

PUBLIC HEARING

before

COMMISSION TO STUDY ADVISABILITY AND PRACTICABILITY
OF FORMULATING AND IMPLEMENTING A COMPREHENSIVE
WATER SUPPLY POLICY AND PROGRAM, CREATED UNDER ACR 31.

Held:
October 8, 1968
Assembly Chamber
State House
Trenton, New Jersey

Members of Commission present:

Assemblyman Herbert M. Rinaldi [Chairman]

Assemblyman W. Allen Cobb

Assemblyman John J. Fekety

Senator David W. Dowd

Also:

Assemblyman Douglas E. Gimson

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I N D E X

	<u>Page</u>
Brendan T. Byrne President Board of Public Utility Commissioners	7
Robert A. Roe Commissioner Dept. of Conservation & Economic Development	27
Wayne Dumont, Jr. Senator, 15th Legislative District	59
Walter Davis Mayor, Bloomfield, New Jersey	56 A
Joseph R. Brumale Chairman North Jersey District Water Supply Commission	67 A
Oscar R. Wilensky Counsel North Jersey District Water Supply Commission	80 A

New Jersey State Library

ASSEMBLYMAN HERBERT M. RINALDI [Chairman]: Could I please call these hearings to order.

I would like to introduce myself first, if I may. I am Assemblyman Rinaldi from Essex County who has been designated Chairman of this Commission. I would like to introduce my colleagues on the Commission, starting from my left, Senator Dowd from Essex County, Assemblyman Cobb from Morris County and Assemblyman Fekety from Hudson County.

I would also like to take the opportunity, if I may, to introduce two gentlemen whom this Commission has appointed as Special Consultants to the Commission, who have been of considerable help to us in our deliberations and thinking prior to this hearing. These gentlemen are seated here to my right. The first gentleman is Mr. Percy Wilson from Essex County and the second gentleman is Mr. Karl Honaman, also from Essex County. Mr. Wilson is a man who brings to our Commission great technical information in the area of water supply and water management. Mr. Wilson has served in an executive capacity over many years with the American Waterworks Association and has brought guidance in technical matters and great thinking in that area to this Commission.

Mr. Honaman, former Mayor of my Town of Glen Ridge, who is familiar with the administrative problems relating to water as it affects a particular municipality, also has served administratively in the Eisenhower administration as Deputy Director of Defense under President Eisenhower and has brought guidance to us with respect to administrative problems.

Both of these gentlemen have been serving voluntarily and without remuneration and this Commission certainly is very thankful that we have men of this ability and this wisdom who have sought to serve us without remuneration and for that we are most thankful.

I would like to indicate at this time that we are very pleased that the invitations which have been sent out to testify before this Commission have been well received. We have had an excellent response and I believe that the hearings which will last the next three days will be well attended and will be most fruitful. I wish to thank those individuals who have accepted the invitations and are willing to give their time and their effort to make these hearings productive.

I might add that the record of these hearings will remain open until November 1st of this year. There are many who I am sure would like to testify but who for one reason or another will not have the opportunity to appear in person these next three days. Accordingly, the record will remain open for any further statements that anyone wishes to submit between now and November 1st.

I would just like to make some introductory remarks with respect to the nature of these proceedings and the nature of the problem with which this Commission is concerned. This Commission has been formed by the President of the Senate and by the Speaker of the Assembly, pursuant to Assembly Concurrent Resolution No. 31, which I along with 28 co-sponsors introduced this spring in the Assembly. Assembly Concurrent Resolution No. 31 is a concurrent resolution which created a

Commission to study the advisability and practicability of formulating and implementing a comprehensive water supply policy and program to meet the long-range water needs of this State.

I would just like to place in the record some statistics and some observations which are most significant and which I believe help to focus the course of these hearings - focus the problems that the State of New Jersey is faced with in the future.

By the year 1990, New Jersey's growth and development will require almost two and one-half times the amount of water that is used today. This increase will be needed to meet the demands of a population increase of three and one-half million people and the demands of increased industrial growth. The concentration of development in the corridor between Bergen County and Trenton, where 70 per cent of the population will live, will require geographical distribution of much of New Jersey's generous natural water endowment.

