheit ("[10]" "7.2" degrees Centigrade) "or less" while being transported. Information documenting the sampling time, date and location of sample, sampler's identification, and desired analysis shall accompany the sample.

8:26-7.6 Microbiological water quality standards for swimming pools

and wading pools(a) Heterotropic plate (standard plate count):

1. Standard: The number of colony forming units (CFU) shall not exceed 200 colonies per one milliliter.

i. Method: The heterotrophic plate count test shall be conducted in accordance with procedures set forth in Method 907, heterotrophic plate count, as set forth in "Standard Methods for the Examination of Water and Wastewater," American Public Health Association, 16th Edition. Said text may be obtained from The American Public Health Association, 1015-18th Street N.W. Washington, D.C. 20036.

(b) Total coliform densities:

1. Standard: If the multiple-tube fermentation method is used, none of the 5 standard 10 milliliter portions shall show the presence of organisms of the coliform group at any time. None of the confirmed 5 portions shall show the presence of the coliform group.

i. Method: Total coliform tests shall be conducted in accordance with procedures set forth in Method 908, a multiple-tube fermentation technique for members of the coliform group, as set forth in "Standard Methods for the Examination of Water and Wastewater," American Public Health Association, 16th Edition.

2. Standard: If the Membrane Filtration Technique is used, the number of coliform organisms shall be less than 1 colony per 100 milliliter sample.

i. Method: Total coliform test shall be conducted in accordance with the procedures set forth in Method 909A, a membrane filter technique for members of the coliform group as set forth in "Standard Methods for the Examination of Water and Wastewater," American Public Health Association, 16th Edition.

8:26-7.7 Samples not meeting standards

(a) The certified laboratory having determined that a sample(s) does not meet the microbiological standards established in N.J.A.C. 8:26-7.6, 7.12, 7.19, shall notify the swimming pool, hot tub, spa, or bathing beach operator by telephone on the same day and have the swimming pool, wading pool, hot tub, spa, or bathing beach, resampled. The verbal communication must be subsequently confirmed by a written report within 5 days.

(b) The swimming pool, wading pool, hot tub, spa, or bathing beach operator, upon verbal notification of an unsatisfactory sample result, shall notify the health authority immediately.

(c) The health authority or its authorized agent shall then require the swimming pool, wading pool, hot tub, spa, or bathing beach operator to have additional sample(s) taken and analyzed.

8:26-7.8 Chemical and physical water quality analyses for swimming pools and wading pools

(a) The pool shall be monitored for disinfectant level and pH at a 2 hour frequency throughout operating hours and in conjunction with each microbial sample. These results shall be recorded on the sample slip and become part of the permanent microbial test record.

(b) When testing for free chlorine, combined chlorine, and pH, the following test methodologies shall be used:

1. Free and combined chlorine residual: Method 408D, DPD ferrous titrimetric method or Method 408E, DPD colorimetric (using a color comparator), as set forth in "Standard Methods for the Examination of Water and Wastewater." American Public Health Association. 16th Edition.

(c) When testing for pH, Method 423, electrometric, as set forth in "Standard Methods for the Examination of Water and Wastewater," or

phenol red indicator shall be used.

(d) If color comparators are used for measuring disinfectant residuals or pH using the methods specified above they shall be available at the pool ***during periods of pool use*** for inspections.

(e) A bound log shall be maintained by the swimming pool operator on the premises which shall contain the time and date of the chemical tests performed, results of those tests and initials of the person who performed the necessary testing. The log shall also contain such information as bather load, water clarity, water temperature, and weather conditions as applicable. This log shall be available at all times for review by the health authority.

8:26-7.9 Chemical water quality standards for swimming pools and wading pools

(a) Free chlorine, combined chlorine, free bromine and pH values shall be continuously maintained within the following ranges:

	Minimum	Ideal	Maximum
Free chlorine residual			
parts per million (ppm)	1.0	1.0-1.5	2.5
Combined chlorine (ppm)	None	None	0.2+
Bromine (ppm)	2.0	2.0-4.0	4.0
pH	7.2	7.4-7.8	7.8

*Remedial action shall be taken if combined chlorine exceeds 0.2 as it will result in reduced chlorine efficacy.

