

B R I E F I N G

before

ASSEMBLY AGRICULTURE AND ENVIRONMENT COMMITTEE

on

(Water Supplies and Drought Conditions)

June 3, 1985
Room 438
State House Annex
Trenton, New Jersey

MEMBERS OF COMMITTEE PRESENT:

Assemblyman Robert P. Hollenbeck, Chairman
Assemblyman Stephen Adubato, Jr., Vice Chairman
Assemblyman John O. Bennett
Assemblyman Robert C. Shinn

ALSO PRESENT:

Mark O. Smith
Office of Legislative Services
Aide, Assembly Agriculture
and Environment Committee

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ASSEMBLYMAN ROBERT P. HOLLENBECK (Chairman): I would like to apologize for starting late. I was trying to wait for a few other Committee members who said they would be here. It seems they are being delayed. Since people have been good enough to come to testify today, I don't want to impose on their time. So, I think we should start the hearing. There is a record being made for the rest of the Committee members so they will be able to review the testimony of the briefing we are going to receive today.

I am Assemblyman Robert Hollenbeck; I am the Chairman of the Assembly Agriculture and Environment Committee. This Committee was directed by the Assembly, by a resolution, to hold hearings with regard to the water supply problems in the State, if there are any. The Committee is well aware, of course, that there has been a shortage of rainfall. There is no human being who can take care of that particular problem. We are well aware of that. This is not necessarily a defense, because water management and water supply are based upon coping during periods of shortages so that you can move water from areas where there is an abundance, or a safer yield at the moment, and bring it to areas where there are shortages. That is the whole objective of water supply management in the State of New Jersey. I think some things have been done in a lot of areas; however, I think in some areas maybe the planning process has delayed some of the action.

That is why a lot of the hearing information will be more technical, and that is why this is a briefing, rather than a full legislative hearing where we ask the public to testify. What we are trying to do is obtain information dealing with a lot of the technical aspects of water supply and how they are handled. For that reason, we have members of the Department of Environmental Protection here to testify before us.

To my left is Mark Smith, who is the Committee Aide. On his left is Glenn Beebe, a Committee Aide from Minority Staff. As the members of the Committee arrive, I will introduce them to you.

We will start with Assemblyman Bennett Mazur, who is the legislator who put the resolution before the General Assembly directing

this study. I thought to start this off we should hear from the Assemblyman, so Assemblyman Mazur would you please come forward?

ASSEMBLYMAN D. BENNETT MAZUR: Mr. Chairman, thank you very much for inviting me to testify at the opening of these hearings.

As you know, these hearings were requested by the Legislature in response to an Assembly resolution. As you also know, in 1981, the voters of New Jersey authorized the issuance of \$350 million for improvements and repairs to New Jersey's water supply system. The approval of the bonds reflected the concern of the voters about the previous droughts which have been coming with increasing frequency and increasing severity, in 1965, 1966, 1976, 1980, 1981, and, of course, now, four years later.

The Byrne Administration completed a 1981 water supply master plan. That was four years ago. With the advent of the drought of 1985, the citizens of populous northern New Jersey are wondering what happened to the water. The plan was prepared and completed by the same bureaucracy which exists at present. The same personnel were involved in both Administrations. The funding for water supply improvements was also available. My office has received many telephone calls from constituents asking for answers to all of these questions, particularly in light of the many newspaper articles, and the investigative reporters' reporting in The Record, formerly known as The Bergen Evening Record. Now it is The Morning Record.

There are some specific areas I think you should look at. I served on the Capital Budget and Planning Commission for three years. In the early days of the Kean Administration, we were constantly bombarded with lectures by members of the Governor's Cabinet about the necessity to hold down the bonded indebtedness of the State. Representatives of Wall Street institutions were brought in to tell us how easy it would be to damage the State's credit rating by issuing any more than the present outstanding bond. The level of debt should not rise; it should be kept in a specific ratio to the income of the State. That reluctance to spend permeated the State House, which may have led to reluctance to spend the moneys the people of New Jersey had instructed be spent for our water supply system.

I also have newspaper accounts from The Record of sectional or parochial concerns about specific projects and the objectives of political leaders in the Morris/Somerset area. The Round Valley/Spruce Run reservoirs were the objects of these complaints. They are both State-owned projects. A pipeline only six miles long could have been connected to the Passaic River, which would, in turn, have brought 100 million gallons of water a day to the Hackensack Water Company, the Jersey City Water Company, and the Passaic Valley Water Company -- or Commissions. Plans for that project were in place awaiting implementation. That project was put on the back shelf due to interference on the part of some local political leaders. One of them said, "The region is growing rapidly and cannot afford to share this valuable water source." But, if all the rural growing areas of the State refuse to part with water, where then will this parochialism leave New Jersey? Where will the water come from? Obviously, it is not going to come out of the highly urbanized areas of the State because it is not available in those areas. I think more should be explored as to why this particular project changed from a top priority in the water supply master plan to a back-shelf project.

Since I presented the resolution to the Assembly, I have come under some criticism from the Commissioner of the Department of Environmental Protection. He said that planning delayed these projects, but the plans were already in place. Was it really necessary to rework the existing plans, to restudy the studies? The planning process has traditionally been a series of steps. If you will bear with me I will run through them quickly. We call this the rational, deductive model.

The first step is, one determines goals. The second step is, one attempts to evaluate the present situation; how short do we fall of the goals? The third step is a search for alternatives, for means of attaining the goals. The fourth step is the weighing of the consequences of each alternative. The fifth step is the selection of that alternative which most closely approximates the desired goals. The sixth step is implementing the alternative, and the seventh step is to set up feedback to assure attainment and to modify the alternative if that is necessary.

The Department seems to have gotten as far as the fifth step, to select that alternative which most closely approximates the desired goals, but it has been bogged down there for 40 months and is now desperately trying to make up for lost time. I quote from The Bergen Record: "We got caught short by two years, and we have egg on our face, a DEP spokesman said in defending a decision to shelf the Round Valley project." That was the front-page story in the April 21 edition.

I also have the progress report of the statewide water supply master plan of September, 1984. On the first page, we have the following-- It is the very, very first thing, almost a preamble to this report, and it says: "The important feasibility study concerning additional water supply for the northeast and its accompanying safe yield and demand studies were completed, discussed at public meetings, and improved. These studies indicate that there will be no need for any State-supported water supply project for northeast New Jersey for some years." This was just last September. This shows the position of the Department as it relates to State-supported water supply projects. The people of New Jersey are now facing restrictions, rationings, and surcharges because of this inaction.

I want to thank you again for the opportunity to appear before your Committee and, also, for looking into this matter. If I can be of any assistance to the Committee, please feel free to call on me. The people of this State will be grateful for your efforts. They certainly deserve answers to their important questions. As they watch their lawns parch, their swimming pools collect dirt, and one thing and another this summer, they will want answers from us. I think all of us, as members of the Legislature, are going to want answers too -- reasonable answers, logical answers, not just rhetoric.

ASSEMBLYMAN HOLLENBECK: Thank you, Assemblyman Mazur. Please sit there for a minute. I would like to introduce Assemblyman John Bennett and Assemblyman Robert Shinn, both members of this Committee. Does anyone have any questions for Assemblyman Mazur?

ASSEMBLYMAN BENNETT: Not at this time.

ASSEMBLYMAN HOLLENBECK: Assemblyman Mazur, I would like to invite you to sit up here at the Committee table to listen to the testimony, if you so desire. I don't know that I will allow you to ask questions of anyone appearing here. I think that is the Committee's job. If you have something important, I am sure you will find some way to communicate it to the Chair. (laughter)

I would like to ask Commissioner Hughey to come up to the witness table. He has a group of people with him, and I have asked them all to sit up front because I know they have a presentation to make and some charts they want to show us.

Good morning, Commissioner Hughey. Would you like to introduce your associates? I know them all by name, but I don't know their official titles and I wouldn't want to get them wrong.

COMMISSIONER ROBERT E. HUGHEY: Mr. Chairman, let me start on my right with Rocco Ricci, who runs the State Water Supply Authority.

ASSEMBLYMAN HOLLENBECK: Is he the Executive Director?

COMMISSIONER HUGHEY: Yes, he is the Executive Director of that Authority and has been since-- He is our first Executive Director. On my far left is Dirk Hofman, who I think you all know. He has been involved in water supply in this State for the better part of his professional career. Between Dirk and myself is John Gaston, who has alternately been a part of the water supply system of this State throughout the course of his career.

Mr. Chairman, thank you very much for inviting us today. We have had a number of opportunities to discuss water supply, but never in this kind of a formal setting. I think it is an advantage. Before I turn this over to a brief summary for the purpose of giving the Committee the same kind of background I think we should all start with as a base for questioning, let me respond very briefly to some comments that have been made, not necessarily today, but mostly repeated today.

I, also, bring to this profession a background in planning. Since I have taught planning, I have also taught all of the theories for planning. I would suggest to you that by the time you are finished with our testimony today, you are going to find that no matter what method you want to use by the textbook, there is another step in the

public process, particularly with major projects, and that is called the environmental process. That is where you get permits, and it precedes implementation. I think that is a major item to keep in mind. You just don't get a good idea, decide it is good, and move forward.

Secondly, I think there was a question raised which I think was unfortunate, but I guess we have to deal with questions like that, about who is responsible for water supply and who takes credit for water supply? It never occurred to me that a major program like water supply for the State of New Jersey was anyone's special project, that it was done because someone decided to do it, or that someone else had decided not to do it. The fact is, we all work together in this State to develop water supply and any major program we work on works the same. The ideas of one administration become the plans of another administration and the implementation of a third. There seems, to me at least, to be enough in that process for everyone to take credit for it, and that is the way it should be.

We are working on a long-range plan. Many components of that plan were put into place before we got here. Some of the major components of that plan were not even anticipated three years ago. But that is as it should be. They will be implemented through this Administration and the next administration and the third administration, and everyone will be responsible for a water supply plan that works.

The third thing I would like to do in terms of a specific correction is talk very briefly about the one project -- and we are going to talk about it in far more detail -- that Bennett raises each time he talks about what has not happened in water supply. You talk about the Raritan/Passaic pipeline and it seems to me that everyone has developed a remarkably short memory. The Raritan/Passaic pipeline was not stopped by a group of people in any one part of the State because they did not want to lose water supply. I think it depends really on which newspaper column you want to quote from, three and a half or four years ago, who stopped the Raritan/Passaic pipeline. The fact is, nothing political stopped the Raritan/Passaic pipeline. What we did

was-- We had a chance to evaluate it and we did a series of studies -- actually three studies -- all of which are going to be presented to this Committee today. They start where you should start on water supply, which is yield analysis, and they move all the way through to the most economical alternative.

But, for the record I want everyone to know that when that project was being discussed, there were a lot of people who did not like it on both sides of the mountain. On the one side there were people who, obviously, did not want to lose water. On the other side was a group of people who weren't sure that they wanted to pay for the water for backup emergency purposes. There were also people on that side who thought that moving forward on that project jeopardized a far more significant project that had been discussed for years. It was only four years ago that there was a legislative committee which did not want to let out a bill that included a \$5 million appropriation for the Raritan/Passaic pipeline. We have covered a lot of ground in those four years. I think the legislators' wish at that time was to take a longer look at it. We did take a longer look at it; we took a professional look at it. We are prepared to stand on the professional recommendations that came out of two independent studies and a summary done by the Department.

Mr. Chairman, we have made significant progress in this State on water supply. This year, we happen to be in a position where we face a drought. We have taken some actions under that drought. We have been joined in those actions by Connecticut, New York, Pennsylvania, and Delaware. It is not a drought that pertains only to New Jersey. It is a drought that pertains to the Northeast. It is not remarkable. Since June of last year, which is now a year, we have lost 16 inches of rainfall in the Northeast. Since August of last year we have lost 14 inches of rainfall. In April, which is one indicative month, we anticipated 3.7 inches of rain and we got just over half of it. May was the first month where we got more rainfall than was anticipated.

So, we have a drought, but we also have working with that drought, a series of regulations that we have never had in this State

before, a series of major projects moving along as they were outlined before I got here in the 1983 to 1986 component of the master plan. They are all on schedule. We have worked into that ground water analysis that was never anticipated, which should have been for southern New Jersey, and we have worked into that critical area, water supplies. Beyond that, we have started to adopt our plan to fit the needs of today, which are the pollution problems we find in a Pomona Oaks or a Beachwood. Those problems have all been addressed in water supply in the last three years. Those are add-ons; those are new things.

We sit here today with a plan which I think is a better plan than we have ever had in this State. We sit here today with more projects ongoing than we have ever seen in this State at any one time, probably more than any state in the Northeast has seen. They are all on target; they are all moving exactly the way they were anticipated to move in that plan a long time ago; and, they are being done the right way. And, there is a right way. As you are going to find out as we start to talk about some of these projects, the Water Supply Authority doesn't simply decide to move on a project. Rate hearings, last year alone, took us 14 months for one project. We just moved the Manasquan River project forward from an idea, to reality, to where it is now ready for permits at both the State and Federal levels in 14 months. In doing so, we involved over 100 members of the community and we ended up with an environmental impact assessment, which when it was discussed publicly for the first time, there was one negative comment in the whole room in Monmouth County. That is pretty remarkable.

So, we have projects at every stage of the planning process and we are now, through the critical areas analysis, and through looking at pollution problems in southern New Jersey, moving to the next stage of the projects. I think that this State should be proud of its record. When I say that, I mean the State. I didn't do it; I didn't get the bond issue passed; I haven't been responsible for the appropriations bills. Members of this Committee have. But, we have a good plan. It is a good plan because the people who have worked on it have worked on it consistently, and let me make just one other point

here. I don't refer to anyone in my Department as a bureaucrat, but as a professional in water supply. These people are some of the best in the country. They have moved these projects forward as quickly as possible. I think, as we outline the current situation for you today, the projects underway, and the next stage of the projects, which is the planning stage, the Committee will share my opinion.

Mr. Chairman, allow me to introduce first John Gaston, who, along with Dirk Hofman, is going to summarize for you the status of the drought in a very summary fashion, because I don't think that is the key to today's discussion. I am going to ask John to take it from there to the projects, the planning stages, the implementation stages, and the stages we anticipate for the future. We have all of the information we are going over today in summary form for the Committee, including the appendixes which are the backup reports that have created these summaries. John?

JOHN GASTON: Thank you very much, Commissioner. Let me begin by highlighting where we stand and why we have a drought today, using some of the diagrams we have put together over the last several months. This first diagram shows accumulated reductions in precipitation for two of the droughts which are the most recent in our memory, the one in 1981 and, of course, the severest drought of record in 1964-1965. The powder blue (referring to diagram) shows you why we are concerned about the current situation. Accumulated precipitation in March, April, and into the first of May has fallen significantly below the drought of record in the 1960s, and caused us to begin thinking we were going to get to the granddaddy of all the droughts, the drought of 1985, and thereafter.

More recently, we have had an uptake in precipitation. May has been a good month. We have had over five inches of rainfall, and that has put us in somewhat of a better position, but certainly not in a recovered state of affairs.

This next diagram shows you the status of the reservoirs and again why we were concerned with this drought. The black line shows the reservoirs normally full and empty, 100% in good times, and during the summertime down to about 70%. The droughts of 1964 and 1980/1981

are shown on here. You can see that at the minimum levels the reservoir is back down to 20% or 25%. The drought of 1985 really skipped the first year because there was no rain during the winter, so we went down on an empty cycle and really did not come back up again until we got the rainfall we saw in the last four weeks.

The reservoirs have gone up. They are now at almost 70% of capacity, but they are still tracking just above the situation which occurred in 1964. It is a situation where streams, stream backs, and the residual water available to us isn't there because of past months of a rainfall deficit. So, we are expecting the worst, which we should, and that is, as we turn over, if we do not continue to get average or above average rainfall, the reservoirs will empty faster than normal because they will not be filling up at the rate we would like to see them filling up. At any rate, we are at about 70%. We are a little bit better than we were -- considerably better than we were in one drought and not quite where we would want to be relative to 1964/1965.

In the Delaware Basin -- there are too many lines on here (referring to diagram) -- basically what it says is, in the Delaware Basin we are in-between the regulatory curves that have been set up. We are delineating when you should be in a drought warning condition and when you should be in an all-out drought condition. In this instance -- again powder blue -- it shows that we are in a drought warning state, but because of the fact that we have been in a drought warning state for many, many months, a decision has been made to declare a drought in the Delaware Basin. I might add that this week New York City will move toward increasing the level of restraints that are taking place in the City.

ASSEMBLYMAN HOLLENBECK: John, do you mind if we ask questions with reference to the charts?

MR. GASTON: If you want to.

ASSEMBLYMAN HOLLENBECK: Yes, I think we will ask questions on the charts, all right? The other things are numbers. I have a few questions on the charts, and I think maybe some of the other members of the Committee have some too. Will you please put the last chart up again?

MR. GASTON: The Delaware situation?

ASSEMBLYMAN HOLLENBECK: Yes, that chart. If the black lines, and in-between them, show the period when we go into a drought warning, when did that first occur?

MR. GASTON: Dirk, why don't you handle that?

DIRK C. HOFMAN: Okay. The process on the Delaware side-- You have to remember, on the Delaware side you have four states and the Federal government involved in the regulatory aspects of the Delaware Basin. We have a procedure. We have adopted these lines based on a negotiated agreement between the states. What the negotiated agreement says is, when you go below the line, and you are below that line for five consecutive days, you are automatically in the drought warning status.

We went below that line about the first of December; however, we only stayed there for four days. On the fifth day, we bounced above. You can see that the blue line ran parallel to that line until we got to the point of about the second week in January. So, since the second week in January, we have been in this drought warning status. At this stage of the game everyone assumed we were going to bounce all the way through the line in February. Fortunately, we got enough rain to keep us in that line.

You have to remember, the whole concept of these two lines was only developed since 1981. We were negotiating that type of an arrangement during the last drought. We started our negotiations in about 1978, but had not come to any conclusion. We had never entered-- You see, this whole chart clips back over here now and starts again when you begin the first of June. This is a year which begins the first of June and runs to the first of May. So, we automatically, at the end of May, bounce over here and enter over at this point. We had never entered the draw-down cycle at such a low level before on the records. So, based on that, and based on the ability within the agreement, it was determined, about two or three weeks ago, to declare a drought. We declared a drought within the Delaware, even though we are not below the drought line.

ASSEMBLYMAN HOLLENBECK: Actually though, we were in a drought period since January.

MR. HOFMAN: We have been in a drought warning period since January.

ASSEMBLYMAN HOLLENBECK: A drought warning period since January.

MR. HOFMAN: That is correct. We declared a drought warning back in January. The City of New York took cuts in its diversions and the State of New Jersey took cuts in its allocated diversions from the base.

ASSEMBLYMAN HOLLENBECK: That is the question I had on that chart. Are there any other questions? Bob?

ASSEMBLYMAN SHINN: Yes, I have a quick question. The data base you use for your reservoir capacity -- how diverse is that? In other words, what are you using as that data base to plot your graphs?

MR. HOFMAN: The capacity of the reservoirs.

ASSEMBLYMAN HOLLENBECK: That's using all reservoirs, not individual reservoirs?