With these statistics in mind, I need not remind this Commission of the recent crisis this State has lived through, not only with the problems of drought, but also with the related problems of flooding. In 1965 we were on the verge of running out of water in Northern New Jersey. Strict emergency measures had to be enforced. Governor Hughes had to invoke archaic World War II emergency statutes to meet the crisis. A program had to be worked out and held in reserve to literally evacuate patients from hospitals which did not have their own self-contained ground reserves and to contemplate using railroad

cars and tank trucks to truck water to areas where water was desperately needed.

In May of this year, the Passaic Valley witnessed a flood of nearly catastrophic proportions. Property damage ran into the millions of dollars, 29 lives were lost as a result of drownings. It was reported to me that another two inches of rainfall on May 30th, 1968, in the Passaic River Valley would have resulted in a catastrophe of untold magnitude, a frightening picture indeed.

I needn't remind any of us of the very serious problem of salt water intrusion into the fresh water aquifers of Central and Southern Jersey. The problem is a very serious one in Middlesex County and in some of our southern counties. The problem of ground water resources will grow; it will not diminish.

Gentlemen, I would like to read into the record a few excerpts from what I consider very significant publications that have been issued within the last year.

I would like to read from "Water Resources Management in New Jersey," a report by the State of New Jersey Commission on Efficiency and Economy in State Government, and I quote:
[Reading]

"This study of water management in New Jersey conducted by the Commission on Efficiency and Economy in State Government discloses the urgent need of preparation of a statewide comprehensive water plan. To move into the future without a plan to guide the State's actions will invite disaster and threaten deterioration of community life and the environment."

I would like further to quote from the publication,

"A Capital Program, the Governor's Commission to Evaluate the Capital Needs of New Jersey." I quote:

[Reading]

"The Commission would like to emphasize the need for a strong plan for total water management. Study groups, citizen groups and water users have been asking for such a plan for a long time. It is recommended that expeditious action be taken toward the implementation of a workable water management plan, such as proposed by Commissioner Roe, to correct the present state of conflict and disorder."

I quote further from this source:

[Reading]

"There is evidence that more orderly planning might be achieved if there were a coordinating agency governing all present and future water resources and their distribution. The State, plus the 300 odd public and private companies, authorities and commissions, present a broad array of interests which should have representation in a single body."

I would like to quote one last source, namely, the proceedings which were held on November 2, 1967, of the Public Policy Forum on Surface Water Control in New Jersey, conducted by the Extension Division, Bureau of Government Research of Rutgers University:

[Reading]

"Over the past few years, most of us have attended many conferences and meetings relating to some phase of water management. It should be amply clear to us at this point that there is a serious water problem in New Jersey in

drainage, water supply and flood control. The three principal problems are: 1) The fragmentation of management of water resources. There are more than 2,000 governmental agencies that make decisions regarding water management in New Jersey. Decision-making is fragmented. 2) The wide variety of water objectives depending on the agency which has been assigned responsibility for a particular area of water management. Sometimes these objectives which individually are in the public interest conflict with each other. 3) The lack of an adequate coordinating structure to bring together the decision-making of these more than 2,000 agencies and 8 major functions of water management, namely: water supply, flood control, mosquito control, pollution control, drainage, recreation, erosion and sediment control, and fish and wildlife.

"The point which I would like to emphasize above all else is that our fundamental objectives should be total, over-all water management in contrast to managing for individual objectives of supply, flood control, drainage, mosquito control or any one of the other segments."

And lastly, and still from the same source, the conclusion of this source was as follows:

[Reading]

"In conclusion, we do have a very serious governmental organization problem in New Jersey with respect to total management policy. However, these problems are not so serious that they cannot be overcome by taking a good, hard look and making some changes. We have problems of fragmentation of decisions, conflicting objectives and inadequate coordination.

Improvements must be made because we are faced with critical water problems of supply, flood damage, drainage, siltation, pollution and recreation. The population is increasing rapidly, but our demand for water is increasing more rapidly. Do we possess the imagination, the flexibility, the open-mindedness and the will to seek solutions for the goal of total water management? Are we able to suppress the natural desire to perpetuate what is and has been in order to determine better ways? If so, then we are able to contribute to the broad goal of total water management for the public good."

Gentlemen, I need not comment further on the remarks which have been set forth in these, I think, very significant sources. I believe they set the tone of this hearing. Everybody points to the fact that we do have a very serious problem in this area. I hope that these hearings will be productive of significant testimony which hopefully may cause this Legislature to do that which is necessary.