(b) If pool water disinfectants other than those in (a) above are used, residuals of equivalent disinfecting strength shall be maintained.

(c) If stabilized chlorines are used as pool water disinfectants, the cyanuric acid levels shall be maintained within the following ranges:

	Minimum	Ideal	Maximum
Cyanuric Acid (ppm)	10	30-50	100

1. Stabilized chlorines shall be prohibited in indoor pools.

8:26-7.10 Physical water quality standards for swimming pools and wading pools

(a) The pool operator shall monitor the water clarity of each pool daily.

(b) When in use, the pool water shall be sufficiently clear to permit a black disk 6 inches (15.2 centimeters) in diameter, superimposed upon a white field placed at the bottom of the deepest end of the pool to be clearly visible from the pool sidewalk, at all distances up to 10 yards, measured in a horizontal distance from the projection of the disk onto the pool surface.

8:26-7.11 Saltwater swimming and wading pools utilizing ocean and for bay water

(a) Salt water pools utilizing ocean and or bay water typically having a total dissolved solids level between 18,000 and 35,000 parts per million shall be regulated as follows:

1. Fill and draw salt water pools shall be treated as a swimming pool and shall meet all of the microbiological, chemical, and physical standards for pools.

2. Flow through pools shall be treated as recreational bathing water and shall meet the microbiological and physical standards for recreational waters when sampled at the time and point where the water is discharged.

3. Sodium chloride added to pool waters when used in conjunction with electrolytic chlorine generators shall not constitute a salt water swimming pool.

(b) Saltwater pools shall be posted as such.

8:26-7.12 Microbiological water quality standards for hot tubs and spas (a) Heterotrophic plate count:

1. Standard: The number of colony forming units (CFU) shall not exceed 200 colonies per *[100]* *1* milliliter sample.

i. Method: Heterotrophic plate count shall be conducted in accordance with the procedures set forth in Method 907 heterotrophic plate count, found in. "Standard Methods for the Examination of Water and Wastewater." American Public Health Association, 16th Edition.

(b) Pseudomonas aeruginosa:

1. Standard: If the membrane filtration technique is used, the number of pseudomonas aeruginosa organisms shall be less than 1 colony per 100 milliliter sample.

i. Method: The membrane filitration technique for pseudomonas aeruginosa shall be conducted in accordance with procedures set forth in Method 914C found in, "Standard Methods for the Examination of Water and Wastewater," American Public Health Association, 16th Edition. 2. Standard: If the multiple-tube fermentation technique is used no more than 1 portion of all 5 standard 10 milliliter portions shall show the presence of pseudomonas aeruginosa organisms at any time. None of the confirmed 5 portions shall show the presence of pseudomonas aeruginosa.

i. Method: The multiple-tube technique for pseudomonas aeruginosa shall be conducted in accordance with procedures set forth in Method 914D found in, "Standard Methods for the Examination for Water and Wastewater," American Public Health Association, 16th Edition.

8:26-7.13 Chemical water quality standards for hot tubs and spas.

(a) Hot tubs and spas shall be monitored at a two hour frequency for disinfectant levels and pH according to the methodologies specified in N.J.A.C. 8:26-7.8.

(b) A bound log shall be maintained as specified in N.J.A.C. 8:26-7.8(c).

(c) The following disinfectant levels and chemical values shall be continuously maintained within the following ranges.

	Minimum	Ideal	Maximum
Free Chlorine, residual parts per million (ppm)	*2.0* *[1.0]*	* 3.0-5.0 * *[1.0-1.5]*	*10.0 * *[2.5]*
Combined *[Chloride]*			
Chlorine (ppm)	None	None	0.2+
Bromine (ppm)	2.0	*3.0-5.0*	*10.0 *
		[2.0-4.0]	*[4.0]*
[Combined Bromine (ppm)	None	None	0.2+]
pH	7.2	*7.4-7.6*	7.8
-		*[7.5]*	

*Remedial action shall be taken if combined chlorine *[or combined bromine]* residuals exceed 0.2 ppm as it will result in reduced disinfectant efficacy.