ASSEMBLYMAN SHINN: Are we talking just--

MR. HOFMAN: (interrupting) The chart that John did not show you talks about the four major systems in northeastern New Jersey. We rely on the Hackensack system, the Jersey City system, the Wanaque system, and the Newark system. These four major reservoir systems make up the northeastern part of the State.

MR. GASTON: Because of the interconnections, we have the ability to treat those as a single entity and this is what we call our combined chart which puts them all together.

ASSEMBLYMAN HOLLENBECK: So, as you talk, you're talking about four reservoirs?

MR. GASTON: We're talking about four reservoir systems. There are actually more than four reservoirs.

ASSEMBLYMAN HOLLENBECK: When you come up with your total figure, are you talking four or all?

COMMISSIONER HUGHEY: We are talking all but four systems, which means more than four reservoirs.

ASSEMBLYMAN SHINN: But, there is no aquifer level interjection in that, just reservoir level?

ASSEMBLYMAN HOLLENBECK: In other words, when we talk about Oak Ridge--

MR. HOFMAN: (interrupting) That is part of the Newark system.

ASSEMBLYMAN HOLLENBECK: Part of the Newark system. There are other reservoirs, right?

MR. HOFMAN: That's right.

ASSEMBLYMAN HOLLENBECK: We use the Oak Ridge low level and we average it out with a high level then?

MR. HOFMAN: Total capacity in the Newark system versus total available storage in the Newark system. The same with the others.

ASSEMBLYMAN HOLLENBECK: The same thing with Hackensack?

MR. HOFMAN: Hackensack, right.

ASSEMBLYMAN HOLLENBECK: Where Lake Tappan is added in?

MR. HOFMAN: That's right. Hackensack has three. Lake Tappan, Oradell, and Wood Forest.

ASSEMBLYMAN HOLLENBECK: Wood Forest, is that Hackensack's?

MR. HOFMAN: Which one?

ASSEMBLYMAN HOLLENBECK: Does Wood Forest belong to Hackensack?

MR. HOFMAN: Yes.

MR. HOFMAN: What about Woodcliff Lake?

MR. HOFMAN: Yes.

ASSEMBLYMAN HOLLENBECK: That's empty though.

MR. HOFMAN: That's right. That is very small.

MR. GASTON: What we are plotting here is total reservoir yielding and volume in gallons, and for the systems in the Northeast, it's 69.2 billion gallons of capacity versus time. We're doing that on a percentage basis. When we talk about the low, low point, it was about 22% in the drought of 1980/1981, and normally at this time of the year we like to be above 90%. Of course, we're not; we are around 70%.

ASSEMBLYMAN HOLLENBECK: Yes, but that occurred in 1980/1981 in the fall, didn't it?

MR. GASTON: That's right.

ASSEMBLYMAN HOLLENBECK: That was after the summer, and this time we are going into the summer.

MR. GASTON: It's a very dangerous situation to be in.

ASSEMBLYMAN HOLLENBECK: Actually, the potential for this one is far worse.

MR. HOFMAN: If you just look at this black line here, this is the normal cyclical operation of a reservoir, being full the first of June, and bottoming out in November. This is where we are now as we enter the first part of June, which would indicate that normally we would start going down. If that is the case, we are much worse off than we were in the 1980/1981 period, and we are only slightly better than we were in the 1960s.

ASSEMBLYMAN HOLLENBECK: And that even included the conservation figures of 1980 and 1981.

MR. HOFMAN: That is correct.

ASSEMBLYMAN HOLLENBECK: And we still showed that going down.

MR. GASTON: We want to show you a little bit more about that if we may move on to one of the others, that is if there are no further questions.

ASSEMBLYMAN HOLLENBECK: Are there any other questions on the charts? (negative response) All right.

MR. GASTON: Now, just a quick overview of what has taken place as far as the drought is concerned. This diagram shows you the areas of the State that have been put in different classifications. On April 17, Governor Kean declared the first drought emergency in the 93 towns that are crosshatched up here. That provided for mandatory restrictions on the use of water for non-essential uses and for outdoor uses, which I will cover in a moment.

On May 16, the drought was expanded to be a statewide declaration for all 567 municipalities and the municipalities along the Delaware Basin. Consistent with the action of the Delaware River Basin Commission, a mandatory phase one set of restrictions was applied to those towns which were impacted with respect to surface water use, or those which had ground water problems we were aware of. So, stretching from Sussex all the way down to the borders of Gloucester and Camden, there were a number of towns -- 122, I believe -- that went on phase one mandatory restrictions.

In the northeast, we added several towns. In northwest Bergen County, we added to the phase one mandatory restrictions those towns or communities which used ground water. Where we noted that ground water problems were beginning to be experienced because of the relative storage capacity of aquifers being used, we also added a couple of towns -- Roseland, Essex Fells, and another one -- to the phase one restrictions. The towns which were impacted by the phase one declaration were moved over to phase two, the rationing status, on May 17. Those towns really are the purveyors of those towns, 37 of them, that furnish water to their customers. The phase two mandatory restrictions include continuation of the mandatory phase one restrictions.

ASSEMBLYMAN HOLLENBECK: All right. Before you proceed, we have another chart so we would just like to get some--

MR. GASTON: (interrupting) I can flip back to that. This is a two-part story. Let me finish the second part and then--

ASSEMBLYMAN HOLLENBECK: (interrupting) Yes, because I would like to clarify something.

MR. GASTON: Before I do that, as you can see, most of the State is covered by the voluntary restrictions, which say, in common sense terms, "Don't use water at a time when it is not raining as it should." Now this gives you the articulation of what the restrictions are. The phase one restrictions are voluntary. Practice water conservation and reduce water use as best you can. Phase one mandatory restrictions involve no lawn watering; plants, shrubs, and gardens may be watered only by bucket or hand-held hose with an automatic shut-off valve; no car washing except at commercial sites; no serving of water in restaurants; pools may be filled once during the season; no washing of streets or driveways; and, no water may be used in ornamental fountains. There are restrictions on the use of water at sod farms, nurseries, and golf courses, and a ban on outdoor recreational water uses, including golf courses, tennis courts, and swimming pools, except under special conditions as articulated in the order. There must be reduced water use by commercial and industrial users without affecting employment, and conservation methods and fixtures should be installed

to be used in all non-residential facilities. So, it is a fairly comprehensive set of requirements directed at curtailing the use of water in areas where we have demonstrated concerns.

The rationing phase which gets added on to the phase one mandatory restrictions involves all the mandatory restrictions, a goal of a 25% reduction by all users, and the means by which to attain that through the imposition of emergency surcharge schedules which are included in the regulations that have been reviewed by the public and adopted by the Commissioner earlier this year. The charge that is imposed across the board is 1.33 times the normal rate for non-residential users. If you are a non-residential user and they curtail your water use by 25%, your water bill doesn't change.

For the residential users there is a surcharge of \$5.00 per 100 cubic feet for all residential use above 50 gallons per capita per day. The purveyors that are impacted are in the process of getting the administrative mechanism in place to have this set of emergency surcharge restrictions imposed.

So, those are the mechanics of the job, the areas that are covered, the various phases that are applicable, and the terms that go along with that.

ASSEMBLYMAN HOLLENBECK: My question dealing only with the chart was-- Let's take the hatched area, all right? That part went into phase one on what date?

MR. GASTON: April 17.

ASSEMBLYMAN HOLLENBECK: April 17. And what about the pink portion? When did that go into phase one? I'm talking about along the Delaware.

COMMISSIONER HUGHEY: The Delaware.

MR. GASTON: Oh, the pink portion, May 16.

ASSEMBLYMAN HOLLENBECK: May 16 they went into phase one.

MR. GASTON: Right behind the action of the Delaware River Basin Commission to declare a drought in the Delaware Basin.

ASSEMBLYMAN HOLLENBECK: Even though you show on your other chart that in January we were in that condition.

COMMISSIONER HUGHEY: No, Bob. I think in January we were in a warning condition.

ASSEMBLYMAN HOLLENBECK: If we are showing the regulatory lines and the warning, what is the difference--

COMMISSIONER HUGHEY: (interrupting) A drought warning, in typical conditions in the Delaware, has no impact except for a drought warning. But, what is unusual this time, which relates to what you said before about the time of the year, is that we are still in a drought warning stage according to the categories, but we were in a drought condition as of the thirteenth.

ASSEMBLYMAN HOLLENBECK: But, we are now in phase one -- the pink portions along the Delaware?

MR. HOFMAN: No. What happens here--

COMMISSIONER HUGHEY: (interrupting) Yes, we are now.

MR. HOFMAN: We are now.

ASSEMBLYMAN HOLLENBECK: All right. You say you are now in phase one along the pink portions, along the Delaware River.

MR. HOFMAN: That is correct.

ASSEMBLYMAN HOLLENBECK: You did not go into that in January.

MR. HOFMAN: Oh, no.

COMMISSIONER HUGHEY: No.

ASSEMBLYMAN HOLLENBECK: Because you are saying that was only for a drought warning.

MR. HOFMAN: That's right. A drought warning--

ASSEMBLYMAN HOLLENBECK: (interrupting) What was different between January and where we are now? Why would you be in phase one now? Why weren't you in phase one in January?

COMMISSIONER HUGHEY: There are two differences which I think Dirk sort of alluded to. One is that the Basin made a decision based on where we were in the time of the year, which means that at the end of this curve you pick up in June. If you look at that compared to a regular year, it was time to go to a drought condition even though we had not reached that on the scale. The second difference was, the Delaware River Basin Commission -- of which we are members -- met on May 13 and said that because they were entering June at a point on the scale they had never seen before, they were going to take the drought warning to a drought condition. We followed that on May 16.

ASSEMBLYMAN HOLLENBECK: But, that curve automatically changed. Your regulatory curve already takes that into position, and you have been falling into that position since January. They only did it in May.

MR. HOFMAN: Well, when we entered here, we took steps which were consistent with our agreement in entering a drought warning. We cut back the diversions to New York City. We cut back the diversions to the State of New Jersey. So, we took those actions which were prudent to take at that point in time. At that time, we didn't know whether we were going to continue to go on down or whether we were going to bounce up. What has happened is, we have been tracing this thing since we got into that situation, and we noticed that we have come up and started to even out. If we had continued to come on up, chances are we would not have done that. However, since we completely flattened out since April, and even the storms we have gotten in northeastern New Jersey we did not get in the Delaware to the same degree-- Back on April 13 we held a public hearing and there was overwhelming support for the idea that we needed to do something. We could not afford to enter this period over here and not be in a drought. So, we took prudent actions -- at least we thought they were prudent actions -- to declare a drought at this stage of the game.

ASSEMBLYMAN HOLLENBECK: Although we had the same conditions we knew had occurred in January.

MR. HOFMAN: Well, in January you entered the drought warning. You don't know what is going to happen. You take action based on the information which is available at the time. At that time, we declared a drought warning, which was the automatic thing to do. However, when we got over to here (referring to chart), we were in a situation where we did not know what was going to happen. We wanted to begin to save as much water as possible. This allowed us to do a number of things. This allowed us to begin to store water in some of the flood control facilities. This allowed us to begin to manage the big power company reservoirs within the Basin to make water available for drought management purposes. You couldn't do those things if you remained in a drought warning because they do not trigger until you enter a drought.

ASSEMBLYMAN HOLLENBECK: What did you do on January 1 in the hatched area?

MR. HOFMAN: This is the Delaware.

ASSEMBLYMAN HOLLENBECK: I know, the one is Delaware. Now I am asking, on January 1, what did you do at that time in the hatched area? Did we go into a drought warning?

MR. HOFMAN: Let's go back to what was transpiring here. Please bear with us on this. On January 1, we were still on an empty pattern -- this drought we are talking about here. There was a reasonable expectation that the rest of January, February, March, and April would produce significant water and carry us back up again. In previous droughts, 1980/1981 and the 1960s drought, when we got to January, we were in sad shape as far as the reservoirs were concerned. They were very, very low. So, in January, we began to watch what was happening from the precipitation standpoint to see whether or not we were going to get additional precipitation and go up, or whether we would have what has happened, which is a smattering of rain and a level situation with respect to the reservoirs.

When February came around, we began to become significantly concerned, particularly when a warming trend took place and instead of rain running off into reservoirs, it went up into the atmosphere. So, in February we began to take action to minimize the amount of flowing streams. We also began to take action to move water from reservoirs that had excess capacity to those systems--

ASSEMBLYMAN HOLLENBECK: (interrupting) I am just trying to find out under the drought warning condition in the other area, other than the Delaware Basin, what actions were taken for phase one -- not phase one -- just a drought warning. We went into a drought warning situation. What did we do at that time? What occurred? In other words, was Hackensack Water taking water from their own reservoirs and from the Wanaque reservoir? Were they taking it through Passaic Valley at that time?

MR. GASTON: Before Dirk answers that, let me just make one point. In the Delaware system you can have a need rule curve, which tells you where you are because you are dealing with a single system

entity. In New Jersey, we do not have the same ability to have a rule curve. We may in a few years as we develop our system and our management system. So, we have been looking at our system based on what historic patterns have taken place and what we see in terms of rainfall materializing. Based on that, we did the following. Dirk, why don't you pick up here.

MR. HOFMAN: Okay. I think one of the things you have to recognize, as John just stated, is that in the Delaware we're talking about the three huge New York City reservoirs which totally dwarf anything else. In the northeastern part of the State, we're dealing with four separate systems, each one independently by itself. However, we do have the ability to manage them during drought periods as a single entity because of the interconnections we have. We started to look seriously -- obviously, we were tracking it in December -- at the situation in January when it was obvious we were dropping down below the point where we were concerned. We started to meet with the major purveyors, these four and the other major ones in the northeast, and we began to do a number of things we call "wheeling water" in order to maximize the availability of water and utilize that resource to the best points available.

We started to maximize the use of the Jersey City system because that system is so much higher than all the rest of them. So, we started to draw on the Jersey City system. We started to shed loads between systems. We started to have Jersey City begin to supply, for instance, Bayonne, in an effort to relieve the burden on the Wanaque system, which normally would supply Bayonne. The Hackensack Water Company began to take water from Jersey City in order to help their situation out and maximize, again, the use of the Jersey City water.

ASSEMBLYMAN HOLLENBECK: Did they also take it from Passaic Valley?

MR. HOFMAN: Pardon?

ASSEMBLYMAN HOLLENBECK: Did Hackensack also take it from Passaic Valley?

MR. HOFMAN: They did for a period of time, yes. You see, one of the things you had to do if you wanted to maximize the

resources, maximize the use of the available resources, and balance the system, was put as much of a load on Jersey City as their system could take, because they were in such good shape. In addition to that -- an extremely important point -- we began to conserve water by reducing passing flow and let-down requirements. Now, what do I mean by that? There is a passing flow requirement, for instance, at the Ramapo Pump Station. They have to have a certain passing flow before they are allowed to pump water out. We reduced that passing flow so that we could maximize the intake of water by the North Jersey systems. We began to reduce the letdowns out of the various reservoirs. There is a let-down requirement out of the Wanaque reservoir and we began to cut that down. We began to cut down the passing flows for the Hackensack Water Company so they could take more water out of Sprout Brook and some of the other streams. We began to reduce passing flow requirements for Commonwealth Water Company so they could take more out of the Passaic.

We went through the whole scenario of opportunities to maximize the management of the resources and to maximize the resources. In February, we advertised under the New Management Act. We have a requirement that in order to order passing flows or let-down requirements, we have to go through the process of holding a public hearing. We advertised for that in February, and held it in the first part of March in order to get public review of what we were doing in that area.

ASSEMBLYMAN HOLLENBECK: That was your drought warning phase?

MR. HOFMAN: This was all in the drought warning phase. That's right.

ASSEMBLYMAN HOLLENBECK: All right. I am just trying to say, there are different stages. There is a drought warning and actions are taken by the Department. Then you go into phase one, which is restricted use, and then phase two, the rationing program. So, we understand there are three different phases.

MR. HOFMAN: That is correct. The actions taken under the warning phase are taken strictly by the Department prior to any action by the government. In order to get into the phase one and phase two

actions, a declaration by the Governor is required, which, obviously, has already taken place in New Jersey.

ASSEMBLYMAN HOLLENBECK: We did the phase one action; that requires a declaration by the Governor.

MR. HOFMAN: The first act under phase one was done on April 17. At that time, it was--

ASSEMBLYMAN HOLLENBECK: (interrupting) That was for the hatched area?

MR. HOFMAN: That was the 93 towns in the hatched area. They were put on--

ASSEMBLYMAN HOLLENBECK: (interrupting) So, that was on April 17, phase one in the northeast section.

MR. HOFMAN: That is correct.

ASSEMBLYMAN HOLLENBECK: But not in the pink section.

MR. HOFMAN: The pink section was added on about a month later on May 16.

ASSEMBLYMAN HOLLENBECK: May 16 -- that one in phase one and the other part in phase two?

MR. HOFMAN: Yes. It all happened at the same time. The Governor declared a drought in the entire State on Thursday, and on Friday, under the procedures we have established-- Dr. Richard Dewling, as the Drought Coordinator, placed these areas under phase one mandatory. He placed the entire State, other than those areas, under phase one voluntary, and the 37 purveyors which service all or a portion of the 93 municipalities under the rationing program.

ASSEMBLYMAN HOLLENBECK: Are there any questions on that so far?

ASSEMBLYMAN SHINN: I have a question on the line that cuts Burlington County in half. Is that an aquifer line, or is that some sort of an arbitrary line?

MR. HOFMAN: What happens here is, we're talking about the Delaware Basin. We have placed those areas in the Delaware Basin that depend, down in this area, on the Raritan/Magothy aquifer, and several other smaller aquifers here that receive a major portion of their water as a direct recharge of the Delaware River. One of the main things

that New Jersey is concerned about during droughts is that the salt front remains far enough downstream so that it does not impact on well supplies in that Camden metropolitan area. That is one of our big pushes. We need to protect the well supply in this area. At times, better than 90% of the wells located adjacent to the River-- Ninety percent of that water comes right out of the River. On an overall average, we're talking in the neighborhood of 50% of that water coming as a direct recharge from the River. So, the location of the salt front becomes a paramount concern to us.

ASSEMBLYMAN HOLLENBECK: Thank you. By the way, we have been joined by the Vice Chairman of the Committee, Assemblyman Stephen Adubato.

COMMISSIONER HUGHEY: All right. John?

MR. GASTON: Let's shift gears and look at the question of water use in the Northeast, including the Raritan Basin. This takes us to two points that I think are worth making. One, to talk a little bit more about the Raritan/Passaic pipeline, and two, to talk about what conservation can mean, should mean, and will mean as far as water supply management in New Jersey is concerned.

This chart shows water use in the northeastern part of the State, including the Raritan Basin, but excluding Mercer County, Monmouth County, western Hunterdon County, all of Warren County, and all of Sussex County. So, it's the portion of the Northeast that is developing, and developing very rapidly.

We have millions of gallons on one axis and we have dates going out to the year 2000 on the other axis. We have charted the increase in demand beginning back in 1950 as below 400 million, and peaking in 1980 at about 700 million gallons of water a day, at which time the drought of 1980/1981 took place and we had a rather dramatic drop in the use of water in that region down to some 600 million gallons a day. Then in the post 1980/1981 recovery period, we had about a 35% to 40% recovery of that which was lost during the 1980/1981 period.