At this time I would like to call on our first witness, Mr. Brendan Byrne. Mr. Byrne is the President of the Board of Public Utility Commissioners.

B R E N D A N T. B Y R N E: And a member of the Class of 1949 at Princeton University where I studied little problems while you were studying big problems.

Let me seriously, Herb, say that I appreciate the opportunity to speak and promise to be very brief.

I have with me Felix Forlenza, who is and has been Counsel to the Board of Public Utilities Commission for virtually a decade.

What I thought we ought to have on the record of these hearings is some flavor of really the limited jurisdiction which the Board of Public Utilities Commission has in the field of water and understanding that and understanding some of the problems we deal with could, I think, be of some assistance in the over-all recommendations which I am sure you are going to make to the Legislature.

First of all, we basically have jurisdiction only over privately-owned water companies in the State. There are some 145 privately-owned water companies serving 650,000 customers or perhaps approximately two and one-half million people. These companies vary in size. A great many of them are very small companies and I would like to call your attention to the problem of the small companies in a minute.

I listened attentively to your opening remarks with regard to the problems of water companies, by the way, and I have had the good fortune of having during my very few months in office an era of neither drought nor flood. But Mr. Forlenza has pointed out that during those critical periods the private water companies have fared very well. Their management, their organization, their ability to meet these crises has in our opinion, our staff's opinion, surpassed that of municipally-owned companies and partly, I think, because the private companies, with the cooperation of the Commission, have exercised a good deal of foresight. And we have as a Commission, and here I speak basically for my predecessors, allowed the private water companies to include in their rate base in calculating the charges to customers

"plant not in use," which is a rather foreign concept in rate-making. In other words, we have allowed them to put in capital expenditures for future needs and to anticipate needs in excess of their normal needs. And I do think in giving them a little higher rate of return and in giving them the ability to provide for these contingencies and emergencies, we have and the water companies have served their customers well.

The jurisdiction of our Board is limited to those privately-owned companies. There have been debates, and I think that perhaps you ought to consider the pros and cons of having the Public Utilities Commission regulate all water companies, including municipally-owned water companies, regulate them as to adequacy of service and regulate them indeed as to rates of service. At least, if the Public Utilities Commission does not regulate them, I think in talk of an over-all coordinating agency, you ought to consider the same type of regulation for municipally-owned companies as we now have for privately-owned companies. And incidentally, we have a very similar problem with regard to sewerage companies and you did again in your opening remarks make some mention to coordinating sewer companies in with water companies.

Now, let me say, having indicated our limited jurisdiction, having indicated even for the companies we regulate that we have virtually no control over their sources of water supply, the availability of water supply for them, their right or ability to divert water in the State - other agencies control that - we merely regulate rates, safety, adequacy of service, areas of

extension, and so forth - one of the pressing problems and frankly one of the reasons that I wanted to come here and place this problem before you is that, as I indicated to you, a great many of the water companies in New Jersey are very small companies which were created by developers as a necessary adjunct to a development. So, for example, a developer goes into a municipality and he wants to put up 500 homes and he cannot get either a municipally-functioning water company or a privately-owned water company to service that development. So he puts two wells down - I don't know why two, but it is always two - and he starts his own water company and that water company has some initial success, but the water company goes as a privately-owned company with the developer. When the development is finished, the developer who is more interested in development, and his business is development, not water, sort of walks away from that water company. Then it becomes a problem of either somebody picking up the water company and running it -- and it is difficult to run effectively and at a profit a small water company. There are people who are trying to do it on the theory if they pick up enough of them and can run them as sort of a conglomerate, they may be able to make money on them. But we do have actual instances where a developer owning the water company has just walked away from it and there is very little that our organization can do. We have one now pending in Passaic County where the developer has walked away from it, it has gone into bankruptcy, the trustee in bankruptcy has looked with great frustration to various State agencies in seeking someone who would supply water to the customers in this development

and there is no agency to my knowledge which to date has come forward with the authority and the ability to take over that function and to supply this development with water.

I think we are just beginning to see the problems in that area because up to now the original plant has been committed and the original lines are still in existence and the need for substantial capital improvement in the systems hasn't hit with full force, but I think it is going to. I think it is going to become a problem and I think the citizens of the State are going to demand that there be some agency in a position to do something about that.