(d) If other pool water disinfectants are used, residuals of equivalent disinfecting strength will be maintained.

(e) If stabilized chlorines are used as disinfectants in hot tubs and spas. the cyanuric acid level shall be maintained within the following range:

	Minimum	Ideal	Maximum
Cyanuric Acid	10	30-50	100

1. Stabilized chlorines shall be prohibited in indoor hot tubs and spas. 8:26-7.14 Other biological factors (algae)

All hot tubs and spas shall be maintained free of objectionable algae whereby the water quality becomes effected.

8:26-7.15 Physical water quality

The operator of each hot tub or spa shall monitor the water clarity as specified in N.J.A.C. 8:26-7.10.

8:26-7.16 Sanitary survey criteria for bathing beaches

Before a bathing beach opens each year, a sanitary survey as defined in N.J.A.C. 8:26-1.3 shall be conducted of that bathing beach and surrounding areas by the owner or operator.

NOTE: It is recommended that the health authority be consulted for guidance in conducting the sanitary survey. Records of the survey shall be maintained as part of the permanent file.

8:26-7.17 Collection of samples at bathing beaches

(a) Bathing beach water, with the exception of ocean waters, sample(s) shall be obtained 1 week prior to the opening of the beach and at intervals of no longer than 1 week during the bathing season. Sample(s) shall be obtained whenever possible during peak bathing loads at a depth representative of the water being used for bathing.

1. Ocean waters shall be sampled in accordance with the cooperative coastal monitoring program administered by the New Jersey Department of Environmental Protection.

2. The samples shall be obtained during different hours of the day, and days of the week over a period of time to obtain a representative sampling of the sanitary quality of the natural waters.

3. All pertinent field data including, but not limited to water temperatures, air temperature, wind direction, bathing load, and recent precipitation shall be documented and made part of the sampling record.

(b) One sample shall be taken for the first 300 linear feet of beach front. Oceans under the cooperative coastal monitoring program are not included.

1. Additional samples shall be required as follows:

i. 300 linear feet to 500 linear feet-2 samples.

ii. In excess of 500 linear feet-3 samples.



ADOPTIONS

8:26-7.18 Technique of sampling

Technique of sampling shall be as specified in N.J.A.C. 8:26-7.4(d). 8:26-7.19 •[Microbial]• •Microbiological• water quality standards *for

bathing beaches*

(a) Microbiological water quality standards for bathing beaches shall be determined on the basis of fecal coliform densities, sanitary survey results, and or epidemiological evidence.

(b) Fecal coliform count standards shall be as follows:

1. If the multiple-tube fermentation method is used, the arithmetic average of a set of samples at any particular time shall not exceed 200 fecal coliform per 100 milliliters.

2. If the membrane filtration method is used, the number of colony forming units shall not exceed 200 fecal coliform organisms per 100 milliliters.

(c) The following methods shall be used in accordance with procedures set forth in, "Standard Methods for the Examination of Water and Wastewater," American Public Health Association, 16th Edition.

1. 909C Fecal Coliform Membrane Filter Procedure.

2. 908C-1 Fecal Coliform MPN Procedure (E.C. medium)

3. 908C-2 Fecal Coliform MPN Procedure (A-1 medium).

(d) All analyses shall be conducted in accordance with the standards set forth in N.J.A.C. 7:18 and in accordance with the methodologies set forth in N.J.A.C. 7:18-3.5(b).

*[8:26-7.20 Samples not meeting standards for bathing beaches

(a) The certified laboratory having determined that a sample(s) does not meet the standards established in N.J.A.C. 8:26-7.1 et seq, shall notify the health authority by telephone on the same day.