Now, there are some important ties that go into this information. Fifteen percent reduction in water use was experienced in

the 1980/1981 drought, which only partially came back. Why did this happen? Well, we know institutionally that there were businesses in the Northeast that aren't there anymore. But, more importantly, we know that the 1980/1981 period caused businesses to look at their water use picture from both an energy use standpoint and from a total dollar standpoint. Significant changes were made in-house, plumbing, recycling, etc., that have led to lower use levels as a consequence of the post recovery period. We also know that the New Jersey Pollution Discharge Elimination System Permit Program and all of the concern over hazardous waste has caused businesses to make decisions to use less water and, therefore, put us in a better position in terms of the water supply equation, while they are getting a double benefit of saving money on water and saving money on the treatment and disposal of water.

In addition, we know that the long-term elements of conservation are being put into place in this State. Through our regulatory initiatives in the General Water Supply Management Act and the regulations which go along with it, three things are happening. We have designated critical areas in certain portions of the State, the first of which is down in Monmouth County. There we are mandating -- and we haven't specified exactly the amount thus far -- a reduction in the amount of ground water use for all of the users under the allocation system. We will give those users a choice as to how to make up that reduction. The reason, of course, is the saltwater intrusion and overuse pattern that has taken place in the past. One way of eliminating or getting away with the reduction that is going to be mandated will be to institute a very vigorous conservation program.

Secondly, our General Management Act provides for a program to deal with the so-called unaccounted for water, aka, leaky pipes. We are going to be requiring purveyors individually to report to us the amounts of unaccounted for waters, and for those systems which have the most serious problems, we will be mandating actions to be taken to deal with that.

Thirdly under the Management Act, conservation plans are required in the permits. So, certain of the systems in the State have already begun to implement those plans. Here in Mercer County, the

Pennington Water Company and the Lawrenceville Water Company are two that are activating water conservation programs to deal with their responsibilities under the Water Management Act.

Coupled with the regulatory initiatives in the conservation area again, we have the Loan Program for the rehabilitation of infrastructure. We had \$46 million worth of loan applications submitted to us. We put applicants in a position to receive over \$16 million of that money through loan agreements with us and contractual arrangements to use the money for projects that are going to rehab the infrastructure and plug up leaks and problems that exist in the infrastructure.

In our regulations, we also have a mandatory 10% reinvestment requirement, which is again going to have a salutary benefit as far as reducing leaks is concerned. The BOCA Uniform Construction Code has been modified to provide for only low-flow fixtures to be installed in houses. The BPU, through their Energy Conservation Program -- the Home Energy Conservation Program -- has made low-flow shower heads and low-flow fixtures available to homeowners at modest rates, again, an element of improving the use of water in the home.

Finally, our Office of Water Conservation is publicly promoting water conservation through pamphlets, through education, and through other things. I guess what I am saying is, on the water conservation front and looking out into the future as to where we are heading, we have a very vigorous program of water conservation. The gallon you save is the cheapest gallon you are ever going to produce as far as the investment in water infrastructure is concerned.

Now, the second thing that this line going out into the future tells us is related to the Raritan/Passaic pipeline. In that regard, when the Department, in the aftermath of the 1980/1981 water crisis when the Raritan/Passaic pipeline was initiated-- Part of the disagreement as to whether or not it could move forward stems from the fact that proper studies had not been done indicating that that project was the best project, and that it could be built in an environmentally responsible fashion. We went back in the aftermath of the 1980/1981 period and commissioned a study by the URS Corporation, which is an

engineering firm, to examine the cost-effectiveness of the Raritan/Passaic pipeline in comparison with the cost-effectiveness of a variety of other projects in the Northeast. The results of that study showed clearly that the Raritan/Passaic pipeline was the most cost-effective of the projects available for consideration.

At the same time, we did two other things. First of all, we had NJIT do a comprehensive analysis of the yields of the reservoir systems up there. We got up-to-date information regarding what the yields were of the systems. The third basic ingredient in the decision making was an examination of demand projections through the year 2000. Our staff did that using information back through the 1950s and, also, through the current information that has been produced. We developed a number of scenarios regarding what we thought the use of water could be, and we picked a conservative assumption of a 1-1/2% per year increase in water demand as the means by which we would make our projections out into the future.

When you combine the projections through the year 2020 with the available water that is being produced from the Wanaque South project, 80 million gallons of additional water for northeast New Jersey, in the NJIT analysis one is led to the conclusion that additional water for the northeastern part of the State -- the 93 towns we are talking about that are in rationing right now -- would not be required at least through the year 2010, and perhaps would not be required through the year 2020.

So, on that basis the Raritan/Passaic pipeline was put on a deferred status as far as implementation was concerned, and a commitment was made--

ASSEMBLYMAN HOLLENBECK: (interrupting) Was that the recommendation of URS?

MR. GASTON: Pardon me?

ASSEMBLYMAN HOLLENBECK: Was that the recommendation of URS?

MR. GASTON: URS looked at the engineering and economic aspects of the project. URS concluded that the Raritan/Passaic pipeline southern segment was the most cost-effective of the projects analyzed. It was still a relatively expensive project, but of the projects available to be implemented, it was the most cost-effective.

ASSEMBLYMAN HOLLENBECK: In other words, they suggested splitting it into two parts, the southern portion and then the other portion?

MR. GASTON: Well, there were two options as to how the project could be implemented. The southern portion didn't include the use of the Jersey City reservoir, which was the more economical project.

We combined the results of that analysis with the results of NJIT's, which looked at what the yields were of the reservoir systems using up-to-date information, along with the demand studies that were available from the Department's work, and we concluded that the Raritan/Passaic pipeline did not need to be implemented at this time. Therefore, the project was put on a deferred status. However, the pumping station site for that project in the Raritan Basin was acquired on the assumption that perhaps in the future, and it could have been this year, a drought more severe than the drought of the 1960s would occur and we would want to rethink the fact that we had deferred this project based on it not being necessary under the restraints of the drought of the 1960s.

ASSEMBLYMAN HOLLENBECK: Which one did you find more efficient? Which State project did you find more efficient than constructing-- You said we could get 80 million gallons a day from Monksville. That is a privately built project; it is not a State project. The State is not involved.

MR. GASTON: The most efficient project that can and is being built is the Wanaque South project, including Monksville.

ASSEMBLYMAN HOLLENBECK: That is not a State project. That is a private project.

MR. GASTON: Well, it is a private/public partnership. The North Jersey District Water Supply Commission is a State agency. It is a different form of State agency than the Water Supply Authority.

ASSEMBLYMAN HOLLENBECK: Except it is a much smaller thing. It is not really a State agency; it is a private agency for that particular area dealing with water, isn't it?

MR. GASTON: The North Jersey District Water Supply Commission covers the 13 counties in the northeastern part of the State. It has operated facilities--

ASSEMBLYMAN HOLLENBECK: (interrupting) I guess ideally we could say every municipality is a State agency under the same type of thing.

COMMISSIONER HUGHEY: I think this is significantly different, Bob. The North Jersey Water District has supplied, or is in the process of supplying, most of the area we are talking about here today. It is a State agency and the project they are anticipating, or started construction on last week, or two weeks ago, is a public/private partnership, or a public/public partnership. It does involve State moneys.

ASSEMBLYMAN HOLLENBECK: Where is the State money?

COMMISSIONER HUGHEY: It is a bill that is either--

ASSEMBLYMAN HOLLENBECK: (interrupting) Does it start at construction? If we are dealing with loans, where is the State involvement?

COMMISSIONER HUGHEY: All of the Water Supply Bond Act is loans. Our involvement is either \$50 million or \$70 million, depending on whether you believe what we recommended, which was a \$50 million appropriation, or a \$70 million appropriation, which is what came out of the Senate. So, there is a minimum of a \$50 million commitment to that project in terms of loans from the State, from the Water Supply Bond Act. The bill passed in the Senate is a \$70 million bill. The difference is water treatment. We have always maintained that water treatment is not a part of the Water Supply Bond Act moneys. We have had that discussion on a number of projects. To tell you how important that can be as a precedent, the Manasquan project, which we are going to cover for you today, would double if you included treatment. So, we maintain that the water system is the thing we're buying.

ASSEMBLYMAN HOLLENBECK: I think this is one of Assemblyman Mazur's major concerns. I sat in on the original hearings. I was a sponsor of most of this, the creating of the Authority, the management plans, and the bond issues. I guess this is where we are going to have

most of our questions dealing with that pipeline. So, let's just talk about it for a minute, all right?

The URS study was commissioned by whom?

MR. GASTON: The Department.

ASSEMBLYMAN HOLLENBECK: DEP, not the Authority?

COMMISSIONER HUGHEY: No, the Department.

ASSEMBLYMAN HOLLENBECK: Okay, this was commissioned by the Department. Where did you pay for it and how much did it cost? What bond issue? Where did the money come from to pay for this particular report?

COMMISSIONER HUGHEY: Do you remember which bond issue? (addressing Mr. Hofman)

MR. HOFMAN: I'm pretty sure it was the 1980 Bond Act. It was part of the money that was appropriated--

ASSEMBLYMAN HOLLENBECK: (interrupting) Okay. I should look under the 1980 Bond Act or the 1981 Bond Act. Are you talking about the Water Supply Bond Act?

MR. GASTON: The 1980 Bond Act.

ASSEMBLYMAN HOLLENBECK: What 1980 Bond Act?

MR. GASTON: The Natural Resources.

ASSEMBLYMAN HOLLENBECK: The Natural Resources Bond Act, all right. How do we list those, because I have a few of those here myself? (Chairman goes through material in front of him.) The George Washington Bridge, Lake Hopatcong interconnection, Hackensack Water Company, Newark, Jersey City, North Jersey District Water Supply-- Was that what you took out of the Natural Resources Bond Act for the water supply interconnections? What did this one come out of and how much did it cost?

MR. GASTON: It was around \$215,000 or \$225,000.

ASSEMBLYMAN HOLLENBECK: Two-hundred and twenty-five thousand dollars for this report? Where was the appropriation from? I can't find it. We can't find where the money was appropriated for this study. At least, I can't find it.

Regarding the NJIT study, what did that come out of? Was that on a yield analysis?

COMMISSIONER HUGHEY: On a yield analysis, yes, and, again, it was paid for by the Department, but I am checking the source.

ASSEMBLYMAN HOLLENBECK: Yes, because we are interested in where it came from. I think that one came out of the bond issue, out of the water supply bond issue -- \$239,000. Is that correct?

COMMISSIONER HUGHEY: I don't think so, Bob, because I don't think it was that much.

ASSEMBLYMAN HOLLENBECK: All right, let me just find it here, because I have it. Under the Water Supply Bond Act, we have -- let's see--

COMMISSIONER HUGHEY: (interrupting) Mr. Chairman?

ASSEMBLYMAN HOLLENBECK: Yes, Commissioner.

MR. GASTON: Both the URS study and the first NJIT study came out of the 1980 bond issues.

ASSEMBLYMAN HOLLENBECK: What was the first study, if there is a second study?

MR. GASTON: There is a follow-up study we are going to talk about which deals with regional management in an effort to run the reservoirs to produce more yield for everyone's benefit. That is being done by NJIT. It will be funded out of the 1981 Bond Act.

ASSEMBLYMAN HOLLENBECK: I know I pulled it out of something; I am just trying to see where. I think it came out of the water supply bond. It is listed in there for \$239,000. It is out of the Water Supply Bond Fund 1981 for feasibility studies. All right? We had a feasibility study, a safe yield analysis -- to NJIT, \$239,000. So, that \$239,000 was for the safe yield analysis.

MR. GASTON: That is the second NJIT study. The first study was funded out of the 1980 Bond Act.

ASSEMBLYMAN HOLLENBECK: So, which one is this now?

MR. GASTON: The one you are questioning is the first study.

ASSEMBLYMAN HOLLENBECK: That is the safe yield analysis?

MR. GASTON: Yes, the safe yield analysis.

ASSEMBLYMAN HOLLENBECK: That one there?

MR. GASTON: That was funded out of 1980 -- that one. There is one that you don't have.

ASSEMBLYMAN HOLLENBECK: The 1980?

MR. GASTON: Bond Act.

ASSEMBLYMAN HOLLENBECK: Which Bond Act?

MR. GASTON: The Natural Resources Bond Act.

COMMISSIONER HUGHEY: Both of the studies you talked about, Bob-- The two studies that have to do with the Raritan/Passaic were done out of the 1980 Natural Resources Bond Act. The one you find with reference to the 1981 Bond Act is an ongoing study by NJIT, what we are calling the second study. So, the first two studies that have to do specifically with the Raritan/Passaic came out of the 1980 Natural Resources Bond Act, probably out of the study money provided from one of the emergency appropriations.

ASSEMBLYMAN HOLLENBECK: I can't find where this was done in the 1980 Natural Resources Bond Act. That is what I am questioning. I can't find where the appropriation was for it. There were a couple of appropriations dealing with it. It actually came out in 1981, Chapter 29, \$8 million. Where are the studies?

COMMISSIONER HUGHEY: Bob, I don't have that. I am having someone look for it right now. I can't pull it out, but both of those studies were paid for out of 1980 Bond Act money, at least to the best of my recollection. I am having someone check that. The study you find directly referenced in the 1981 Bond Act is an appropriations bill that applies to a second study being done by NJIT.

ASSEMBLYMAN HOLLENBECK: What is the name of that study?

MR. GASTON: That is the Regional Management Study of Safe Yield.

ASSEMBLYMAN HOLLENBECK: The safe yield analysis?

MR. GASTON: Right. The safe yield analysis for regional management.

ASSEMBLYMAN HOLLENBECK: Isn't this the safe yield analysis?
(Chairman holds up material he is referring to)

MR. GASTON: That is a yield analysis for the--

ASSEMBLYMAN HOLLENBECK: (interrupting) The safe yield study of proposed projects to provide additional water for northeast New Jersey.

MR. GASTON: Well, let's just put things in context. The purpose of that project was to look at individual reservoirs and articulate what the yield was of those individual reservoirs using the most current up-to-date information. The purpose of the second study we are having done is to look at all those reservoirs together to see if they can't be operated in a way to produce more water. Ultimately, that is the cheapest water that anyone can produce.

ASSEMBLYMAN HOLLENBECK: This particular report -- the safe yield analysis -- was paid for from the Natural Resources Bond issue of 1980, Chapter 29 of 1981?

COMMISSIONER HUGHEY: That is the information we have right now, Bob. I have someone checking it.

ASSEMBLYMAN HOLLENBECK: How much did that one cost?

COMMISSIONER HUGHEY: Approximately \$90,000.

ASSEMBLYMAN HOLLENBECK: Ninety thousand dollars for this report. What about the \$239,000? Now we have another report that shows you have taken the money, and we have a \$239,000 study.

MR. GASTON: Bob, if we could produce 10 additional million gallons of water out of that second report for \$239,000, that would ultimately be the cheapest water anyone could ever find up in the northeast. The cost of water on a dollars-per-thousand-gallons basis is enormous.

ASSEMBLYMAN HOLLENBECK: I am only trying to find out-- You see, all of a sudden you're talking about a second NJIT study, and you made the decision before in the Department about URS and NJIT. There is the NJIT report; there is the URS report; and, now we have another NJIT report.

COMMISSIONER HUGHEY: But, they are also different studies, Bob. The next thing on our agenda for you, is to take you through the studies that are being done now. Historically, there were two studies done on the Raritan/Passaic pipeline. Actually, there were three; the two studies you just talked about, and the third one, which was done by the Department. John summarized those three studies. We are now doing a system analysis, which is a second study. It is totally different; it has nothing to do with the Raritan/Passaic pipeline.

ASSEMBLYMAN HOLLENBECK: We understand certain things. I just want to get straight in my mind how many studies have been done, how much they cost, and where the money came from? I'm sure we have other studies besides the three that were done. How much did they cost and where did the money come from?

COMMISSIONER HUGHEY: That's a good question.

ASSEMBLYMAN HOLLENBECK: You know, let me have the contract numbers on them.

COMMISSIONER HUGHEY: Fine. That takes us into our next point.

ASSEMBLYMAN HOLLENBECK: I am trying to find out where the money came from and how much the studies cost.

MR. GASTON: We will have to report--

ASSEMBLYMAN HOLLENBECK: (interrupting) All right, this particular report, \$90,000? You know, it's a 20-page report. This might seem unfair, but I would like to know where they got the information because the information, for \$90,000, has been available for 30 years.

MR. GASTON: The information in that report was--

ASSEMBLYMAN HOLLENBECK: (interrupting) That information is held by all of the water purveyors. All of the water purveyors have this report. It is just a matter of compilation. You know that and I know it. A majority of this for the North Jersey District Supply came through the Clinton-Bogarde Associates. Did they purchase it from them? I don't know, but that is where the information came from for \$90,000.

MR. GASTON: May we get on with our other presentation?

ASSEMBLYMAN HOLLENBECK: Well, no, because I am interested in these reports. You made a decision within the Department, as Assemblyman Mazur said, and this is the point we would like to get into. We said it was going to be the most controversial portion of the hearing.

COMMISSIONER HUGHEY: I think that is fine, Bob, but I don't want it to be the only part of the hearing. I thought we were supposed to summarize--

ASSEMBLYMAN HOLLENBECK: (interrupting) No, I don't want it to be the only part of the hearing either because there are some other parts I completely agree with you on.

COMMISSIONER HUGHEY: Let us get back--

ASSEMBLYMAN HOLLENBECK: (interrupting) No, let us proceed a little bit further.

COMMISSIONER HUGHEY: I would like to go back and just summarize this because I think somehow we are not getting it through.

ASSEMBLYMAN HOLLENBECK: Well, you're getting it through, but what happens is, we get kind of misled, Bob, if we don't realize that some of these things-- I mean, you made one report, two reports, and a third report. We have a statewide master plan, completed in 1981, I guess, which is now being changed because we had studies done. Yet, they had the same information that was in here when they made up the master plan in 1980.

COMMISSIONER HUGHEY: That's really not accurate, Bob. I think it's fine to say that, but--

ASSEMBLYMAN HOLLENBECK: (interrupting) I think anyone would agree that safe yield analysis -- the information from it -- has been around for a long time.

COMMISSIONER HUGHEY: Let me summarize again where we were on the Raritan/Passaic, how we got there, and what I found, and let me be a little more specific this time.

The Raritan/Passaic pipeline was anticipated as one of the emergency projects under the last drought emergency. It happened to be the most controversial. I have said that more than once. It was controversial because it did not anticipate doing an environmental impact assessment and because people on both sides of the mountain were unhappy with it. The people on one side-- I think, Bob, that the person who held up the appropriations because he didn't want payment for the Raritan/Passaic was you. So, there were two issues here.

ASSEMBLYMAN HOLLENBECK: I think you will find that I was the one who submitted the bill for construction of the Raritan/Passaic pipeline and, also, for the Manasquan reservoir. I submitted the bills in 1982. I also met with the Department, with you, in reference to them, and you asked that they not be moved. Let us put it clearly.