So if I could indicate just that, that our chief problem is and will continue to be in the water field dealing with these small water companies which cannot really operate at a profit. I do not come here with concrete suggestions as to what type of an over-all agency is necessary. I frankly do not come looking to broaden the jurisdiction of the powers of the Public Utilities Commission. But I do say that there are those problems, that there are areas in municipal water supplies where supervision ought to be exercised and the same type of supervision for all municipally-owned water companies in the State, that there ought to be an over-all agency to deal with this existing and ballooning problem of the small water company and sewage company which either can't make it on its own or soon will be in a position where it can't make it on its own. And there ought to be some source of funds available, either somewhere in State government or through matching grants or through appropriations or through levies on existing water

companies - again we have not thought this through - to pick up the gaps in water supply to those customers, those citizens, who are or will be without a proper and adequate supply of water.

Other than to give you that broad outline and to have Mr. Forlenza answer any questions you may have, that is what I came to place before this Committee.

ASSEMBLYMAN RINALDI: Thank you, President Byrne. Can it be said that you would conclude from what you have just stated that there is a need for some type of reorganization within the structure of our government to coordinate these problems that exist? Is the word "coordination" a fair word? Is there a need for governmental reorganization?

MR. BYRNE: Yes. I like the word "coordination" rather than "reorganization." I do think that there ought to be some agency or board or the powers of some existing board or department ought to be expanded so that these problems which either get confused between agencies or which in effect no agency is handling can be picked up. I think one of the problems of being in the Public Utility Commission is that people somehow look to us on the assumption that if they have nowhere else to go, we must have an answer and it is with a sense of frustration that we face the problem that we have in Passaic County where just no one is there, no one is ready to take any responsibility and no one has the jurisdiction apparently to take any responsibility.

ASSEMBLYMAN RINALDI: Tell me, to what extent does your department coordinate its thinking and its programs and its activities with the Department of Conservation and Economic

Development? Just look at these two departments now --

MR. BYRNE: Yes.

ASSEMBLYMAN RINALDI: -- because you are concerned with a failing water company which provides a source of water to a particular area. Now to what extent does that problem and your thinking on that problem relate to the problems of Commissioner Roe's department?

MR. BYRNE: Well, you have to answer a question like that in terms of what jurisdiction we each have. If we each have some jurisdiction, the coordination between our two departments is remarkable. We each have some jurisdiction, for example, in the field of development of nuclear power and we meet regularly at the highest level on that. Here we have an area where I have no jurisdiction and Bob Roe has no jurisdiction and there is really nothing to meet on and work out. If either of us or both of us had some authority to try to work it out, I am sure we would have the utmost in cooperation and coordination between the two departments. You are dealing now with a field where neither of us have any jurisdiction so that the amount of coordination has to be limited.

ASSEMBLYMAN RINALDI: Does anybody have jurisdiction within government of this problem?

MR. BYRNE: I haven't found anybody with jurisdiction over that particular problem yet.

ASSEMBLYMAN RINALDI: Is it reasonable to say then that there is a clear gap here within our governmental structure?

MR. BYRNE: Well, I don't know if it is in governmental structure and I don't know- this is your philosophy rather than

mine - that government has to solve everybody's problems. But I do think there are areas - and I think that the private water companies will tell you that there are areas - where water on a private profit motivated basis is not feasible. As a matter of fact, the literature now abounds in discussions by private water companies to the effect that water is no longer a profitable business. Water isn't a profitable business as contrasted with electricity where every year there are growing horizons and new uses to which electricity can be put. So electricity can expand with the economy. But water doesn't really expand proportionately with the economy and water companies are not all that attractive as private enterprise investments, for example.

So I do think, getting back to my original point, that although the government can't be asked to solve everybody's problems everywhere, I do think in the area of water supply there is a very legitimate gap which government is going to have to pick up.

ASSEMBLYMAN RINALDI: Thank you very much, President Byrne. Senator Dowd, do you have any questions that you would care to ask Mr. Byrne?

SENATOR DOWD: Yes. Mr. Byrne, if you know, approximately how many small water companies as you described, referring to small developments, are in existence?

MR. BYRNE: We would gather that 100 of the 144 are tied in with developers which would make them small companies. We also have 24 companies which actually serve 100 customers or less.

SENATOR DOWD: One hundred that serve 100 or less?

MR. BYRNE: -- that serve 100 or less. And, Senator, there are water companies in existence in this State which aren't even registered with us they are so small.