(b) The verbal communication must be subsequently confirmed with a written report within 5 days.

(c) The health authority or its authorized agent shall then notify and require the operators to have an additional sample(s) taken and analyzed as needed.]*

8:26-*[7.21]**7.20* Chemical water quality standards of natural waters (a) Chemical water quality standards of natural waters shall be monitored by the bathing beach operator and judged on the following basis:

1. Chemicals used to control aquatic vegetation shall not be capable of creating toxic reactions, or skin or membrane irritations, to bathers when the bathing place is in operation and shall be applied in accordance with N.J.A.C. 8:26-6.11(a).

[2. The recommended pH of bathing waters should be within the range of 6.5 to 8.3 where possible.]

•[3. Where toxic substances are suspected or known to be present, analysis of the bathing beach water shall be conducted by a laboratory certified by the New Jersey Department of Environmental Protection to determine the identity and amount of toxic substances present. The New Jersey Department of Environmental Protection Water Quality Standards for Surface Water Quality shall be used N.J.A.C. 7.9-4.1 et seq.]•

8:26-*[7.22]**7.21* Physical water quality standards of natural waters (a) Physical water quality standards of natural waters shall be monitored by the bathing beach operator and judged on the following basis:

1. Visual observations and or physical determinations shall be made to demonstrate the water to be free of deposits, aquatic vegetation, growths, oils, greases, or other substances having the potential to cause a health or safety hazard.

SUBCHAPTER 8. ENFORCEMENT PROCEDURES

8:26-8.1 Legal authority

All public swimming pools, wading pools, hot tubs, spas, or bathing beaches shall be operated in compliance with the provisions of this Chapter and Title 26, Revised Statutes of New Jersey.

8:26-8.2 Inspection of public swimming pools, hot tubs, spas or bathing beaches.

(a) The health authority shall inspect every swimming pool, wading pool, hot tub, spa, or bathing beach as often as the health authority deems necessary.

(b) The person operating a swimming pool, wading pool, hot tub, spa. or bathing beach shall permit access to all parts of the establishment. 8:26-8.3 Report of inspections

(a) Whenever an inspection of a swimming pool, hot tub, spa. or bathing beach is made, the finding(s) shall be recorded on an inspection report form approved by the State Department of Health. (b) The inspection report form shall identify in a narrative form any violations of this Chapter and shall be cross referenced to the section of the Chapter being violated.

(c) The health authority, upon anticipating a closure of a bathing beach shall immediately notify via telephonic communication the State Department of Environmental Protection, State Department of Health, and adjacent local health authorities of the intended action.

8:26-8.4 Public availability of inspection records

Records of inspections of swimming pools. hot tubs, spas, or bathing beaches shall be made available to the public upon request.

8:26-8.5 Criteria for closure of public recreational bathing facilities.

(a) The approval, license or permit of any person to operate a swimming pool, hot tub, spa or bathing beach may be suspended at any time, when in the opinion of the health authority or its authorized agent, such action is necessary to abate a present or threatened menace to public health.

(b) The health authority shall order the owner or operator of a swimming pool, hot tub, spa, or bathing beach to physically sequester the bathing area and to prohibit any bathing until the violation is abated.

(c) The following shall be reason(s) for closure.

1. Failure or lack of properly functioning equipment, structure, area or enclosure such as to jeopardize the health or safety of the persons using or operating it.

2. Lack of required supervisory personnel or required lifeguards.

3. Failure to meet specific water quality standard(s).

4. Any other condition which poses an immediate health hazard.

(d) Such orders may be verbal but shall be followed-up by a written confirmation within 24 hours.

1. In the event remedial action is not taken immediately, the health authority may cause an order to be issued requiring the facility to be closed in order to protect the public health. Such order shall be sent by certified mail, return receipt requested or hand delivered.

i. The order shall "[given]" "give" the alleged violator an opportunity to be heard "by the health authority," within a reasonable time, not to exceed 15 days, while the order remains in effect.