COMMISSIONER HUGHEY: Well, let's be real clear about it. You submitted the bills. Bob, I think you have always submitted the bills that the Department has requested. You objected to money for the Raritan/Passaic pipeline and wanted it pulled. Now, if we are going to be candid about it, we will all be candid about it.

ASSEMBLYMAN HOLLENBECK: That is not absolutely true. I put the bill in. That is what you are refuting. I filed the bill.

COMMISSIONER HUGHEY: I didn't question whether or not you filed the bill. I said that you were unhappy with the part of that bill which applied to the Raritan/Passaic and you asked most of your questions on it.

ASSEMBLYMAN HOLLENBECK: I have always been unhappy with the Raritan pipeline, but only regarding questions of dealing with it without environmental impact statements. Weren't you unhappy with it?

COMMISSIONER HUGHEY: Bob, you and I happen to agree on that. So, this is what we did. We committed ourselves to three studies on the specific question of the Raritan/Passaic pipeline. One was the URS study; the second was the NJIT study, and we can all now say we had the data, but we felt there was a need for the data or we would not have collected it; and, the third was a Department study done to summarize those two. We have copies of all three of those analyses for this Committee.

The summary of those three studies said that the Raritan/Passaic pipeline, under the terms and conditions we face today, the yield we know about today, and the demands we know about today, would not be necessary in that basin to the year 2010, possibly 2020. But, we didn't stop there. We are in the process of buying the pumping stations at both ends should it become a necessary project. So, we did what we were asked to do, which was to study that project on both sides of the mountain. We came to the conclusion that it wasn't necessary at this point in time. That is the basis for our decision.

ASSEMBLYMAN HOLLENBECK: Where are the pumps that were ordered for it?

COMMISSIONER HUGHEY: They were never ordered.

ASSEMBLYMAN HOLLENBECK: They were never ordered for the Raritan pipeline?

COMMISSIONER HUGHEY: That was the controversy, Bob, that you and I both addressed when that bill first went up.

ASSEMBLYMAN HOLLENBECK: URS said they ordered them though, didn't they?

COMMISSIONER HUGHEY: No.

ASSEMBLYMAN HOLLENBECK: URS does not say they were ordered?

MR. GASTON: The pumps were not ordered.

ASSEMBLYMAN HOLLENBECK: Was the Raritan pipeline engineered -- designed?

MR. HOFMAN: It was partially designed. What we really need to do is step back in time.

ASSEMBLYMAN HOLLENBECK: What was the \$2 million for?

MR. HOFMAN: At the time we were moving ahead, sir.

ASSEMBLYMAN HOLLENBECK: I asked what the \$2 million was for then. In other words, we appropriated over \$2 million for the engineering design of the pipeline. I was surprised. They said in this report that the pumps were ordered.

MR. HOFMAN: There is no question. They were proceeding with the design. Then the rains came and we had the respite. Because of all the controversy surrounding this project, there was a decision made at the time to hold back and to go out and have the consultant look at other alternatives, i.e., the report that you have now -- to look at the report you have now, and to look at the other alternative projects which everyone who was opposed to the project advocated as being a project that was better to put forth.

Because of the respite that Mother Nature provided us, we went through and did those reports and analyses. Based on those analyses, it was determined that we didn't need that project, on the main assumption that the Wanaque South project would be on line before we had another drought. That is a major assumption that we have taken into consideration.

ASSEMBLYMAN HOLLENBECK: Have we gotten any bills in dealing with the appropriation for the engineering design of the Washington Valley reservoir?

MR. GASTON: There is nothing we are sponsoring to do that, no.

ASSEMBLYMAN HOLLENBECK: Do we have any bills in dealing with any appropriation for the construction of the Dunkers Pond reservoir?

MR. GASTON: No.

ASSEMBLYMAN HOLLENBECK: How about Longwood Valley?

MR. HOFMAN: No. Longwood Valley is being studied at our request by the Corps of Engineers as a multi-purpose project.

ASSEMBLYMAN HOLLENBECK: The URS report says, the way I read it: "Of the seven alternatives investigated for this feasibility study, the Raritan/Passaic diversion project, the southern section only, appears to be the most economical if constructed in the near future." I assume they had the safe yield analysis at the same time they did this report. "However, its construction is delayed to the more distant future. Its relative advantage would require reexamination." The project's relative advantage over the reservoir alternatives-- A disproportionate rise or fall in the energy costs would change these costs, right? But, an apparent, viable alternative-- Now, if you didn't want to go this way, the viable alternative, by the report, was the stage implementation of the Washington Valley reservoir, the Dunkers Pond reservoir, and the Longwood Valley project. We have not done anything on them, so we have ignored this report.

MR. GASTON: Not so. Let me just--

ASSEMBLYMAN HOLLENBECK: (interrupting) That is what they recommended in it.

MR. GASTON: We read that just recently again ourselves. What that means is, if you needed 20, 25, or 30 million gallons of additional water, a viable alternative would be those three reservoir projects. What our demand studies showed is that we did not need that quantity of water with Wanaque South. So, that recommendation is also a recommendation that we will consider in the future if the demand analysis leads us to conclude that we need the additional water.

ASSEMBLYMAN HOLLENBECK: Wanaque South, and you are including Monksville with it, for 80 million gallons a day yield, does that add anything as a watershed area?

MR. GASTON: It adds Monksville, which is seven million gallons of storage.

ASSEMBLYMAN HOLLENBECK: That is the capacity of the reservoir; that is the tank. What fills up Wanaque South, the Monksville reservoir?

MR. GASTON: From an engineering perspective, you can add additional supply by using reservoir capacity more efficiently or you can add additional reservoir capacity. This uses the reservoir capacity more efficiently.

ASSEMBLYMAN HOLLENBECK: Don't you take water from the Ramapo and divert it up into the Wanaque reservoir?

MR. GASTON: Yes, under the stringent permit conditions provided for in the operation of that project.

ASSEMBLYMAN HOLLENBECK: All right. Isn't that how you fill Monksville?

MR. GASTON: Yes.

MR. HOFMAN: Partially.

ASSEMBLYMAN HOLLENBECK: All right. How much is Monksville allowed to draw to fill Wanaque South for that project? How much do they draw from the Ramapo River?

MR. GASTON: Well, there is a schedule of specific--

ASSEMBLYMAN HOLLENBECK: (interrupting) Is there a number on it?

MR. GASTON: Yes. I think the yield of that pumping station is 250 million.

ASSEMBLYMAN HOLLENBECK: How much are they allowed to draw?

MR. GASTON: One-hundred and fifty million.

ASSEMBLYMAN HOLLENBECK: But, there is another proviso, isn't there? That is not all the time, is it? Can they draw that 150 million at all times from the Ramapo to fill Monksville?

MR. GASTON: The permit was a stringent permit. They considered both water quality and water supply needs. To balance those needs, no pumping is permitted during the summer months.

ASSEMBLYMAN HOLLENBECK: In other words, we are dealing with water quality now, aren't we, so that at periods of low flow and low quality of the water, there are restrictions about using that water to fill up those reservoirs.

MR. GASTON: Those restrictions were taken into consideration when computing the yield of the reservoirs.

ASSEMBLYMAN HOLLENBECK: All right. Now, when you have done that-- How many sewerage plants are on the Passaic River, the Ramapo River, and all the tributaries of the Passaic?

MR. GASTON: The water quality of the Ramapo is rather good. That is one of the reasons why the pump station was expanded there to provide for the use of the Ramapo. The other pump station was located at the confluence of the Pompton and the Passaic River in such a way that it could take advantage of water coming out of the Pompton, and provide the very best water quality available for filling the reservoirs and, therefore, for transmission on to the customers.

ASSEMBLYMAN HOLLENBECK: You didn't answer my question. How many sewerage plants are on the Passaic River and its tributaries?

MR. GASTON: There are quite a number.

ASSEMBLYMAN HOLLENBECK: What is the figure, 10?

MR. GASTON: I'll estimate 40.

ASSEMBLYMAN HOLLENBECK: Would you estimate over 40?

MR. GASTON: I'll even go a step further. During low flow periods, when--

ASSEMBLYMAN HOLLENBECK: (interrupting) Would it be closer to 100 than to 40?

MR. GASTON: It would depend upon what size you are talking about. But, during low flow periods--

ASSEMBLYMAN HOLLENBECK: (interrupting) Well, is it closer to 100 than it is to 40?

COMMISSIONER HUGHEY: He gave you an approximate number, but we will get you a specific number.

ASSEMBLYMAN HOLLENBECK: Well, this comes from the URS report we studied so carefully and made our decision on. It's 100; they say 100, approximately 100.

MR. GASTON: The question you are really asking is, is the Passaic River made up of sewage during certain periods of the year? The answer to that is, it is made up of substantial amounts of waste water during certain periods of the year. That is one of the reasons

why we have an aggressive program of promoting the expansion and cleanup of the wastepaper plants.

ASSEMBLYMAN HOLLENBECK: What I am leading up to is, what have we done as far as those treatment plants are concerned to make sure that they are meeting standards? Are they all meeting standards up there for their effluent discharge, BOD, dissolved solids, and all the other stuff? Are they meeting those standards?

MR. GASTON: Some are and some aren't.

ASSEMBLYMAN HOLLENBECK: What are we doing then? Do we still allow them to add on? Are there any building restrictions or anything in that area so that they do not add to the overburdened system that is polluting the water, where Passaic Valley takes an 80% surge into their system, treats it, and feeds it to people?

MR. GASTON: I think you will be seeing that many of those towns recognize they have to meet water quality discharge parameters by 1988. Those that do not meet the discharge requirements are themselves under a ban on additional connections to their treatment facilities. If they do not remember that, we will be reminding them as they submit additional applications to us. We are taking a very hard line in dealing with improvements to water quality in the Passaic, as well as the rest of the areas in New Jersey.

ASSEMBLYMAN HOLLENBECK: Didn't they just lift some building restrictions up on the Whippany River?

MR. GASTON: If they did it was because--

ASSEMBLYMAN HOLLENBECK: (interrupting) Is that because that plant is now meeting the standards of effluent discharge?

MR. GASTON: (continuing) --the town responded positively.

ASSEMBLYMAN HOLLENBECK: Do the plants meet the effluent discharge standards?

MR. GASTON: Which plants are you talking about?

ASSEMBLYMAN HOLLENBECK: All the ones on the Whippany River. They had a building ban up there on that. They had a building ban on it because the sewerage plant couldn't do it; however, the building ban was recently lifted. I assume it was lifted because they are now meeting the standards.

COMMISSIONER HUGHEY: The only reason a building ban comes off, if capacity is given, is that we enter into a consent agreement which time lines every improvement that has to be made to a system. If this is not done -- and I can take you into any city where we have made that kind of a negotiation -- we stop progress. It is that simple. I think one of the major differences in the last couple of years is that we have made municipalities certify capacities and suffer criminal penalties if they certify capacities they do not have. We are having very few illegal connections these days. So, there is a ban unless we get a consent agreement that puts someone on the line for the improvements they have to meet by the 1988 clean water standards. It's that simple. There are no variations to that.

ASSEMBLYMAN HOLLENBECK: I just wanted to show that there is another thing when you start talking about drawing the amount of water to go for the Wanaque South project from the rivers. There is a limitation dealing with the quality of the water, and what the quality of that water is at the moment. We assume, of course, that during periods of drought it is on a low flow and the quality of the water is poor. That means, of course, that you don't really have that water during periods of drought, do you, other than what you reserved in the reservoir? You put a big tank in.

COMMISSIONER HUGHEY: But, the whole capacity of the reservoir system, Bob, is built on the same kind of factors you are asking us to build in. They were all built in -- low flow, high flow, augmentation, and what's happening in low flow periods. We are not assuming that we can fill that reservoir in low flow periods. As a matter of fact, it is a condition of the permit. So, the capacity is built on the same kind of considerations you are asking us to take, and they have been taken.

ASSEMBLYMAN HOLLENBECK: When you did the interconnections, you did a fine job, all right? It was a major job, something that was needed. When we put interconnections in, we could change from one system to the other and augment one system with the other. If one system has problems, we can take it from another system. That is very good management. I think we all agree with that; however, one of the

things we do not have the capacity for is interfacing transfer. Now, in 1980/1981, we had a drought condition in the Passaic and Hackensack Basins, and yet the Raritan Basin was fairly good. I think we were overflowing in the State reservoirs. They had the capacity. Do we have the capacity there now, a safe yield capacity, and an excess in the State reservoirs?

MR. GASTON: Yes, we have the capacity to produce what is necessary in the Raritan Basin.

ASSEMBLYMAN HOLLENBECK: Now they have a safe yield for diverting water out of that, don't they?

MR. GASTON: A safe yield-- Well, Rocco is here, why don't we let him answer that.

ROCCO RICCI: The yield of the combined system, including the D&R, is 225 million gallons a day.

ASSEMBLYMAN HOLLENBECK: They have a safe yield for a diversion. The URS said they had a safe yield for diversion. What was that figure? It was 93 million gallons a day, wasn't it?

MR. RICCI: The difference between the safe yield of the system and our present contracts is 75 million gallons a day. That is the uncommitted water at this time.

ASSEMBLYMAN HOLLENBECK: They show a safe yield of 93 million gallons a day.

MR. RICCI: They may not have reflected the fact that during droughts we cannot take more than 65 million gallons a day from the Delaware River. I don't know what constituted that particular number.

ASSEMBLYMAN HOLLENBECK: So, do we divert that water?

COMMISSIONER HUGHEY: Which water?

MR. RICCI: I'm sorry, you will have to be more specific, Mr. Chairman.

ASSEMBLYMAN HOLLENBECK: Well, we have this extra capacity right now in State reservoirs.

MR. RICCI: The water is in storage.

ASSEMBLYMAN HOLLENBECK: Is it diverted? Is there any way to divert it right now, an interfacing transfer?

MR. RICCI: At the present time, through the direction of the Department, some 30 to 35 million gallons a day are being sent into the Newark system via one of our customers, the Elizabethtown Water Company.

ASSEMBLYMAN HOLLENBECK: Is that an interconnection?

MR. RICCI: It is an interconnection.

ASSEMBLYMAN HOLLENBECK: That was a beefed up interconnection. There was always a little one there, but I think it was beefed up.

MR. RICCI: Substantially so.

ASSEMBLYMAN HOLLENBECK: All right. Who paid for that?

COMMISSIONER HUGHEY: It was done in the form of a loan, Bob. Those loans that went out for the interconnects were made to either communities, municipalities, or the companies.

ASSEMBLYMAN HOLLENBECK: No, no, I'm talking specifically about the interconnection between the Elizabethtown Water Company and the Commonwealth Water Company. There is an interconnection there, the Newark system.

MR. HOFMAN: That was part of the money that was made available for the emergency projects, and that was one of the emergency projects. That money was to be paid back based on a benefiter's pay. The Department and BPU went through a process to develop the percentage of payback by the seven major purveyors in the Northeast. We ultimately promulgated a set of rules and regulations. There have been several bills kicking around in the hopper to forgive that money, but as far as we are concerned, we are in the process of collecting it. Some of the purveyors had already started to make those payments back--

ASSEMBLYMAN HOLLENBECK: (interrupting) That original appropriation was from the Clean Water Bond Act for \$6.4 million.

MR. HOFMAN: There were two bond acts.

ASSEMBLYMAN HOLLENBECK: Primarily, there was the Clean Water Bond Act and the Natural Resources Bond Act.

MR. HOFMAN: Right, 1976 and 1980.

ASSEMBLYMAN HOLLENBECK: It was \$6.4 million that was appropriated to do that particular project, that interconnection.

COMMISSIONER HUGHEY: That's right, Bob. We have a chart that shows all of the interconnections and their costs.

ASSEMBLYMAN HOLLENBECK: Okay, except that what I want to get into is how you say "on a loan." You said on a loan. How was that money being loaned? You know, we have looked into the appropriation bills and we have not found that there is anything about paybacks in them.

COMMISSIONER HUGHEY: You didn't see anything that required paybacks?

ASSEMBLYMAN HOLLENBECK: No, not within those appropriations.

COMMISSIONER HUGHEY: That would surprise us because the Legislature told us that that was payback money.

ASSEMBLYMAN HOLLENBECK: I can't find it in there. That is why I am questioning you on it. You can see why my curiosity has been aroused a little bit about it.

COMMISSIONER HUGHEY: Bob, what we were told to do a couple of years ago was-- We were told that we had to collect. It was water money that had to be paid back. We were left with that as a part of the drought emergency. BPU and the Department had to develop a system for the collection of that money and, so far, I think we started to receive payments from all of the privates for the money that was spent. The ones which are not paying are the municipals.

ASSEMBLYMAN HOLLENBECK: What do you do with the money you get back?

COMMISSIONER HUGHEY: We don't do anything with it. It goes to the bond act.

MR. HOFMAN: Yes, it goes back to the bond act.

ASSEMBLYMAN HOLLENBECK: How do you get it back, because you have already taken the money out?

MR. HOFMAN: It goes back into the bond act account.

ASSEMBLYMAN HOLLENBECK: I think we are all going to have to look very carefully at how the money gets back. I can't understand how you are going to get it back without some legislative action. I mean, what we are going to have here are interconnections, all right? Let's talk about the George Washington Bridge. That was appropriated, again, during the emergency period, \$5.2 million. Right?

COMMISSIONER HUGHEY: Yes.

ASSEMBLYMAN HOLLENBECK: Who paid for it?

COMMISSIONER HUGHEY: It came from the same fund.

ASSEMBLYMAN HOLLENBECK: Who removed it?

MR. HOFMAN: The Hackensack Water Company.

ASSEMBLYMAN HOLLENBECK: Who paid for that removal?

MR. HOFMAN: They did.

ASSEMBLYMAN HOLLENBECK: Did the Hackensack Water Company have to pay you back for that construction, that \$5.2 million? Are they supposed to pay you back for it?

MR. HOFMAN: Sir, that was lumped together in the whole pot of money. The Department and BPU were to determine a method, at least the way we read the bond act -- pardon me, read your appropriation -- and were to develop jointly a procedure to recover the money from those who benefited from the project. We -- the Board of Public Utilities and DEP -- went through the process of holding a public hearing. We then developed a procedure where all the parties would pay back; the seven purveyors had to sign an agreement to pay that money back. When we were going through the process of signing on the dotted line, several municipals refused to sign on the dotted line. We then said, "Hey, we have an obligation."

We then went through the process of developing, through the Administrative Procedures Act, an agreement which had been signed by the majority, although not by everyone, regarding a loan rate to collect that money. That loan rate went into effect at the public hearing in January of last year. Everyone had one year to make their first payment. On January 17 of this year, the first payments were due. The investor-owned systems have all made their first payments, and I believe they have all made their second payments. They are due on a quarterly basis. The ones who have not paid back are the municipals. The municipals have been waiting for a bill that has been kicking around in the hopper here to forgive them from paying it back.

The way we read the appropriation, our job is to collect the money. We have done everything we could to collect the money. We have even threatened the municipals with court action.

COMMISSIONER HUGHEY: Bob, what you are telling us today is that we shouldn't try to collect that money.