SENATOR DOWD: To be authorized or to be created as a water company as such, isn't it necessary to have the permission of the P.U.C. or some governmental agency? If it is not yours, do you know what agency?

MR. BYRNE: I think the answer is - and I keep my lawyer at my side on this - you can organize a water company without our permission, but as soon as you get into the area of servicing customers, then you are regulated by the P.U.C. We also control the financing.

SENATOR DOWD: As a practical matter, you control the creation and the inception of the operation.

MR. BYRNE: Yes, we do.

SENATOR DOWD: And do you feel you are limited in any way in setting standards or qualifications? And I am not second guessing at the one in Passaic - but generally if there are 100 potential companies that might fail because of economic reasons, do you have any safeguards or standards that you may impose?

MR. BYRNE: Yes. I think within the limits of practicality, we can either tell a municipality, "You can't develop in this area," or we have to take the risks of a small water company.

SENATOR DOWD: Do you have any specific suggestions as to needs for further control by way of the creation of these companies to go in and service, whether it be a 12-house development or a 150-house development? Do you have any recommendations?

MR. BYRNE: I don't know. I think offhand that the problem is either you let them do it or you don't let them do it. If you allow a small water company to be established, you run certain risks and I think there are only two answers - one, you don't let a developer develop, or somewhere we get an over-all State agency that is willing to pick up a small water company and run it and run it at a loss, if necessary. The third alternative is, as I suggested very briefly, to look to these few people in the State who are willing to pick up and make a conglomerate out of a number of small water companies and, if they get too small, they are not even willing to do that.

SENATOR DOWD: Has this problem of water supply for these developments frustrated developments of residential areas in the State?

MR. BYRNE: That would be hard for me to answer as an expert because if the municipality is unsatisfied with the over-all program, including water and sewage, it probably never gets to us.

SENATOR DOWD: You said earlier in your remarks that during the periods of emergency the privately-owned water companies - I think you used the expression - "fared better" than the municipally-owned and I think generally you were only speaking about the two types of water companies, municipally-owned and private water companies - that the private water companies, and I assume you mean other than the 100 you referred to being the small development-type water company, the other 45 generally fared better.

MR. BYRNE: No, I think even the 100 fared better.

SENATOR DOWD: -- than the municipally-owned?

MR. BYRNE: Yes, I do.

SENATOR DOWD: By that you mean, their ability to service?

MR. BYRNE: In terms of having an adequate source of supply at the time. That may not be so 20 years from now when their two wells run dry and they are reluctant to dig another one.

SENATOR DOWD: Does your jurisdiction in granting permission to operate a service extend into going into their ability to supply their source of water or do you just go into the rates?

MR. BYRNE: No, we go into their ability to supply.

SENATOR DOWD: You go in in depth as to their ability to supply and their long-term needs?

MR. BYRNE: Yes, we do and as to their long-term needs, if they can show us that two wells can serve them for the foreseeable future, we have not assumed that they are going to walk away from the operation.

SENATOR DOWD: Does any other governmental agency aid you in the determination of their ability of source and supply?

MR. BYRNE: If necessary, yes.

SENATOR DOWD: Do they have to have their facts that they submit to you confirmed by the Department of Conservation or any other department?

MR. BYRNE: Mr. Forlenza tells me, yes, that they go to

the Department of Conservation.

SENATOR DOWD: That they would confirm their facts that they submit to you as to their ability to supply.

MR. BYRNE: Yes.

SENATOR DOWD: I have no further questions.

ASSEMBLYMAN RINALDI: Assemblyman Cobb, do you have any questions?

ASSEMBLYMAN COBB: Well, Mr. Byrne, you mentioned the development in Passaic County with 500 homes and I wonder if I heard you correctly in saying that ---

MR. BYRNE: No. I'm sorry. The specific reference I had was not to a development of 500 homes, Assemblyman.

ASSEMBLYMAN COBB: All right. Then I'll change it. There is a private water company that is in Passaic County that was started by a developer who has gone bankrupt and the receiver for the water company is having difficulty to operate this particular water company to supply these people?

MR. BYRNE: That's right.

ASSEMBLYMAN COBB: For what reason? Was there an insufficiency of water?

MR. BYRNE: It was a financial problem. Nobody wants to operate it. As I understand it, there is water there, it costs money to operate the water system and nobody is willing to do it and nobody can see a profit doing it, including the Bankruptcy Court.