8:26-8.6 Swimming pools and wading pools

(a) Whenever a sample of pool water exceeds the bacteriological standards set forth in N.J.A.C. 8:26-7.6 and 7.11, the water shall be resampled immediately and the health authority shall be verbally notified immediately, upon gaining knowledge of all unsatisfactory laboratory analyses.

(b) If the resample exceeds the bacteriological standards, the pool shall be immediately closed and shall not be opened until a satisfactory bacteriological sample is received.

(c) A written copy of all laboratory analyses shall be transmitted to the health authority within 5 days of analyses.

(d) The swimming pool shall not be operated for bathing if the disinfectant residual is below or above that set forth in N.J.A.C. 8:26-7.9 or if the physical water quality is not in conformance with 8:26-7.8.

8:26-8.7 Hot tubs or spas

bbx

(a) Whenever a hot tub or spa water sample exceeds the bacteriological standards set forth in N.J.A.C. 8:26-7.12, "the hot tub or spa operator shall immediately notify the health authority;" the hot tub or spa shall "then" be closed, drained, disinfected, refilled, and resampled "[and the health authority shall be immediately notified]".

(b) The hot tub or spa may be reopened after taking the required actions in (a) above and while awaiting laboratory results of the resampling.

(c) If the resample is unsatisfactory^{*}, the bot tub or spa operator shall immediately notify the health authority;^{*} the hot tub or spa must ^{*}then^{*} again be closed, drained, disinfected, refilled, resampled, ^{*}[and the health authority shall be immediately notified]^{*}. The hot tub or spa shall not be reopened until a satisfactory sample result is received and the health authority gives its approval.

(d) The hot tub or spa shall not be operated for bathing if the disinfectant residual is not within the range set forth in N.J.A.C. 8:26-7.13.

(e) A written copy of all laboratory analyses shall be transmitted to the health authority within 5 days of the analyses.

8:26-8.8 Natural bathing waters (oceans, bays, lakes, rivers, etc.)

(a) If a sample of bathing beach water exceeds the bateriological standards set forth in N.J.A.C. 8:26-7.19 the following action shall be taken:

1. Immediately resample and immediately notify the health authority.

i. Sampling points for resamples shall be clustered around the area from which the unsatisfactory sample was obtained. Said sampling points shall be approved by the health authority.

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2. A sanitary survey of the area shall be conducted by the health authority and the operator of the bathing beach to attempt to identify the source(s) of pollution which shall include, but not be limited to, nearby point sources of pollution.

3. If the resample is unsatisfactory, or if the sanitary survey uncovers any condition which may present an imminent hazard to public health, the bathing beach shall be closed to bathing.

4. If the overall water quality data indicates that an area exceeds the bathing water bacteriological quality standards as a consequence of certain environmental conditions, that bathing area shall be kept closed for a period of time following those environmental conditions as indicated by past sampling data.

5. A bathing beach shall not be opened until the sanitary survey and, if necessary, appropriate sampling, shows the water to be acceptable.

8.26-8.9 Record keeping

(a) Accurate and complete records on the following items shall be kept on the premises and be available upon request of the authorized agent or the health authority. Such records shall be kept for a minimum period of one year.

1. Water analyses results in conformance with N.J.A.C. 8:26-7.

Sanitary survey records in conformance with N.J.A.C. 8:26-7.

3. Daily number of bathers.

4. Copies of all necessary credentials of personnel associated with the recreational bathing operation(s).

5. Accidents requiring external emergency services-patients name, time, date, description of occurrence, treatment, action taken, and name of person on duty supervising pool.

6. Deaths and or drownings. The record shall include the name of the person, the date, and a description of the occurrence.

. Inspection logs of playground equipment.

8:26-8.10 Deaths and or serious injuries

All deaths, head, neck, spinal cord injuries and any injury which render a person unconscious shall be reported to the health authority within 24 hours of occurrence. The health authority shall report such injuries to the State Health Department in January of each year for the injuries of the previous year.