ASSEMBLYMAN HOLLENBECK: No, I am trying to find out whether everything has been equal throughout the State. When we are dealing with various areas, I want to know if it is payback moneys. In other words, you're saying that the interconnection of the Elizabethtown Company is going to be paid back. That was paid for by the State. The Washington Bridge is going to be paid back, and that was paid for by the State. The Delaware River/Raritan Canal, the \$20 million, is going to be paid back. It is being done by the State; it is a State project. That is what you are telling me.

COMMISSIONER HUGHEY: That is the way we read it.

ASSEMBLYMAN HOLLENBECK: All right. I just want to find out where the payback money is going. How do you pay it back to the Natural Resources Bond Act, when the revenues and what you are dealing with are in the Water Supply Bond Act?

MR. HOFMAN: That is just a regular transfer. Wherever that money came from, that is where it goes back. I am not an accountant, but that is a regular accounting procedure.

ASSEMBLYMAN HOLLENBECK: That only sounds easy. It doesn't sound like you could do that without a legislative act. That is all I am saying, and I have said that before.

COMMISSIONER HUGHEY: You can't take money back to the same account--

ASSEMBLYMAN HOLLENBECK: (interrupting) Oh, I said that you could get your money back to your Water Supply Bond Act, no problem. If you took it out of the Water Supply Bond Act, you can get it back in there very easily; you can revolving fund it. That is a revolving fund. But these others were not revolving funds. They were not revolving fund accounts.

MR. HOFMAN: But the bill tells us-- The appropriation bill--

ASSEMBLYMAN HOLLENBECK: (interrupting) I don't know whether you might be in a "Catch-22" situation. This is just a problem that we have seen develop.

MR. HOFMAN: Well, we have already collected money, and as far as we know-- Look, some of them have already paid a portion of their money back, and according to our records, that money is now sitting back in those bond act accounts.

ASSEMBLYMAN BENNETT: In the Clean Water account?

MR. HOFMAN: Well, in the 1976 and 1980 accounts.

ASSEMBLYMAN BENNETT: I don't understand why you haven't sued. That is what I don't understand.

MR. HOFMAN: Well, we have been threatening the municipalities since January, and it is getting to the point now where that is the next step.

ASSEMBLYMAN BENNETT: Having been engaged in so many lawsuits with you people, I know it takes forever. My own direction would be-- I mean, the bill is clear to me. I think you have a duty; I think that if they are not paying back, you have to sue for it. If there is going to be legislative relief, well, so be it, if it gets passed. But, until it is passed, I don't think you have a choice. You have an obligation to get that money back in so it can be utilized. The Legislature acted, and if I remember correctly, Bob, we moved that legislation rather quickly, particularly for a Legislature to appropriate and to then move the appropriations. There was every assurance made to every member of the Committees which dealt with those appropriations that those moneys would be paid back. I am kind of surprised that it is four years later and we don't have it all back, and that we are even taking it in payments.

That just started this January. I mean, I am kind of surprised. We were supposed to be getting 30-day monthly reports, but I don't think I ever saw one. It would have gone to the Speaker, and he doesn't always give me every report he gets. (laughter) Not that I ask for every one he gets, either. I am concerned at this point that if we are talking about a total of \$18 million out of that appropriation, and those moneys are supposed to come back, I think it would be helpful if we knew what has come back, what hasn't come back, what hasn't come back from whom, and why there has not been court action instituted.

ASSEMBLYMAN HOLLENBECK: Excuse me. I am going to break for lunch at this time. Commissioner, I would like to invite you and your associates from the Department to have lunch with us. We will resume after lunch. It is 12:11 right now; we will proceed at a quarter after one.

(RECESS)

AFTER RECESS

ASSEMBLYMAN HOLLENBECK: All right, ladies and gentlemen, we are ready to reconvene the hearing. There was a discussion this morning, and we were talking with reference to some of the interconnections which have occurred. We will try to get back on the track here, back to the Department's presentation. Somehow one of the members of the Committee seemed to get us distracted from the presentation. His initials are Bob Hollenbeck. However, I know you want to do something dealing with some charts you have regarding the interconnections. That was where you were leading, so why don't we pick it up at that point? Is that fair?

COMMISSIONER HUGHEY: That's fine.

ASSEMBLYMAN HOLLENBECK: The only thing is, it has been requested that if anyone goes up to the chart to point out something, that he please take one of the microphones out of its stand and take it along so we can get a recording.

COMMISSIONER HUGHEY: Thank you, Mr. Chairman. Rocco Ricci had to go to a Water Supply Authority meeting, so the Chairman said he would speak to him again at another session.

We have a series of things that we would like to go over with you very briefly, and we will keep it brief. Then we will fill it out as we get into questions.

I said before that there are a number of different kinds of projects going on all at one time. The basis for these is the drought emergency projects which John has on the board that is up there now. I will let him do those, and then we have a series of major water supply projects, then the ground water studies, and then the ground water

feasibility studies. If we can hit all of those, that will take us to a question we got into very briefly this morning, which was loan progress. Essentially the loan progress -- and we are going to give you a summary report on that -- is, after doing what we thought was called for in the appropriations bills, we have started to get paybacks from everyone with the exception of the municipals. The municipals mean essentially the same communities that are involved in the drought this time. So, we will lay all of that out for the Committee and present a summary letter to the Committee Chairman with regard to how we set the limits, what the limits were, and what the municipals have or have not done with regard to those limits.

Mr. Chairman, let me also just fill in an answer to a question that you asked this morning that we did not have a prompt reply to. You asked where the study money came from for the three studies we talked about. Do you want that now, or do you want me to lay that out for you later?

ASSEMBLYMAN HOLLENBECK: Let's try it.

COMMISSIONER HUGHEY: Okay. The URS study came from the 1976 Bond Act. That was \$220,000.

ASSEMBLYMAN HOLLENBECK: Two-twenty?

COMMISSIONER HUGHEY: Two-hundred and twenty. The NJIT study, the first phase that we talked about this morning, was also funded from the 1976 Bond Act. The second phase came from the 1958 Bond Act.

ASSEMBLYMAN HOLLENBECK: The 1958 Bond Act?

COMMISSIONER HUGHEY: Yes. And, the management study done by NJIT--

ASSEMBLYMAN HOLLENBECK: (interrupting) How much did the second one cost?

COMMISSIONER HUGHEY: The second one was \$90,000. The costs of all the studies were: the first phase study, 1976 Bond Act, \$185,000; the second phase, 1958 Bond Act, \$90,000; and, the NJIT management study came from the 1981 Bond Act. That is the one you referred to this morning, and it cost \$239,000.

ASSEMBLYMAN HOLLENBECK: What was the 1958 Bond Act? Was that Natural Resources?

MR. HOFMAN: That was the original first Water Bond Act passed by the Legislature and the voters of the State of New Jersey. That was the Bond Act--

ASSEMBLYMAN HOLLENBECK: (interrupting) That was the old one that we constructed Spruce Run and Round Valley with?

MR. HOFMAN: Spruce Run/Round Valley, that is correct.

ASSEMBLYMAN HOLLENBECK: And the 1976 Bond Act, what was that one?

MR. HOFMAN: That was a Bond Act that had several components, one of which was water supply. It had some sewer money in it.

COMMISSIONER HUGHEY: But, Bob, if my memory serves me correctly, I think it was referred to as the 1976 Clean Water Bond Act. All right, John--

ASSEMBLYMAN HOLLENBECK: (interrupting) Did we have an appropriation for the other one?

COMMISSIONER HUGHEY: Did we have appropriations for--

ASSEMBLYMAN HOLLENBECK: (interrupting) Did we have an appropriations bill on that one, the one in 1958, the \$90,000?

COMMISSIONER HUGHEY: I'm sure we have appropriations bills that merge all of those moneys into the Water Supply.

MR. HOFMAN: Yes, as a matter of fact, the last appropriation bill-- The 1958 Bond Act only has a couple of hundred thousand dollars in it and it was appropriated to be used to fund those projects recommended in the master plan -- master plan updates and master plan orders. Anything that is included in the master plan is eligible.

ASSEMBLYMAN HOLLENBECK: This deals with all the feasibility studies and engineering designs. Do we have all those numbers that have been contracted out?

COMMISSIONER HUGHEY: Well, we have them all, but I don't have them all on the tip of my tongue.

ASSEMBLYMAN HOLLENBECK: All right, but would you make it a point, Commissioner, so we can see what has been spent or what has been contracted to spend on which studies or engineering designs?

COMMISSIONER HUGHEY: From what bond acts?

ASSEMBLYMAN HOLLENBECK: Yes, for the whole thing.

COMMISSIONER HUGHEY: We will do that.

ASSEMBLYMAN HOLLENBECK: We have some of them, but this one here for the \$90,000 we don't have. I don't show that one on any of my lists. I don't show the 1976 one either for \$185,000. I don't have that one.

COMMISSIONER HUGHEY: All right. What we will do, Mr. Chairman, is give you the study, the appropriations bill, and the bond act they were drawn from.

ASSEMBLYMAN HOLLENBECK: All right.

COMMISSIONER HUGHEY: I want you to know that I think Mark asked for that information a week ago. I didn't know he asked for it and I just don't have it for today.

ASSEMBLYMAN HOLLENBECK: All right, very good.

COMMISSIONER HUGHEY: John, please do the interconnects; then move right from that to the major drought projects. Please take the microphone.

MR. GASTON: As far as interconnection projects are concerned, we have four of them we would like to point out here on the board, the first of which is a small project that is very significant now, the Delaware and Raritan Canal/Raritan River interconnection. It provides for taking Raritan Basin water from Spruce Run and Round Valley, putting it in the Canal, and allowing the Canal rehabilitation project to proceed. At the same time, it furnishes water to all the customers along the Canal. I will show you that in a little more detail.

The second major interconnection that we talked about before is the Newark/Elizabethtown interconnection. It is an expansion of a main, a pump station expansion, and an expansion and rehab in Newark. It allows for additional water to be moved through to Newark. Approximately 20 million gallons of additional water moves through to Newark.

Up at Great Notch, a multiple exchange facility was constructed. It allows the purveyors in the Northeast to exchange water fully between them and to take full advantage of strong systems in any given drought, furnishing water to weak systems during that drought. Of course, the George Washington Bridge interconnection was built. During the last drought, it was taken down and stored and it is

now in the process of being reinstalled and relocated on the lower tier of the George Washington Bridge.

ASSEMBLYMAN HOLLENBECK: That was the one you cited the other day. You said it would be ready by when?

MR. GASTON: The agreement acknowledging the movement of Delaware Basin water to New Jersey was announced by Mayor Koch last Tuesday, I believe, and the exact schedule for the completion of that project has to be established by finalized engineering plans, which are in the development stage.

ASSEMBLYMAN HOLLENBECK: You gave a figure last week. When we had our briefing, I know you had a date.

MR. GASTON: Yes.

COMMISSIONER HUGHEY: Our target, Bob, is August 1. The only thing that could delay that target is that this time we want to put the installation on permanently, not temporarily. We don't want it taken down again. Because of that, we have to work with the Port Authority to put it on a lower level where the support system is in place, and we have to work around some traffic patterns. So, we have more detailed engineering to do than we had the last time.

ASSEMBLYMAN HOLLENBECK: Isn't there some discussion about putting it on the steel on the upper level also?

COMMISSIONER HUGHEY: No. As I think you know, we looked into using the same area of the bridge that was used the last time, which was a sidewalk. That is no longer a sidewalk. The problem with doing that is that we would have to reinforce that whole area. It is a very weak area of the bridge, which might be okay for a temporary facility, but is not okay for a permanent facility. I think this time, if we are going to spend this kind of money, we ought to end up with a permanent backup system. So, we are going to try to get it at a lower level and engineer it for permanency.

ASSEMBLYMAN HOLLENBECK: That decision hasn't really been made yet, has it, about where it is going?

COMMISSIONER HUGHEY: I think the decision is very close to being made that we are going to go to the lower level because that is the only place where we can put it on permanently.

ASSEMBLYMAN HOLLENBECK: I know that up until the other day "on the side" was still being discussed, as was "at the top." A woman engineer for the Port Authority disagreed with that position. So, I know that the decision had not been reached as of the other day.

COMMISSIONER HUGHEY: I think that all of the engineers, for the State, for the Port Authority, and for the water company, are convinced that the upper level is the wrong place for it, so the bottom level has been pretty much agreed upon.

ASSEMBLYMAN HOLLENBECK: Yes, but it created some other problems dealing with the swaying and the stress of the bridge, etc.

COMMISSIONER HUGHEY: Traffic patterns are really the biggest problem.

ASSEMBLYMAN HOLLENBECK: Yes.

MR. GASTON: Okay. The other two drought emergency projects that are being put back into operable condition are, number one, the Lake Hopatcong diversion, which was operational during the last drought, and operated for 100 days pumping 20 million gallons of water a day into the Jersey City system. That project has been the subject of a contract between the State Water Authority and CVM Engineers. We expect to have the project in a position to be operational in early July.

The other project that is being put back into operational condition is Lake Wawayanda, which is a State Park lake that produced 10 million gallons of water per day during the last drought. It will do the same again this time.

So, those will be supplements, particularly if we have a problem later on this year. Lake Wawayanda feeds the Newark system; Hopatcong feeds the Jersey City system, and right now even if we had it operational, we wouldn't need it because Jersey City is basically spilling.

ASSEMBLYMAN HOLLENBECK: If Jersey City is spilling, why aren't we using some of their water so that it doesn't spill?

MR. GASTON: We are using very substantial amounts of their water and we are rerouting it to the other purveyors.

ASSEMBLYMAN HOLLENBECK: And still not enough to keep it from spilling?

MR. GASTON: It is close to spilling; I don't know that it is actually spilling. It is at 98% or 99%.

MR. HOFMAN: It was not spilling on Friday, but I am not sure what the rain over the weekend did, whether that caused it to spill or not. We are milking that system. The treatment plant has a capability of about 80 million gallons a day. We are taking about 85 to 90 out of that system in order to maximize it. That is putting some of that water into the Hackensack system and some of that water into the Newark system.

ASSEMBLYMAN HOLLENBECK: How does that water get into the Hackensack system?

MR. HOFMAN: Through an interconnection that was constructed in the 1980/1981 drought. It was paid for by the Hackensack Water Company. It interconnects their two systems.

ASSEMBLYMAN HOLLENBECK: In Secaucus?

MR. HOFMAN: In Secaucus. Then there is the interconnection that was built with the 1980/1981 money between Jersey City and Newark at Chittenton Road, which is part of the Great Notch complex. That is putting water from the Jersey City system into the Newark system. In addition to that, Bayonne has gone off of the Wanaque system and onto the Jersey City system, relieving the Wanaque system of that liability.

ASSEMBLYMAN HOLLENBECK: Do you have a chart that would show the Committee members what we are talking about? I happen to know, but I don't think they all realize what we are talking about. What we are talking about is whether a system is the watershed for that particular system and how you divert water. Some numbers on there show you where you can divert.

MR. GASTON: Assemblyman, we put together such a chart. It wasn't really the clearest chart, so we decided to leave it home, as opposed to bringing it here for you today. If we have another opportunity to see you, we will bring it with us.

ASSEMBLYMAN HOLLENBECK: I can see that some of the Committee members would have difficulty with this. I know the systems, but I don't think they realize what they are. It becomes very difficult to understand how this water can be moved back and forth between points --

I mean one way between systems; I don't know about back and forth -- how they interconnect between the systems, and how they can control where they are drawing from. You know, if you don't see it, it is very hard to visualize.

MR. GASTON: We made an attempt at that, but when we looked at it-- More importantly, when I had my wife look at it, she didn't understand it; therefore, I thought it didn't pass the test of being for the layman, so we left it home.

ASSEMBLYMAN HOLLENBECK: You thought for us it had to be very simplex.

MR. GASTON: Well, I think that for me it had to be very simple. So, she was my test.

ASSEMBLYMAN HOLLENBECK: Thanks a lot, John.

MR. GASTON: Now, let me move on to the things we have done to make the water supply system better in New Jersey, beginning with the Delaware and Raritan Canal. As you all know, that Canal extends for, I guess, about 50 miles from up near Frenchtown down to Trenton, across through Princeton, over to the Raritan River, and to New Brunswick. The major purveyors along the Canal are Elizabethtown Water Company, North Brunswick, Elizabethtown again, New Brunswick, and the Middlesex Water Company, right at the bridge in New Brunswick. The Delaware and Raritan Canal had undergone a situation where it had just not been maintained since 1948 when it was made operational again. It silted up during the summertime. There were nutrients there, weeds grew, and the flow had been constricted to the point where you only had 10 or 20 million gallons of water passing through the Canal, when New Jersey's allotment in the Delaware Basin was a full 100 million gallons a day. So, that created a problem.

The Canal Rehabilitation Program was designed, managed, and is now being implemented by the State Water Authority at a cost of some \$20,500,000. When the Canal is fully operational, and for the most part it will be operational in late summer -- August, 1985 -- at Princeton, New Jersey will be in a position to take its full allocation, which, in all likelihood at that time, will be only 65 million gallons under the constricted conditions which exist in the

Delaware Basin. Eventually, New Jersey will use its full 100 million gallons of flow and the project itself will be completed later this year.

The funding of this project has been somewhat interesting in that short-term notes have been utilized to finance the project. The difference between what was spent and what was available under those short-term notes has been reinvested, and the earnings from those short-term notes have resulted in about a \$4 million benefit to the users of the Canal. So, the reason we have not used 1981 Bond Act money as of now is that an alternative financing scheme under the State Water Authority -- really one of the advantages of the State Water Authority is that they can do that -- has been implemented to provide short-term money to finance the project. Once it is complete, long-term arrangements will be made through the 1981 Bond Act for the Authority to finance that project.

ASSEMBLYMAN HOLLENBECK: In other words, the Authority passed a bond resolution?

MR. GASTON: Yes. Well, Bob, a bond resolution--

COMMISSIONER HUGHEY: (interrupting) Bob, what we did was use the appropriations bills which appropriated the bond money. The Treasurer had certified that the bond money was available, and we used that for collateral for the short-term financing.

ASSEMBLYMAN HOLLENBECK: So, the Authority itself did not float or pass any bond resolution?

COMMISSIONER HUGHEY: No. It was done based on a legislative appropriation.

ASSEMBLYMAN HOLLENBECK: All right. But, the Authority has the right to float its own bonds.

COMMISSIONER HUGHEY: Right.

MR. GASTON: Okay. So, the first of the major initiatives in water supply was the D&R Canal improvement. That was in the master plan action program and is well along the way to being fully implemented.

ASSEMBLYMAN HOLLENBECK: What was the total flow we anticipated out of the Canal?

MR. GASTON: The flow through the Canal would be 100 million gallons a day.

ASSEMBLYMAN HOLLENBECK: One-hundred million gallons a day is our allotment from the Delaware River?

MR. GASTON: Yes.

ASSEMBLYMAN HOLLENBECK: How much is our draw on that right now?

MR. GASTON: It has been limited to \$75 million in firm fixed-price contracts because of the constrictions that exist. The delivery has been another matter, as I mentioned. During periods of the summer they were unable to get that flow through the Canal.

ASSEMBLYMAN HOLLENBECK: But, assuming it is at its flow and we are drawing the 100 million gallons a day of Delaware water, how much of that is going to be drawn down on? Does that leave an excess capacity in that system?