ASSEMBLYMAN COBB: You mean the rates would have to be so high to supply these people, to pay for the operation of the Water Department, that would be set up there?

MR. BYRNE: Apparently so. In any event, we can't find anybody who wants to operate it.

ASSEMBLYMAN COBB: Somehow or other, in my opinion at least, something was done wrong at the beginning. He didn't have enough customers or he didn't make the development large enough. Is that the answer, do you think?

MR. BYRNE: There are all kinds of problems that these developers face. They may come in projecting a 500-home development and only develop 74 homes. This particular developer developed 74 homes. But there are all kinds of problems which are possible, but maybe not calculable.

ASSEMBLYMAN COBB: It appears to me there are 74 families, or whatever number of homes there are there, that are in a pretty embarrassing situation now.

MR. BYRNE: Yes, there are.

ASSEMBLYMAN COBB: I would think that the question or the problem that should be solved is to how this can be stopped in the future, in other words, so there will be a guaranty that those people in that development who buy these homes will have a reliable source of water.

Then I believe you said that some people can start a water company without permission of the Board of Public Utility?

MR. BYRNE: They can organize a corporation, just as you can organize a life insurance company without anybody's permission in this State, but to operate, to issue stock and to service customers, you have to have our permission.

ASSEMBLYMAN COBB: In my particular area there was - perhaps there still is - one or two or three private water

companies spread around the township. As you said, it was strictly a necessity on the part of the developer to get water to the houses that he was building in order to sell them. And when the houses were built, he developed a great disinterest regarding the operation of this water system. I think that one of the big problems was the fact that he had a bare minimum of water to serve these homes. There didn't seem to be any depth - I am not trying to make a pun on words - to his water system. The township did take over and they had to seek water and it has been quite expensive to find the water that is necessary for these homes. When you spoke of the developers providing - you seemed to sense that it was always two wells they started with - I just wonder how sufficient the wells were. Were there engineering surveys furnished to your Commission to show there are x number of gallons available per minute?

MR. BYRNE: Yes, there are. I would say by and large the problems that come up with these small water companies are not problems so much of the adequacy of the supply from the two wells, but from the fact that there comes a point where pipe mains have to be replaced or pumps have to be replaced and the additional investment just doesn't interest anybody.

ASSEMBLYMAN COBB: I know another small water company - I do it an honor calling it a company - I think it is about 10 or 12 homes - and another person would buy a piece of ground and connect up with the pipes in the ground and another one and another one until the first thing you knew, there wasn't enough water to furnish these homes. Now I don't know whether this was done illegally or is this something that occurs?

MR. BYRNE: No. Just speaking from our Board, I think, first of all, they would have to come to us with regard to the extension and, second, we would be very careful to see that sufficient water pressure was available before we allowed them to extend their service.

ASSEMBLYMAN COBB: You also mentioned a gap between your Commission and Commissioner Roe's department that you felt ---

MR. BYRNE: The gap doesn't necessarily lie between our two departments. It may lie between our department and the municipality or somewhere else. I would rather characterize it as a gap than as a gap between any two State agencies or governmental agencies.

ASSEMBLYMAN COBB: I don't mean this in the form of criticism. It was a thought that was developed by your remarks. I sensed that you feel that there is something that should be done there to coordinate these important departments. Have your commission and Commissioner Roe's department come up with any plan you think would be to the betterment of the operation that could be put into effect?

MR. BYRNE: I can't speak for Commissioner Roe. We don't have one, except that as I indicated this morning, I do think that an over-all coordination, agency, council, whatever it is, could serve both to coordinate and to examine at least and make a judgment in the area of where there is no governmental service, whether there would be or whether there wouldn't be.

ASSEMBLYMAN RINALDI: Assemblyman Fekety.

ASSEMBLYMAN FEKETY: Through you, Mr. Chairman - Mr. Byrne,

you mentioned earlier that the 144 private companies had fared much better than the municipally-controlled waterworks - much better - is that companywise or customerwise?

MR. BYRNE: Well, I am talking about service. When I am talking about service, I am talking about customers; I am not talking about whether the company made more or less money during this crisis. I just said they were better prepared to meet it and I am talking from the viewpoint of the customer.

ASSEMBLYMAN FEKETY: Let me ask you a pointed question. You don't have to answer it if you don't want to.

MR. BYRNE: That is more leeway than most witnesses have been getting lately.

ASSEMBLYMAN FEKETY: Do you think that the government should step out of the water business and turn it over to private industry?