8:26-8.11 Penalties

Any person who shall violate any provision of this Chapter or who shall refuse to comply with a lawful order or directive of the health authority, shall be liable for penalties as provided by law, or an injunctive action as provided by law, or both.

8:26-8.12 Separability

If any provision or application of any provision of this Chapter is held invalid, that invalidity shall not affect other provisions or applications of this regulation.

APPENDIX

The following organizations are currently recognized by the New Jersey State Department of Health to certify the personnel *and/or program* required in Subchapter 5 of these regulations.

First Aid Certification American Red Cross

CPR Certification

American Red Cross

American Heart Association

Lifesaving/Lifeguarding Certification

Swimming Pools and Lake Bathing

American Red Cross-Advanced lifesaving certificate Lifeguarding certificate Advanced lifesaving certificate

YMCA-

Lifeguarding certificate Ocean and Tidal Waters United States Lifesaving Association

P.O. Box 366

Huntington Beach, CA 92648

Certified Pool Operators Certification

YMCA

National Swimming Pool Foundation 10803 Gulfdale

Suite 300

San Antonio, Texas 78216

24 UNIT FIRST AID KIT CONTENTS

2 Units-1 inch Adhesive Compress

2 Units-2 inch Bandage Compress

Units-3 inch Bandage Compress 2 2

Units-4 inch Bandage Compress Unit-3 inches by 3 inches Plain Gauze Pads

Units-Gauze Roller Bandage 2 Unit-Eye Dressing Packet 1

4 Units-Plain Absorbent Gauze-1/2 square yard

3 Units-Plain Absorbent Gauze-24 inches by 72 inches

4 Units-Triangular Bandages

1 Unit-Tourniquet-Scissors-Tweezers

(a)

LOCAL HEALTH DEVELOPMENT SERVICES Implementation of Local Health Services Act Adopted New Rule: N.J.A.C. 8:53

Proposed: December 2, 1985 at 17 N.J.R. 2836(a).

Adopted: July 11, 1986 by J. Richard Goldstein, M.D., Commissioner, Department of Health.

Filed: July 14th, 1986 as R.1986 d.332, without change.

Authority: N.J.S.A. 26:3A2-10c(2) and 26:1A-15.

Effective Date: August 4, 1986.

Expiration Date: August 4, 1991.

Summary of Public Comments and Agency Responses: No comments received.

Full text of the expired rule adopted as new appears in the New Jersey Administrative Code at N.J.A.C. 8:53.

NARCOTIC AND DRUG ABUSE CONTROL

(b)

Controlled Dangerous Substance **Temporary Placement of Parafluorofentanyl in** Schedule I

Adopted Amendment: N.J.A.C. 8:65-10.1

Proposed: April 7, 1986 at 18 N.J.R. 603(a).

Adopted July 10, 1986 by J. Richard Goldstein, M.D., Commissioner, Department of Health.

Filed: July 14, 1986 as R.1986 d.326, without change.

Authority: N.J.S.A. 24:21-3.

Effective Date: August 4, 1986.

Expiration Date: Exempt pursuant to N.J.S.A. 24:21-3

Summary of Public Comments and Agency Responses: No comments received.

Full text of the adoption follows.

8:65-10.1 Controlled dangerous substances; Schedule I (a) (No change.)

(b) The following is Schedule I listing of the controlled dangerous substances by generic, established or chemical name and the controlled dangerous substances code number.

1.-6. (No change.)

7. Temporary listing of substances subject to emergency scheduling. Any material, compound, mixture, or preparation which contains any quantity of the following substances:

i. (No change.)

ii. (No change.)

61x

iii.-iv. (See proposal at 17 N.J.R. 2950(a).) v.-xii. (See proposal at 18 N.J.R. 254(b).)

xiii. Paraflourofentanyl (N-(2-1-phenylethyl)-4-piperidyl)-N-(4flourophenyl)propanamide.

(CITE 18 N.J.R. 1591)

HEALTH