MR. GASTON: Well, when Mr. Ricci was here before he indicated that the combined capacity of the two systems was 260 million gallons, and that commitments existed for all but 75 of those.

ASSEMBLYMAN HOLLENBECK: So, there is a \$75-million surplus projected in that system?

COMMISSIONER HUGHEY: A 75-million-gallon surplus, if you do not factor in a drought. In other words, we have restricted draws under the drought anyway.

ASSEMBLYMAN HOLLENBECK: And, when it comes up with 100 million gallons and we have an interconnector-- How much is in that interconnector, 80 million gallons?

MR. GASTON: Sixty million.

ASSEMBLYMAN HOLLENBECK: Sixty million?

MR. GASTON: Sixty million max.

ASSEMBLYMAN HOLLENBECK: So, actually 160 million gallons can go into that?

MR. GASTON: Well, physically you cannot flow more than 100 million gallons through the Canal. You can replace the absence of the Canal water up to 60 million gallons with this interconnection pump station.

ASSEMBLYMAN HOLLENBECK: Is that pump station going to be working all the time because you are going to be drawing water off it?

COMMISSIONER HUGHEY: No, this interconnection, Bob, was put into place simply so we could do the dredging process, so it would allow us to go forward with dredging and still--

ASSEMBLYMAN HOLLENBECK: (interrupting) Is that interconnection a temporary setup, or is it permanent?

COMMISSIONER HUGHEY: It is a backup in a drought situation. It is now necessary for interconnectors because a dredging project is going on.

ASSEMBLYMAN HOLLENBECK: Yes, but once you stop the dredging and you have the capacity, that Canal will carry 100 million gallons.

COMMISSIONER HUGHEY: Right.

ASSEMBLYMAN HOLLENBECK: Or you disconnect it?

COMMISSIONER HUGHEY: No, you keep it in place for just this type of a situation.

ASSEMBLYMAN HOLLENBECK: Do you keep a low flow in it, a minimum flow?

MR. HOFMAN: We have to look at the total picture. As far as the total picture is concerned, you have the capability of moving 100 million gallons of water a day through the Canal when it is completely repaired. If you look at the Delaware system, we have the rights for 100 million gallons a day. During a drought, when you are in the drought status, you cut back to 65 million gallons a day, a diversion from the Delaware. How will we use that 65 million gallons? Right now we are talking about taking a portion of that water through the George Washington Bridge. The water that comes across the George Washington Bridge is basically a diversion from the Delaware Basin through the New York City aqueducts into Manhattan and back across into Northeastern New Jersey. That is 20 million gallons a day.

Now, if we take water out of Lake Hopatcong and put it into the Jersey City system, that is another diversion out of the Delaware Basin. That is another 20 million gallons a day. So, if you are cut to 65 and you are taking 40 million gallons a day, you are down to 25 through the Canal. You have to make up that additional water that is

lost in order to satisfy the customers along the Canal, i.e., use the pump station from the Raritan to put the water into the Canal.

ASSEMBLYMAN HOLLENBECK: That is where you are going to use that interconnection.

MR. HOFMAN: That's right.

ASSEMBLYMAN HOLLENBECK: That is what I wanted to find out. Did the State construct that?

MR. HOFMAN: Yes, that was done as part of the emergency interconnections.

ASSEMBLYMAN HOLLENBECK: And that is going to be paid back through the rates? The bond issue will be paid back through the rates? The others have to pay it back, why not that one?

MR. HOFMAN: I don't remember whether that one was included in that pot of money or not. I don't remember at the moment where that money came from.

ASSEMBLYMAN HOLLENBECK: Well, if the policy for one is that they pay it back, then it should be for all.

MR. HOFMAN: That is the policy. I just can't say right now that that is included in the lot.

ASSEMBLYMAN HOLLENBECK: That is one we have to look at.

MR. GASTON: May we go on?

ASSEMBLYMAN HOLLENBECK: Yes, thank you, gentlemen.

MR. GASTON: We may as well continue with the State Authority project, the Manasquan reservoir project. The Manasquan reservoir project is a pump storage project. The availability of on-line sites for reservoirs is significantly lessened in New Jersey. One of the last that we looked at was the Hackettstown reservoir which was neither economically or technically feasible. In Manasquan what we are going to do is pump 150 million gallons out of the Manasquan River and store it in a reservoir of some 770 acres up off of the River. The water from that project will go in two directions, to two purveyors, through treatment adjacent to the pump station, and, also, a small amount will go through treatment and on to purveyors up near the reservoir.

The project is designed to produce 30 million gallons of new water down in that area of the State. The Manasquan area, which includes most of Monmouth County, northern Ocean County, and eastern Middlesex County, is an area which has been designated a critical area for water supply management purposes. What that means is that the ground water dependence that has been developed down there is too great for the resource. We expect that as time goes on through the implementation of these critical management responsibilities, there will be a diminution in the use of ground water. Manasquan water will be used as one of the principal replacements, although we are allowing in the regulatory operation here for other supplies to be furnished or for towns to meet their diminished use through conservation.

ASSEMBLYMAN HOLLENBECK: What is the completion date on the D&R Canal?

COMMISSIONER HUGHEY: The D&R Canal should be done and back in business this fall.

ASSEMBLYMAN HOLLENBECK: What is the completion date projected on this one?

MR. GASTON: The completion date for the Manasquan project is 1990, if we are able to meet our dates for obtaining permits for the initial construction of the facility.

ASSEMBLYMAN HOLLENBECK: Again, for clarification, just so we understand, who are the purveyors? You have two sets of purveyors going there for the pump station.

MR. GASTON: The Monmouth Consolidated Water Company is one of the principal purveyors down in that area, but there is also a whole family of smaller municipal operations that would benefit from the Manasquan reservoir.

ASSEMBLYMAN HOLLENBECK: Do they all have the pipeline systems needed to take the water from that River?

MR. GASTON: There would be a cost associated with distributing the water and interconnecting the systems. That is a cost that ought to be undertaken under any circumstance because systems that stand alone are getting to be more anachronistic every day.

ASSEMBLYMAN HOLLENBECK: And, where we have areas along the shore that are on their own ground water wells, if they ran pipes in the street, would they have to go to those pipes in the street and lose their own ground water supply?

MR. GASTON: The concept of the Manasquan project is to relieve the pressure that has developed over the years as it relates to ground water use in Monmouth County, northern Ocean County, and part of Middlesex County.

ASSEMBLYMAN HOLLENBECK: I guess the answer is yes.

MR. GASTON: The scheme involves limiting the amount of ground water withdrawal and, therefore, allowing the ground water to stop falling -- and the level is falling down steadily -- and lessening the threat of salt water intrusion.

ASSEMBLYMAN HOLLENBECK: The answer was yes?

MR. GASTON: Yes.

ASSEMBLYMAN HOLLENBECK: John, I thought that might arouse your curiosity a little bit.

ASSEMBLYMAN BENNETT: Is all the water coming out of the reservoir going to be treated before it is passed off to the purveyors?

MR. GASTON: Well, this small one up here (referring to chart) may show that some of the water will be sent on to Monmouth Consolidated in an untreated fashion for them to treat it.

ASSEMBLYMAN BENNETT: That has been the request. There has never been a commitment by anyone that they would go along with that. Now the way it is being projected, the consumer is going to be paying to treat that water twice.

MR. GASTON: That is still something that is up for debate and discussion.

ASSEMBLYMAN BENNETT: I think the treatment facility located immediately north of the Manasquan reservoir is even up for discussion because there has been talk of having all of the treatments done down at the pump station. That is another problem. Therefore, the purveyors up here may have to pay for it to be sent down, treated, and then sent back to their treatment plant, at double cost. What is the date of that map right there?

MR. GASTON: This is something that we made up recently. It's a week old, or thereabouts.

ASSEMBLYMAN BENNETT: So, as of this week, that is the perception of what it is going to be?

COMMISSIONER HUGHEY: This is just a graphic, John. The things you have seen from the Water Supply Authority are far more sophisticated than this. The Water Supply Authority has just now finished the hearing process, so there is going to be discussion on treatment. I guess that will be the next stage. We have taken the position that the reservoir itself is the principal issue. The second issue is how the water is to be treated as it is lifted from the reservoir.

ASSEMBLYMAN BENNETT: So, that may or may not accurately reflect--

MR. GASTON: (interrupting) It shows you the kind of project that Manasquan is. Its principal feature is a pump station to an off-stream reservoir where you have the distribution of the water directly to the purveyors, or through treatment and directly to the purveyors. It is the kind of project that is viable in New Jersey, given the fact that the on-stream sites have either been taken or are not available these days.

ASSEMBLYMAN BENNETT: Well, if the completion date is 1990, is the saturation point the year 2000 or something?

MR. GASTON: When it would be fully utilized?

ASSEMBLYMAN BENNETT: Yes.

MR. GASTON: Well, if you assume that all of the water Manasquan produced would go to new customers, it would extend you out into the future. The fact that a good deal of Manasquan water is going to be needed for replacement of ground water will shorten its life, but certainly its useful life ought to go for 10 years beyond 1990.

ASSEMBLYMAN BENNETT: Is that without taking into consideration the Mount Laurel decision and what demands will be made because of the increased housing?

MR. GASTON: We have not been planning Mount Laurel through this water supply program.

ASSEMBLYMAN BENNETT: Right. Will there be a point in time when Mount Laurel will become a factor, because it is almost like the Supreme Court and the people dealing with water are operating on two different planets. I would think that somewhere along the line the two would have to get together.

COMMISSIONER HUGHEY: Well, John, one of the things we started to do, not because of water supply, but because of a series of issues we deal with-- We have started to put together a primer for the court and for court masters on the environmental issues that have to be addressed with development. I think you can make that same argument not just in water, but in almost any natural resource area.

We have taken the best available information in projections and built into those projections what we see happening in Monmouth and northern Ocean. There is probably some flex in the numbers because we are not sure whether we are going to be able to bring back the ground water supply system as quickly as we anticipate from an engineering standpoint. We are not sure who is going to connect to this in the first round. So, there is probably some play in terms of capacity, but the ground water information is really irreversible. At this point, the reservoir system is the only thing that can reverse the demand on the ground water system.

ASSEMBLYMAN BENNETT: I know, but the reservoir itself is located in the midst of what this State has determined is a growth area. The critical water area that was just set by the Department runs right through the growth area of this part of Monmouth County. We are not supposed to place any increased demands on the water supply there, but yet it is in the very area that, by court direction, 6,000 new units are going to have to be built within the next five years. I mean, somehow we have to try to get people to get their act together. I know the Supreme Court doesn't call you up and say, "What are we supposed to do?" but there is definitely a serious problem in this part of Monmouth County with the demands of Mount Laurel being placed, when we don't have a supply of water, nor are we even going to have the capabilities from anything that is up on that chart or anything being proposed to have a water supply for that area.

In five years we are supposed to have the reservoir built. We are supposed to have 6,000 units on the line in one municipality alone, and it has always been my understanding that the capability or the capacity is going to be obsolete 10 years after it has been constructed.

MR. GASTON: Once you have the project, there is always the possibility of moving to the next stage in a water management scheme, which would be to operate the reservoir systems in conjunction with your ground water withdrawals. If you adopt a scheme that is inclusive, as we began to discuss this morning, for the reservoirs in the Northeast, sometimes you can produce additional water without producing additional facilities. So, that is something that will and can be looked at as kind of the next increment of water for Monmouth County.

Additionally, the studies we are doing up in the South River area, and the purveyors up in the South River area, are beginning to look east, you know, "Look east, young man; look east." They are looking east to see the possibilities of expanding their territories out toward the communities in Middlesex County which are along the bay shore, and that gets you to start thinking about expanding even further under the bay shore area.

So, we can see that those possibilities also exist as the dynamic and positive growth characteristics have continued to unfold up there.

COMMISSIONER HUGHEY: But it is a good argument, John. I think it is one of the reasons why we support some updated mapping, which we really think is going to be necessary as a result of the Mount Laurel decision. I don't want to get into that today.

ASSEMBLYMAN HOLLENBECK: It sounds like another study.

COMMISSIONER HUGHEY: No, I don't think it is a study. I think a number of studies have already been done, or that there are studies which are ongoing, Bob, that have to find their way into new base maps in order to make intelligent Mount Laurel decisions. I think that is a part of the proposal that was recommended last year by Senator Stockman, which we supported.

ASSEMBLYMAN BENNETT: I just hope we don't run out of time before these decisions start coming down.

This is my last question. When the Wall Township sewerage facility was sandbagged in order to require all of the people in this part of the county and State to send their sewerage down to Ocean County -- and I don't know the numbers -- one of the basic environmental points that I thought I had learned was that we were not supposed to take water out of one basin and divert it into another basin. We are going to be taking, I don't know how many millions of gallons of water, out of the Manasquan Basin down into the Metedeconk Basin down there in Ocean County? Will that have any impact upon the amount, as those other storage facilities that are going to have to be closed off? Will the waters that are now going into this basin then be deferred down into the southern part of the State basin? Will that impact dramatically upon any of the water supply in this area, which is already a critical water supply?

MR. GASTON: Well, I believe that in terms of the surface system, that was looked at and was found not to be a material factor as far as the hydrology is concerned.

ASSEMBLYMAN HOLLENBECK: Hey, John, if it is all right for the people up in Passaic to drink treated sewerage water, why can't you? (laughter)

ASSEMBLYMAN BENNETT: I know, but what we are supposed to do in planning is learn by our mistakes so we don't end up with mistakes in other areas. What has happened, unfortunately, is that it is not even the sewerage system. The present plants that are discharging into the existing facilities-- They are a secondary treatment and the water is not a problem; I mean, it is clean. They are all being closed down. They have to be closed down because all of the waste has to go into the Manasquan project so that the Manasquan project can go down to Ocean County, and we can fill up an undersized plant there in order to keep it on line. When this is done, we are taking millions of gallons on a daily basis from the Manasquan Basin and shipping them down to a different basin, which has to have some impact on the water supply.

Maybe someone's report says no, but I don't have to pay \$225,000 to realize that if I am going to take millions of gallons out of one basin it is going to have an impact on it.

COMMISSIONER HUGHEY: John, in all fairness to us, I think you know that this was based on a couple of court actions. We didn't just decide that that was the way it was going to go. It was based on a series of court actions that involved both Monmouth and Ocean Counties, and I think that is still going on.

ASSEMBLYMAN BENNETT: There are going to be more too, Bob. I fully expect I will be a witness in it before it is over. I was told by the State that that was not a problem, that it is no problem to take water out of one basin and put it into another basin. I did not believe it then, and I don't believe it now. I am going to keep asking the question until I find out that it is a problem.

MR. GASTON: The last point I would like to make is that the 30 mgd yield took that concern into account also.

ASSEMBLYMAN BENNETT: Okay.

MR. GASTON: May we move on?

ASSEMBLYMAN HOLLENBECK: Things didn't total out there, John, on that last chart. Pull it back again, all right? Pump station, 150 million gallons a day.

MR. HOFMAN: That is just a pump station.

MR. GASTON: That is just to move water.

ASSEMBLYMAN HOLLENBECK: All right. Treatment of 25 million gallons a day?

MR. GASTON: Then there are the other five up there.

ASSEMBLYMAN HOLLENBECK: That's 30. Where are the other 120?

ASSEMBLYMAN BENNETT: They go back into the reservoir.

MR. GASTON: In any one day, the amount that the reservoir can produce on a sustained basis is a different number. That is coming out of the reservoir, as opposed to going in. So, you fill it as fast as you can. You take advantage of the high flows in the wintertime to fill it up. The amount coming out is controlled by the length of time you need it during the dry period. That is how you get a yield of 30 million gallons.

ASSEMBLYMAN BENNETT: But out of the river itself it is 30 million gallons a day, right?

MR. GASTON: No.

COMMISSIONER HUGHEY: Out of the system itself, out of the reservoir itself, the safe yield is 30 million gallons a day. The ability to pump is higher than that because when you get a high flow period you are going to pump at a greater capacity.

ASSEMBLYMAN HOLLENBECK: John should have had his wife look at that chart too.

COMMISSIONER HUGHEY: John's wife understood though.
(laughter)

ASSEMBLYMAN SHINN: That is another black mark.

MR. GASTON: I want you to know that those two sets of remarks are going to get me in trouble tonight.

We have had a fair amount of conversation through the schematic of what Wanaque South is all about. The Pompton River and the Passaic River-- There have been two pump stations constructed to make Wanaque South work. One is the Confluence pump station on the Passaic and the Pompton; the other is an expansion of the Ramapo pump station. The Confluence pump station is designed to move 250 million gallons of water a day into the reservoir. Ramapo has been increased from 100 to 150 million gallons of water into the reservoir. Additionally, you have water coming out of the reservoir into a 17-mile pipe to the Oradell reservoir for use by one of the two partners in the Wanaque South project, the Hackensack Water Company. The other partner is the North Jersey District Water Supply Commission, and they share equally in the system yield which we say is about 80 million gallons a day.

The other feature of this project is the first new reservoir capacity that has been commissioned in quite some time, the Monksville reservoir, seven billion gallons of capacity, in addition to the 29 billion gallons of capacity that is in Wanaque South. The total project cost, which we have updated from our previous numbers, is about \$151 million, Monksville being \$21 million of that. The schedule for the Ramapo pump station project is open. The Confluence pump station

will be operational in the summer of 1986, and the Monksville reservoir project will be on line in the spring of 1987. So, that is a project that after a very long hard pull through the approval process, including all judicial reviews that were possible, has gone to construction and is on an expedited schedule to be completed. It is the reason we have said if the drought were delayed two years we would have a different scenario being played out, particularly for the 93 communities in the Northeast, because this 80 million gallons a day would make a big, big difference up there.

ASSEMBLYMAN HOLLENBECK: That's the North Jersey District Water Supply Commission and the Hackensack Water Company?

MR. GASTON: Yes.

ASSEMBLYMAN HOLLENBECK: What about Passaic Valley?

MR. GASTON: Who are the partners on--

MR. HOFMAN: (interrupting) Passaic Valley is a partner under the existing Wanaque facility.

ASSEMBLYMAN HOLLENBECK: But not part of the Wanaque South?

MR. HOFMAN: The new capacity, no. The new partners are the North Jersey District Water Supply Commission-- One way to describe it is to consider the North Jersey District as a holding company, holding a municipality's interest in a project. So, you have the North Jersey District which is in it for 50% of the project, and Hackensack, which is in it for 50% of the project. If you look at North Jersey District, their largest single partner in this particular project was the City of Newark. Passaic Valley did not go into this project at all. Newark is the largest owner of that share of the North Jersey portion. There are others, Nutley, and a few others.

ASSEMBLYMAN HOLLENBECK: The State did not let any of those contracts out, did it?

MR. GASTON: What do you mean?

ASSEMBLYMAN HOLLENBECK: In other words, this is not a State project.

MR. HOFMAN: Well, it is a State project if you consider the North Jersey District as being a State agency, which they claim they are. I think it was created by the Legislature as a State agency.

ASSEMBLYMAN HOLLENBECK: My town was also created by the Legislature; that doesn't make it a State agency. County government was also created by the Legislature.

MR. HOFMAN: I think the employees of North Jersey District consider themselves to be State employees.