MR. BYRNE: No, I don't say that the government should step out of it. First of all, as I indicated, I don't think water is an attractive investment in the sphere of private industry anymore. That may be partly our fault in rate-making. It may be a combination of circumstances, including the nature of the industry not being attractive to private investors anymore. But I don't think that private industry is all that interested in taking over water supply. I think you ought to ask them.

ASSEMBLYMAN FEKETY: Because of the rate of return?

MR. BYRNE: Because of the rate of return and because it is not an expanding industry.

ASSEMBLYMAN FEKETY: I get the impression from the material I have read and the research I have done that the water industry

is turning out to be like the railroad industry where the State is going to support it, support it to a certain point where the State is going to be forced to take over, and I just don't want to see the State stepping in and picking up all bankrupt corporations and wind up that we are going to be a State-run business house completely. The railroads have led the way and I hope that this isn't brought out at these hearings that it is going to follow the same path, that the State is going to have to pick up these little corporations, that the State is going to wind up paying the whole bill. I can picture the situation where the people in the development are paying for well water and at the same time we ask them to pay for reservoir water, to build reservoirs, to build transmission lines throughout the State. I can't see the justification there.

As far as the small corporations are concerned, maybe we ought to look at them the same as we do with the risk-plan insurance. Maybe these water companies ought to pool and if we do get a problem like this where a development is left without water, then maybe this pool can help this one development out. It may be a case where we have a few like this and we maybe have gone over that portion where we have been developing these little areas. Mainly what we are looking at now - what I am looking at is - the highly developed area - the water problem. Now is it a case of water supply or is it a case of water transmission or is it a case of it is a poor business risk and are the private corporations now saying, "Let's look at the State to bail us out"? Yet your department regulates ---

MR. BYRNE: Let me just say that the suggestion you make is an interesting one and it is one which Mr. Forlenza who has had a good deal of experience in this field has thrown out for discussion. I don't know that I am ready to support that recommendation at this time, but I do think that is one worthy of study. It is one which he has made as a specialist in the field. It is one which you have made from your reading of the literature and I certainly think it is one worth exploring.

ASSEMBLYMAN FEKETY: On the surface right now, as far as your office is concerned, you only can regulate the private companies.

MR. BYRNE: We regulate only private companies. We think that you ought to consider letting us regulate all companies.

ASSEMBLYMAN FEKETY: All companies?

MR. BYRNE: Yes.

ASSEMBLYMAN FEKETY: The only thing is, if all companies would be included, there would be an expense incurred by your office. This expense would be deferred by the other companies or incurred by the State?

MR. BYRNE: Again that is a question that we haven't resolved. We are, as you know, unique now in that the entire budget of the Department of Public Utilities will be picked up by the utilities. We are the only self-sustaining department in State government. What the various reactions would be toward increasing that budget so that we could regulate municipal companies, I am not sure.

ASSEMBLYMAN FEKETY: Thank you.

ASSEMBLYMAN RINALDI: Does anybody else have any further questions?

SENATOR DOWD: If I may go back at the risk of being repetitious, I just want to clarify my own mind - the creation of these water companies, not the initial incorporation, but the actual going into business, can only be done with the permission of the P.U.C.?

MR. BYRNE: That's right.

SENATOR DOWD: Do you feel there is a sufficient amount of guidelines as to the feasibility, the need, the capability of the company that is going into business, to be successful and to be able to continue? Do you think there are enough standards now in existence wherein you can make a judgment with a strong sense of security without the risk of having others like the 78 people without water and probably cancellation of insurance policies and the attendant problems that are created? Do you think there is some need for the Legislature to do something to help guide or to help firm up the situation so you wouldn't get into this problem?

MR. BYRNE: Well, Senator, I would answer that question only by saying, first, I think you would have to do it on a case by case basis, going back and looking at what was presented to the Commission and on what basis they made their judgment to allow this company to come into existence. I do think that there are standards and I do think if the standards are inadequate, they can be amended by regulation.

Empirically speaking, apparently there have only been two or three companies that have just gone under where nobody is

willing to pick them up. Again on a percentage basis, the judgment of my predecessors apparently has been sound.