ASSEMBLYMAN HOLLENBECK: I want to see how you make these two into State agencies. (referring to chart) I am just curious because I know where these are; these are in Pennsylvania. I want to see how we can rationalize that these are State agencies.

MR. GASTON: We're talking about major water supply projects. We have gone over three major water supply projects that are scheduled to happen. They are either under contract now or are imminently at the stage where they will go to design prior to going to contract.

The fourth one we have on our list is the Delaware River augmentation project. New Jersey's obligation under the good-faith agreement is to provide reservoir capacity to do its fair share in keeping the salt water wedge in the Delaware River down south of our well fields in the Camden area. The response to that has been a long negotiation among the States of New Jersey, Pennsylvania, and Delaware to figure out a way to most efficiently provide additional capacity in the form of reservoirs. The conclusion of these analyses is that the best, the most efficient, and certainly the most implementable project, is the expansion of two reservoirs in Pennsylvania, one on the Lehigh River, the Francis E. Walter reservoir, and one on the Lackawaxen River, the Prompton reservoir, which would provide for a water supply component to flood protection reservoirs built by the Army Corps of Engineers, which would be the project sponsor and implementer.

The Francis E. Walter reservoir is under design at the present time to expand to provide a water supply component, which New Jersey, Pennsylvania, and Delaware will be responsible for financing. This project, we hope, will be financed through an amendment to the so-called 15-1-B provision of the compact, which will allow for charges to be imposed across all basin users for the benefits that are derived from these facilities. If all goes well, and if the Corps' schedule

follows, we expect that the project will be completed in 1991, that the cost of Francis E. Walter will be about \$114 million, and its yield will be 170 million gallons a day.

The storage that is available now will increase from 0.6 billion gallons to 23.9 billion gallons for water supply purposes. So, what they have to do is go up. They do not have to take a new site.

ASSEMBLYMAN HOLLENBECK: Actually, they were flood control projects.

MR. GASTON: They were flood control projects that were operational.

ASSEMBLYMAN HOLLENBECK: They were made to hold back water during periods of heavy flow, and then release it in periods of lesser flow. That is just what we are going to do now too, isn't it?

MR. GASTON: Well, we are going to store it.

ASSEMBLYMAN HOLLENBECK: We are going to hold the water back during periods of heavy flow where we can draw from the river and release it during periods of light flow so we can augment the river.

MR. GASTON: We are going to stretch the time frame for that happening.

ASSEMBLYMAN HOLLENBECK: Unless, of course, we have a heavy rainstorm, and then we have to release.

MR. GASTON: There will be separate functions in the reservoir. A portion of the reservoir will be dedicated to flood purposes. That will not interfere with the portion of the reservoir that is dedicated to water supply purposes.

ASSEMBLYMAN HOLLENBECK: I will have to look at that carefully. It sounds interesting.

COMMISSIONER HUGHEY: Actually, that makes sense, Bob, when you see the--

ASSEMBLYMAN HOLLENBECK: (interrupting) Well, I was just curious about how it is done.

COMMISSIONER HUGHEY: The way the existing flood control project was planned, it was warped. The augment to that would be a water supply component. So, you can actually look at it as two separate units.

MR. GASTON: Prompton reservoir, a little further north in Pennsylvania, has a yield of 37 million gallons at a cost of \$45 million. That one will come after the scheduled actions on Francis E. Walter. Dirk, why don't you do about two minutes on where we stand with respect to Francis E. Walter and the negotiations.

MR. HOFMAN: Okay. John has alluded to the financing and the cost of Francis E. Walter. There are two things we have to look at. One, we are negotiating with the State of Pennsylvania and the State of Delaware as to how we are going to allocate the shares of that project. We have already made the determination that the Delaware River Basin Commission would serve as the non-Federal sponsor of that project. We, the three down-basin states, in accordance with the good-faith agreement which all of the parties to the decree have signed, would be the supporters of that project.

We are also negotiating with the Corps of Engineers to determine what would be the non-Federal share of that project. They own the project. Both the Walter and the Prompton projects were built as flood control facilities. We are modifying existing projects. We had gone through a process with the Corps of Engineers wherein they were trying to charge what they call "shared benefits." In other words, charging us, the new participants in the project, for the benefits that were derived from the project that was constructed by them for flood control. We have argued that point, and Assistant Secretary of the Army Dawson, a month ago, made a public statement that we won. He has now withdrawn that issue, so we do not have to worry about the Corps of Engineers making a profit anymore.

I think we are proceeding along on target. Everyone is satisfied with the progress that is being made toward ultimately implementing that project in the time frame that has been set forth in the good-faith agreement.

MR. GASTON: There are two things about this project which are really outstanding. One is that the Corps is doing it, which means that our resources are not tied up; and the second is, the financing mechanism may not require any New Jersey capital, although we may want to have the bond act moneys available to back us up should we not be

successful in the negotiations to arrange financing through the basin itself. We have a project that was implemented by someone else and financed by resources that were not direct debt resources of the State.

COMMISSIONER HUGHEY: I think there is a third benefit that we looked at, Bob, and that is, since there are additions to two projects, we are not in a position where we have to look at all the environmental impacts of trying to place one, which we have done before on the New Jersey side. So, if we can buy in, we will get an environmentally sound project at probably a fraction of the cost of a project which would have to be started from scratch.

MR. GASTON: And it would meet our obligations under the good-faith agreement to protect our 100-million-gallon-a-day D&R Canal withdrawal.

ASSEMBLYMAN SHINN: Before you leave that chart, John, could you talk about that system relative to Camden -- the draw-down situation? Does that interface with Camden's system?

MR. GASTON: Well, it is directly New Jersey's down payment to protecting Camden's system. The reason we have to come up with a project to augment the Delaware flow, is to provide for control of the salt wedge in the Delaware River. We are doing that by implementing this project, which is a reservoir project for release during the low flow periods. This will make up our contribution and a portion of Pennsylvania's contribution directly to protecting and controlling the salt wedge.

ASSEMBLYMAN HOLLENBECK: Where is New York's contribution?

MR. GASTON: It is already up there in those enormous reservoirs they have. In this instance, they are a step ahead of all of us.

MR. HOFMAN: The quid pro quo for New York's permission to take water out of the basin was to provide a passing flow of Montague, which is the point at the junction of New Jersey, Pennsylvania, and New York, where the borders come together. In order for them to gain permission to build those facilities in accordance with the Supreme Court decree, they have to provide a passing flow at that point. In essence, when you reach a drought situation, better than 50% of the

flow that passes Trenton is as a result of the direct releases from those New York City reservoirs.

MR. GASTON: Let's move quickly to the last project, which we are listing as a major initiative. This is also a project we are not involved with. It is the Meryl Creek pump storage project sponsored by the Electric Utility User Group. Meryl Creek is located between Harmony and, I guess, Greenwich Township, Warren County. There is a pump on the Delaware River that has a three-mile conduit to Meryl Creek, a 650-acre reservoir on top of Montana Mountain up in Warren County. The capacity of that reservoir is 16.3 billion gallons; its yield is 129 million gallons a day; the cost is estimated at \$217 million; the approximate date of initiation of construction will be within six to eight weeks if the New Jersey permits are issued on this project; and, completion should be 2.5 years from the start of construction.

So, we are at the doorstep of having that project go forward. It is a significant addition to the supply capabilities of the basin. It is the way the Electric Utility User Group chose to meet their responsibilities for the takeouts they have for their consumptive cooling towers. We expect it will be a reality.

ASSEMBLYMAN HOLLENBECK: How much is the total capacity we are putting back in here for what we are taking out?

MR. GASTON: Everything that comes out goes back.

ASSEMBLYMAN HOLLENBECK: In other words, if we are taking 100 million gallons out of the D&R Canal, we have to put 100 million gallons back in from other points during low flow.

MR. GASTON: What is New Jersey's low flow commitment obligation? (addressing Mr. Hofman)

MR. HOFMAN: For instance, the City of New York is allowed to take 800 million gallons of water out of the basin a day. Their obligation is 1,750 cfs at Montague. That was established by a Supreme Court decree. The Supreme Court decree did not tell New Jersey that it had to provide any low flow augmentation at the time it was passed. They required New Jersey to participate, with the State of Pennsylvania, in the development of a mainstream dam. That mainstream

dam at the time was considered Walpack Bend. Walpack Bend was later turned into Tocks Island. What we are saying now is, the whole basis of the good-faith agreement was that the Tocks Island project was not going to move forward. It was not going to be implemented and, therefore, you had to look at the water resources of the basin, taking into consideration that all of those numbers -- the 800 million gallons a day, the 1,750 -- were all based on the drought of the 1930s. Along came the drought of the 1960s, which was worse than the drought of the 1930s, and you could not meet those same conditions in a recurrence of the drought of the 1960s. Therefore, a good-faith agreement was started with the idea of looking at the resources of the basin, bringing them up to modern times, and dealing with the shortfall. The shortfall that exists is to provide water for low flow augmentation, particularly to meet the Camden situation, as the salt wedge becomes one of our prime concerns in the State of New Jersey, i.e., the development--

ASSEMBLYMAN HOLLENBECK: (interrupting) Tocks Island was not originally projected as a water supply project; it was a flood control project.

MR. HOFMAN: You're absolutely correct. Tocks Island was originally conceived as a flood control project.

ASSEMBLYMAN HOLLENBECK: You are trying to imply that then we would have met the minimum flow requirements, but the dam wasn't designed for that reason. You can say it now when you talk about water supply, and water supply only being passing. It is not water that is going into a pipe system. It was a flood control project. Some people thought it should have stayed there as a water supply.

MR. HOFMAN: There is no question, Tocks Island was originally conceived as a flood control project. However, it did not take Congress long to recognize that there was also a need for a water supply component. The State of New Jersey and the State of Pennsylvania supported that water supply component. In the studies that were done in the 1960s and 1970s regarding Tocks Island, all considered Tocks Island to have a major water supply component. Governor Hughes wrote a letter asking that New Jersey be allocated 300

million gallons a day from the water supply component of the Tocks Island project. So, water supply has been a component of that project for a good many years. I agree with you, there is no question that when Tocks Island was originally conceived of in 1955, it was as a result of the tremendous floods we had in the Delaware Basin in 1955. It was not long after that that water supply became a component.

You also have to recognize that as the years have gone by, many of the areas that suffered flood damages-- The area of Trenton down by the Labor and Industry Building was all homes in 1955. They have all been removed and you now have State office buildings which have all been elevated. Many of the benefits that would have been derived out of a flood control facility no longer exist. Water supply then became a critical issue in whether that project was a go or no-go project. As the studies showed, we didn't need that project, assuming we could go ahead and move forward with converting F. E. Walter and Prompton into multi-purpose projects.

ASSEMBLYMAN HOLLENBECK: When was that?

MR. HOFMAN: That was all done as part of the good-faith agreement which was developed after the decision was made on Tocks Island not to move forward.

ASSEMBLYMAN HOLLENBECK: What year?

MR. HOFMAN: The good-faith agreement was signed roughly three and a half years ago. It was negotiated from about 1978 on.

ASSEMBLYMAN HOLLENBECK: Did it have anything to do with the deauthorization of Tocks?

MR. HOFMAN: It had a tremendous impact. The whole inception was based on the fact that the decision was made by the governors of the four states at the time not to proceed with Tocks Island. As a result of that, it was determined that we needed to sit down to develop a good-faith agreement as to how we would proceed without a major on-stream dam.

COMMISSIONER HUGHEY: That was the basis, Bob, that would have formed a basis for the original agreement as Tocks became more and more a water supply project. When that effort was voted down -- and it was literally voted down by the governors at that time -- we had to reenter a good-faith agreement, which started, as Dirk said, in 1978.

ASSEMBLYMAN HOLLENBECK: Our Governor was the one who threw the deciding vote.

MR. HOFMAN: That is not entirely correct. It was a combined decision made by the governors of New York, New Jersey, and Delaware. The State of Pennsylvania voted for it, and the other three conferred and decided not to go with it.

ASSEMBLYMAN HOLLENBECK: Delaware said it would go the way the others went, didn't it? (no response)

COMMISSIONER HUGHEY: Let's move on to the summary, and then we will open it up to questions.

MR. GASTON: Assemblymen, besides the activities we discussed before -- the major projects, the drought emergency projects, and the ground water studies we have ongoing in several areas of the State -- numerous other water supply feasibility studies have been started or will be started in the near future. The Water Supply Loan Program and conservation initiatives are all tabulated in dollars and cents based upon what we have done to date in bond act activity. There have been a series of appropriations that have been made by the Legislature; the first one totaled some \$35 million in 1983, and covered the initial operation, the Rehab Loan Program, money for conservation, aquifer ground water protection, storm water management (which was never implemented), special water treatment analyses, and numerous feasibility studies, including new contamination well fields, which had not been mentioned in the initial framing of the Water Supply Bond Act.

About \$25 million of that \$35 million was committed to various activities; about \$10 million remains available. Two subsequent appropriations were requested for interconnections for the D&R Canal, and through the recently enacted Assembly Bill 2267, the amount of money appropriated by the Legislature has risen to \$115 million. Of that amount, we have tabulated that about \$57 million has been committed to project activities.

ASSEMBLYMAN HOLLENBECK: How much has been spent?

MR. GASTON: Between \$5 and \$6 million has been spent.

ASSEMBLYMAN HOLLENBECK: There is a big difference between committed and spent.

MR. GASTON: There is a big difference between committed and spent, and there is lead time that we all know has to go into these projects. In addition, the \$20 million that has been listed as D&R Canal, committed but not spent, is, in effect, being spent.

ASSEMBLYMAN HOLLENBECK: Is that because you took the moneys from another issue?

COMMISSIONER HUGHEY: No, that is because we financed it with short-term debt. So, it is spent as collateral. We financed it with short-term debt while we were under construction.

ASSEMBLYMAN HOLLENBECK: But, we did take it from other issues also, didn't we, the D&R cleanup money?

COMMISSIONER HUGHEY: We took it from this issue as collateral, Bob. We took the two appropriations bills passed by the Legislature and used them as collateral for short-term debt. We have to go onto the bonds, obviously, when the project is completed this fall. If we held out any longer than this fall, then we would be in an arbitrary situation with regard to debt, which is not legal. So, we have to cash in those bonds upon completion of the project.

MR. GASTON: In addition to the \$115 million that has been appropriated by the Legislature, we have appropriations pending where we are carrying Wanaque South, which we discussed at length, at \$50 million. That could easily be \$70 million if the project owners' view of the appropriation becomes a reality. We are calling the Manasquan reservoir system commitment at \$72 million. When you total those up, along with the appropriation, you get a total appropriation, or appropriations pending, of \$237 million using our math, or \$257 million using the math of the North Jersey District sponsors. From that, \$179 million has been committed, leaving a net of about \$57 million available to be committed.

ASSEMBLYMAN HOLLENBECK: How many applications for rehabilitation have we had?

COMMISSIONER HUGHEY: For the \$57 million we have in that category, we currently have in front of us \$47 million in applications, and \$16 million is on its way out.

ASSEMBLYMAN HOLLENBECK: I'm sorry, I didn't catch the numbers.

COMMISSIONER HUGHEY: By our count, we have about \$57 million allocated to that component, Bob, which is rehab. We have \$47 million in applications in front of us, and we have signed agreements with various people who are starting to take the money out, of \$16 million. So, we are reviewing \$47 million, we have signed on \$16 million, and we have a total appropriation available of \$57 million.

ASSEMBLYMAN HOLLENBECK: How much did you have committed on January 1?

COMMISSIONER HUGHEY: I don't think the situation has changed dramatically. I think the numbers I just gave you are about the same numbers from January 1.

MR. GASTON: We have not been updating our numbers on a day-by-day basis.

ASSEMBLYMAN HOLLENBECK: Had you approved any rehabilitation loans before January 1? I am not asking for commitments; I want to know if you had any approved before January 1 of this year.

MR. GASTON: What does approved mean?

ASSEMBLYMAN HOLLENBECK: In other words, how many had you granted? You had the applications, how many had you granted?

MR. GASTON: The way this loan program is working, Assemblyman, causes-- We tried to work to the benefit of the potential applicants. In the loan program, you can apply for a loan and line up without doing anything, which is different than the construction grant program, where in order to get a grant you have to do everything. In the loan program, we allow applications to be made in a relatively simple form. Upon acceptance at the beginning of the process, we reach a point where we make a commitment for the loan. This puts the applicant in a position to design the facility with an assurance that he has funding for the specified amount with certain levels of interest rates and terms.

ASSEMBLYMAN HOLLENBECK: The answer is, by a report put out by the Department: "Through December 31, 1984, applications totaling over \$46 million have been received. No loans have been awarded through that date."

COMMISSIONER HUGHEY: I think that is accurate, Bob.

ASSEMBLYMAN HOLLENBECK: That was the question I asked. The answer should have been "none."

COMMISSIONER HUGHEY: But, commitments have been made.

ASSEMBLYMAN HOLLENBECK: Yes, but there were none granted. The answer was none. We have committed a lot of moneys for other things and, all of a sudden, it doesn't even get spent.

COMMISSIONER HUGHEY: I think this is considerably different.

ASSEMBLYMAN HOLLENBECK: This money has been around for a long time, and as of the beginning of this year, there were no approvals; no money was spent. This is your report (Chairman referring to report he is holding), unless we were having a feasibility study done.

MR. GASTON: Once the projects are commissioned, they go to design. The design is based upon our commitment so they will know where they stand.

ASSEMBLYMAN HOLLENBECK: How long have we had applications coming in for that?

MR. GASTON: The first round of applications came to us in October of 1983.

ASSEMBLYMAN HOLLENBECK: In 1984 we still had not approved any. We just started to approve them a short time ago.

COMMISSIONER HUGHEY: No, no, that's-- Bob, I admit it, always, when you hit me with an answer that I agree with. The answer you gave yourself to your former question was "none," and I agree with that. But John just explained how this program works. People first came in in 1983. I think if we have learned nothing else in this State, we have learned that we don't ask people to make major commitments to projects before they have a commitment from the State.

We gave those people a commitment, and based on that commitment they went to design. Now we have a lot of projects sitting around that have never moved forward because they went into the process and made a major commitment of funds without a commitment from the State. This is an exception. So in 1983, after we reviewed the first round, those people spent six months to a year or a year and a half in design, and they are now in a position to begin drawing those dollars. I don't see anything inconsistent about that at all.

ASSEMBLYMAN HOLLENBECK: Do you see any need to draw any more moneys from the Clean Water Bond Act for water supply projects?

COMMISSIONER HUGHEY: The 1976?

ASSEMBLYMAN HOLLENBECK: Yes.

COMMISSIONER HUGHEY: That is pretty well tapped out.

MR. GASTON: If we could get that money back we would use it to complete some unanswered commitments on the sewer grant side. As a matter of fact, we have two different types of recipients who are unhappy. We have the water supply people who want to keep the money, and we have the sewer people who want to take it out.

ASSEMBLYMAN HOLLENBECK: How many feasibility studies have been done?

MR. GASTON: Let me give you a digested version of feasibility studies we have ongoing. We talked about the Manasquan River, which is not a feasibility study in the same sense, but we have feasibility studies under the bond act in South River for water supply purposes. That is eastern Middlesex County. Regarding the Camden metropolitan area water supply feasibility study, that has been awarded and is moving along nicely.

The Atlantic County area water supply feasibility study will be started in the current fiscal year. We have a statewide interconnection feasibility study that is in its second half, and it is being completed. We have set up an account for the evaluation of contaminated wells and well fields. As you know, that was something that was not contemplated in 1981, and it has become more and more of a problem. We set up a revolving list of consultants whom we can call upon to come in to do a preliminary engineering analysis in areas like Pomona Oaks and others which have critical water supply needs, but not to supply obvious answers as to how we should go about solving them.

We have four county demonstration projects which are being funded under certain provisions of the program. We have a long-range watershed protection program that is being funded under the Water Supply Bond Act through a contract with Rutgers University. We have a study of the various methods that one can use in providing safe drinking water to our communities, in the sum of some \$600,000. The

purpose of that is anticipation that what we have been finding through the A-280 testing program will become more and more prevalent. The need to provide a reasoned means by which we can guide an approved treatment technology is apparent. So, a special water treatment study was commissioned and is just being initiated.

I think that gives you a flavor-- Well, we have a whole series of ground water studies which are not exactly feasibility studies, but they are studies which improve our understanding of the science of ground water supply and ground water resources through the United States Geological Survey and the New Jersey Geological Survey. We are doing work in Camden, Atlantic, and South River. We will be moving to North Jersey to study the Bedrock and Berry Valley aquifers as part of this long-term program to understand and to utilize that understanding in our allocation program to extend the ground water resources of the State for use by our citizens.

ASSEMBLYMAN HOLLENBECK: You even had a couple that I didn't have. Of course, you are going to submit to us where the moneys are coming from, how much they cost, the contract numbers, etc. so we will have that information for our review.

COMMISSIONER HUGHEY: Bob, some of that is in the package we have for you today. Anything that isn't in the package will be put into an addendum.

ASSEMBLYMAN HOLLENBECK: I wish Mr. Ricci were still here because I have some questions with reference to the Authority. You are the Chairman of the Authority by your position-- How many employees does the Authority have?

COMMISSIONER HUGHEY: Roughly 120, Bob. Those are the people who were transferred over when the Authority was created.

ASSEMBLYMAN HOLLENBECK: How many people of the Department of Environmental Protection are working within the area of water supply?

MR. GASTON: Broadly, the water supply element now has about 60 people working on water supply and safe drinking water.

ASSEMBLYMAN HOLLENBECK: So, we're talking 60 people then within DEP and 120 employees of the Authority.

MR. GASTON: Maybe I can extend that. In addition, we have a number of people in the New Jersey Geological Survey who are working on water supply. I think maybe you could say between 10 and 15. Under our contractual relationship with the United States Geological Survey, a substantial amount of the resources over there are being funded by the joint ground water studies we have. So, I think we have well over 100 people, if you tabulate all of the people who are working on water supply related activities.

ASSEMBLYMAN HOLLENBECK: Okay. I guess you are deferring them from the Department, plus the 120 of the Authority itself, so we are talking about 220 people directly related in the State.

COMMISSIONER HUGHEY: Related to the water supply system. I would think that is a conservative number.

ASSEMBLYMAN HOLLENBECK: What are the total revenues of the Authority?

COMMISSIONER HUGHEY: I don't have that off the top of my head, Bob.

ASSEMBLYMAN HOLLENBECK: What are the total expenditures of the Authority?

COMMISSIONER HUGHEY: I don't have that off the top of my head either. I do have an annual report, which I think was just issued about a month ago. I can get you a copy of that.

ASSEMBLYMAN HOLLENBECK: I want to determine -- and this is really why I wanted Mr. Ricci here because I think he would have these numbers -- whether the rate schedule of the Authority is bearing the full expense of water supply.

I want to see whether or not the general revenues are being used to support any debt service of any of the State water supply systems. You say there are delinquent payments of revenues on return of payment. I would like to see that. The reason why -- and this might sound like nitpicking to some of the public -- is that the general policy set by the Legislature in 1981 dealing with water supply was that those who use it should pay for it. That was the reason why we created the Authority, why we used revenue bonds where possible, etc., and that was the policy, because we had known previously that it

was not operating that way. We knew that the rates for State water were held artificially low by being supplemented very heavily within the DEP for the debt services of the State reservoirs. We felt it was unfair for the people of South Jersey, who are on well water and ground water, to have to pay for somebody else's water so their rates would be held low. That was the whole policy question. I want to see if that policy is being followed through. As I said, it sounds like nitpicking.

COMMISSIONER HUGHEY: Bob, not only is it a fair question -- I can give you the annual report numbers -- but I can give you an answer to it. We follow, within the Authority, the policy set up by the Legislature, which is reflected in the annual report and, more than that, is reflected in the rate hearings we hold. I mean, we have to have an Authority which collects, plus a reserve, that which it spends. In addition to that, as I think you are aware, we negotiated past due payments on things that were put into place, so there was an agreement reached with the Treasurer on what had to come back from former bond issues from the Water Supply Authority as part of the rate structure.

There are two variations to that which have nothing to do with the Authority. The debt we talked about before was the debt that was issued by the State for interconnects, and the State was having trouble collecting that money, not the Authority. The other variation to that is the variation that we got through the modification in the bond money last year to allow us to do some of these critical area studies which do not necessarily transfer themselves to a specific project. So, there are some things within the bond issue dollars -- not the Authority's operations, but the bond issue dollars -- which are not directly traceable to a final project. Critical area studies are not going to be in that category; contamination studies are in that category. So, there are going to be some projects here done for the benefit of the State as a whole, particularly in the ground water area, that I think will be hard to change back through the bond issue. However, with your help, we clarified that language.

Therefore, I think the answer to the first question is, the Authority pays for what it does. It sets its rates accordingly through a fairly lengthy process. The only two variations from bond issue moneys are the things we are doing in ground water, which the Legislature knows about, and the second variation is the loans that we can or cannot collect, depending upon whether municipalities choose to pay us back or not.

ASSEMBLYMAN HOLLENBECK: There are always ways of getting the money. Assemblyman Adubato had a couple of questions too.

ASSEMBLYMAN ADLBATO: The only question I had really centered on the New Jersey pollution discharge elimination system. Mr. Gaston, you stated that in that particular program the Department had done a great deal to make the enforcement of, or the giving out of, permits to municipalities and industry that were discharging into our waterways-- You said that the Department had been very diligent in that process, and then you outlined the reason why -- we improved water quality. You talked about that. Was that before or after the \$1 million the Department received for 48 new positions to do away with the very dramatic backlog in that program, which was addressed by the Joint Appropriations Committee last year in a budget resolution?

COMMISSIONER HUGHEY: It was before, during, and after, but it certainly stepped up, as you know, from our Joint Appropriations appearance this year. It certainly stepped up after the Joint Appropriations supplemental last year.

ASSEMBLYMAN ADLBATO: When you were outlining the number of staff positions, if I may restate the Chairman's question, the number of people involved in the Department in the area of water supply, or dealing with water -- did that include the 48 positions?

MR. GASTON: No.

ASSEMBLYMAN ADLBATO: Why do we separate the NJPDES program out as employees who are involved with water quality or water supply?

COMMISSIONER HUGHEY: Well, I think what we are trying to do is give Bob an accurate answer to his question, which is simply to deal with the water supply projects we discussed today. Almost everything in John's Division is interrelated, and there are over 500 people

in that Division. There are 588 people as of today, and they are all related in one way or another to water supply, water quality, or water enforcement.

ASSEMBLYMAN ADUBATO: My final question is, we were talking about municipalities that the Department was finding it difficult to get money back from based on the interconnect dollars that were given back at the time of the last drought. The City of Newark owes the Department how much?

COMMISSIONER HUGHEY: I don't know what their number is, Steve, but they do owe us some.

MR. HOFMAN: It is probably as much as \$5 million at least.

COMMISSIONER HUGHEY: Around \$5 million? (addressing Mr. Hofman)

MR. HOFMAN: At least.

COMMISSIONER HUGHEY: Steve, it is about \$5 million.

MR. HOFMAN: It's at least \$5 million.

COMMISSIONER HUGHEY: But they are not there by themselves. I mean, Jersey City is there in North Jersey, Passaic Valley--

ASSEMBLYMAN ADUBATO: (interrupting) I am particularly interested in the City of Newark because they own the water supply with the Pequannock system that services a very significant percentage of the people in my legislative district. So, I am particularly interested in the Pequannock Water System. Thank you.

ASSEMBLYMAN HOLLENBECK: Assemblyman Shinn?

ASSEMBLYMAN SHINN: The municipalities where you are having problems with collection were a part of the whole system. They were component parts of that. They do not have a contract for repayment, as I understand it, because they wouldn't sign one. Is that right?

MR. HOFMAN: The way that worked was, we tried to get a negotiated agreement with the seven major purveyors. Let me tick those off so that everyone understands: Newark and Jersey City would be the two municipals; then you have the two commission types, North Jersey District and the Passaic Valley Water Commission; and then you have the three investor-owned systems, the Hackensack Water Company, the Elizabethtown Water Company, and the Commonwealth Water Company.

The Elizabethtown, Hackensack, and Commonwealth Companies have all made payments. Passaic Valley made one payment. The others have not made any payments.

ASSEMBLYMAN SHINN: What is the provision for nonpayment? Is there a penalty, do you get interest on the deferred payment, or what?

MR. HOFMAN: That was not set forth specifically in the legislation. The last letter that went out to them threatened that if they did not begin to pay immediately, we would turn them over to the Attorney General's office for prosecution.

ASSEMBLYMAN SHINN: From their point of view, would the debt service that would reduce their debt to the State be part of their expense for a rate increase?

MR. HOFMAN: I would assume so, yes. The Treasurer has set an interest rate, so anything they don't pay now, they are being charged an interest--

COMMISSIONER HUGHEY: (interrupting) No, I think what Bob means is, that is the way it was designed to work. Obviously, it would have been consistent with the legislative mandate. We would have developed a charge with BPU, which we did. We would structure an agreement with the water supply purveyors, public or non-public, to pay back that charge in some reasonable fashion, and they would put it onto their rate structure. I'm sure the reason they are not paying back is that they do not want to put it onto the rate structure.

ASSEMBLYMAN SHINN: I was just trying to ferret out what their reason is -- since the improvement should be a benefit to their overall system -- for not wanting to pay, and if it were strictly a rate charge.

COMMISSIONER HUGHEY: I think that improvement is a benefit to their overall system if we are in a position like we are in today. Up until three months ago, I think a lot of them questioned whether that improvement was something they even wanted. They want it when they have to transfer to their benefit. When they don't have to transfer their water, I'm sure it becomes a smaller item on their agenda.

ASSEMBLYMAN SHINN: The other question I have is related more to water quantity. On the previous chart you showed us, it looked as if August was sort of the key in the graph where you had significant water usage in July and August, which is the next 60 days. Historically, how does that compare to the last 60 days in water usage; for instance, April and May versus June, July, and August type utilization? How big of an increase in water utilization is there during the summer months?

MR. HOFMAN: Well, in the summer months it goes up at least 25%.

ASSEMBLYMAN SHINN: Twenty-five percent?

MR. HOFMAN: At least 25%. Here again it varies, depending on whether you are in a real urban area or whether you are in suburbia where people wash their cars, water their lawns, and things of that nature. So, you have a lot of factors, but generally speaking it goes up about 25%.

MR. GASTON: The results of the imposition of the first stage requirements in April and now the rationing are still to be determined, but our usage during March, April, and now through May is basically flat, although in the last several days, we have gone down maybe 3-1/2%. What we are seeing is that at a time when water use would be rising, we're flat. So, something is happening, and we consider that to be a positive response. The base from which it is happening changes on a month-by-month basis because of the changing use patterns in May, June, July, and August.

ASSEMBLYMAN SHINN: Okay, thank you.

MR. HOFMAN: I would like to correct one statement, if I may, in answer to Assemblyman Adubato's remarks about Newark. Newark's debt is not quite \$5 million; they owe about \$3.7 million.

ASSEMBLYMAN ADUBATO: That doesn't mean they have paid any from what it was before. That was always the figure, and they haven't paid any.

MR. HOFMAN: No, no, no. That was the figure. From memory, we said \$5 million, but I have been hunting through my records here and I found that it is really about \$3.7 million. They have a direct bill

of \$2,334,000, and then they also have their share of their ownership in the North Jersey District, which is about 40% -- roughly 37%. So, that would be another--

ASSEMBLYMAN ADUBATO: How much does North Jersey owe?

MR. HOFMAN: North Jersey owes \$3,590,000.

ASSEMBLYMAN ADUBATO: Okay, thank you.

ASSEMBLYMAN SHINN: I don't see any incentive built into that scenario we are discussing for the towns to pay the bill if there is not an interest penalty for late payment. Maybe that is something the Legislature needs to address. I would think that should be built into this whole structure to treat cost, and more for late payment than they can sell bond anticipation notes for, or else they are using arbitrage on their end. While this whole process is ongoing, the State should be getting interest on that money so that other municipalities are not being penalized by a lack of use of the funds. Do you follow what I am saying?

COMMISSIONER HUGHEY: I think that probably would be a good idea. The only penalty we can impose is to hold back, for example, a rehab loan, which just shoots us in the foot. That doesn't do us a whole lot of good. You should know, Bob, and I know the Committee Chairman knows, that the preponderance of bills in the Legislature addressing this issue are forgiveness bills. They are not penalty bills. They are retroactive forgiveness bills for the full amounts.

ASSEMBLYMAN HOLLENBECK: If the North Jersey District Water Supply is a State agency, why can't we get the money back from one of our own State agencies?

COMMISSIONER HUGHEY: We have the same problem with them. Bob, we went through a process, we designed a process--

ASSEMBLYMAN HOLLENBECK: (interrupting) It seems to me that you can't have it both ways. If you want to call it a State agency, then you should be able to get the money back from that State agency very easily. I would bring that to their attention, if they are not aware of their State status.

COMMISSIONER HUGHEY: Public status is a better way to say it. Public status is, I think--

ASSEMBLYMAN HOLLENBECK: (interrupting) There are a couple of other things, all right? One is, the ground water of the State belongs to whom, just so we can clarify this? Who owns the ground water of the State?

COMMISSIONER HUGHEY: That's a tough question. I think the ground water of the State belongs-- We have taken the position, particularly recently, that it belongs to the State. We have testified within the last six months on the first diversion of a private company on ground water, which I think the Chairman knows.

ASSEMBLYMAN HOLLENBECK: The surface water of the State belongs to whom?

COMMISSIONER HUGHEY: The surface water of the State, as the system is coordinated, belongs to the State.

ASSEMBLYMAN HOLLENBECK: Unless the State has given a legislative grant to--

COMMISSIONER HUGHEY: (interrupting) Unless a company has a grant--

ASSEMBLYMAN HOLLENBECK: (interrupting) A legislative grant?

MR. HOFMAN: The State owns the waters of the State.

ASSEMBLYMAN HOLLENBECK: Unless the State has given away the rights of some of the waters of the State.

MR. HOFMAN: That may wind up being litigated some day. Right now, as a matter of agreement, I think the State supremacy would respect--

ASSEMBLYMAN HOLLENBECK: (interrupting) Well, there has been litigation on that particular question, hasn't there?

MR. HOFMAN: Yes, and there may be many, many times in the future.

ASSEMBLYMAN HOLLENBECK: Of course, you know the one I am referring to is Dundee.

MR. HOFMAN: Right now I think we have an agreement with respect to what Dundee's--

ASSEMBLYMAN HOLLENBECK: (interrupting) Somehow it was amicably settled. That is what made Wanaque South work. You know it

and I know it. That was part of the settlement. I knew the answer to that, but I just wanted to get it on the record.

Another point is one that I brought up earlier. It is something that still bothers me no end. I don't agree with you with regard to Ramapo pipeline, but that's okay. Reasonable people disagree. I personally think that maybe we should have proceeded with the southern portion, even if it was just dealing with augmenting a flow into the Passaic River for other areas, particularly the Passaic Valley Water Commission. No one likes the quality of their water. I have said it before; 80% of it was sewerage during 1980 and 1981. It was treated; it was super-chlorinated to the point of forming chloroform which caused some problems with the water.

In the meantime, I think it is imperative for the Department, if they haven't been doing it, to look at the permits on the Passaic River and its tributaries to see that those plants are operating at their permit level on what they are allowed to do; to see what we can do; and at least to see if that portion is being followed through. If they are not, then so be it. I think we are going to have to apply some restrictions because we can't continue.

Again, we are going to have further hearings. I would like to have some of the purveyors of the water around the State appear. There are a string of little water companies around the State, and a lot of big ones. What has happened here, of course, is, we are talking about the most heavily populated area of the State which is having this problem. Granted, things have piled up on us much faster than anyone anticipated. I can't blame the Department; they can't make it rain, as we said. Personally, I think there are some things we could have moved a little faster on. That, again, is a matter of opinion. You can argue with it.

I would hate to think that if we go into what we anticipate this summer -- because this is not over -- we are going to have problems if we have water in one area of the State and we are not prepared to move water on an interbasin transfer. I am primarily thinking about the State reservoirs. To me, not only interconnections were important in 1980 and 1981; the other thing of importance was interbasin transfers. They became very important.

The other thing, of course, is the concern about the salt water intrusion in the Camden well fields, and along the shore area because of the heavy summer crowds.

I think we are going to have some real problems with that. I want to thank the Commissioner, John Gaston, and Dirk Hofman for coming to brief the Committee. I realize that sometimes we get heavy in our questioning. It is only in the elan of the situation that you get the fervor of it. But this is so important to the State. We should all realize, and the public should realize, that everything we talk about in the State, from toxic waste to solid waste and everything else, is to protect the water of the State. Everything we talk about in this Committee reverts to the quality of water. That is how important it is to the State. We have to handle it right. If we have a problem within that legislation, Commissioner, and the mandate we gave you doesn't give you the authority, or if you have problems dealing with any appropriations, see the Committee, and we will gladly try to hammer those things out for you. It is not the Legislature's intent to have anything go wrong with this program. From what we did in 1980 and 1981 -- Dirk was here, John was here, but you were not here, Commissioner -- I am sure there are mistakes. There had to be mistakes made. This was all new; it was different. No one else had the experience, and we did it. If we have to correct it, we will gladly correct it. Reasonable people will do that for you.

So, again, I want to thank you very much.

COMMISSIONER HUGHEY: Mr. Chairman, we don't really have any complaints about the response of the Legislature. We think you did a pretty good job in 1981. The one correction we wanted was the correction we got on the ballot last year for the purposes of studies. We are satisfied that the Legislature gives our appropriations bills the attention they deserve. When they take a little longer occasionally, we understand why. We think we have a very good plan in this State, and we think we built it with the Legislature. We think we are on target. We appreciate the time.

ASSEMBLYMAN HOLLENBECK: John, one other thing. You said you would come up with the chart that your wife couldn't understand. You are going to simplify it so that we can understand it.

Again, thank you very much.

COMMISSIONER HUGHEY: Thank you.

ASSEMBLYMAN HOLLENBECK: And, thank you, members of the Committee.

(HEARING CONCLUDED)

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