Perhaps there may not even be a problem. Maybe these two or three examples we have had in recent years are most unique. But I think there is a problem. I think to the extent there is a problem, we are in the unfortunate situation of having nobody quite ready to pick them up. If nobody does anything, I think the municipality will be most naturally forced to pick up these problems. In the Passaic situation, the municipality wouldn't do it. But to answer your question, I think you would have to analyze it on a case-by-case basis. Maybe an analysis of that sort would lead you to conclude that under no circumstances would you allow a private water company to service more than a planned development of 100 homes. Frankly I think that is worth looking at from that type of a standard.

SENATOR DOWD: Thank you.

ASSEMBLYMAN RINALDI: If there are no further questions, I would like to thank you very much, Mr. Byrne, for taking the time to come and testify before us. Your testimony, I think, is very significant. It has touched on areas that I think some of us hadn't contemplated to be as serious as they are. I would like to thank you again very much.

MR. BYRNE: Thank you, Mr. Assemblyman.

ASSEMBLYMAN RINALDI: I would like to call as our next witness Commissioner Roe. Commissioner, would you identify yourself, please, after you get comfortably seated.

R O B E R T A . R O E : I am Commissioner Robert A. Roe of the New Jersey State Department of Conservation and Economic Development, Mr. Chairman.

ASSEMBLYMAN RINALDI: Would you speak up, Commissioner? This Assembly Chamber is not inaccurately referred to as a cave of wind and one of the problems is the acoustics. So speak up loud and clear.

MR. ROE: Yes, sir. I am Commissioner Robert A. Roe of the New Jersey State Department of Conservation and Economic Development.

I would like to first present if I may to this distinguished Commission a prepared statement for a specific reason, I think primarily to bring into sharp focus the basic background which I think is essential to understand before we can deliberate on resolutions to some of these matters. So if I may, I will proceed with my statement.

Chairman Rinaldi and distinguished members of the Commission, I welcome this opportunity to join with you today in these legislative deliberations on the crises facing New Jersey's water resources and fervently and respectfully trust, as a result of the findings of these hearings and on the merit of the case, that the Legislature of our State will take forthright action at the earliest possible date to provide the fiscal resources and the administrative tools essential for the implementation of the State's Blue Acres Water Resources Development Program as presented March 15, 1968 to the Commission to Evaluate the Capital Needs of New Jersey and submitted herewith as Exhibit 1.

When one reflects upon the substance of the mandate of the Legislature to this distinguished Commission, it is by no means redundant to reiterate the context of their resolution in that it brings into sharp focus the severity and the exigencies of this vitally important matter. The Legislature resolved that:

"WHEREAS, The State of New Jersey has recently experienced a most severe shortage of water supply, which threatened the health of its people and caused heavy losses and inconvenience to its citizens and to commerce and industry; and

"WHEREAS, It is the opinion of many informed technical authorities that this water shortage might have been prevented to a large degree by more adequate advance planning and by the proper execution of such plans with relation to our water supply works in the State; and

"WHEREAS, Numerous studies of water supply problems have been made during the past few years, including a report by the New Jersey Committee of the Regional Plan Association, dated July 1967, and the Report of the State of New Jersey Commission on Efficiency and Economy in State Government, dated November 1967, which studies clearly have indicated the need for improved long-range planning, co-ordination and organization of our water supply; and

"WHEREAS, It is clearly evident from the foregoing that the agencies which have been and are now in charge of the planning and development and management of our water supply works have been unable to perform their duties adequately and to discharge their responsibilities fully; and

"WHEREAS, By 1990, New Jersey's growth and development will require greater than double the amount of water presently provided for homes, industries and public uses; and

"WHEREAS, The responsibility for rectifying the present condition, and the taking of such steps as are necessary to assure New Jersey's citizens of an adequate and economic water supply, rests finally upon the Legislature of this State which established the present water supply organization...."

In order to thoroughly understand the order of magnitude and the gravity of the continuing mounting crises affecting our water resources, the situation can be graphically manifested by the poignant revelation of the "Four Horsemen of the Apocalypse" -- DROUGHT -- FLOOD -- POLLUTION -- DEATH! Dramatic perhaps in some people's eyes but not when you consider that never before in the history of this State have we faced:

the severest drought of record, costing the people and industry of this State countless millions of dollars in damages, unnecessary hardship and great personal sacrifice;

a catastrophic flood, affecting five counties, but particularly severe in the Passaic River Basin, with enormous property damage, costing yet undetermined millions of dollars for rehabilitation -- but what price can be affixed to the misery, heartbreak and personal tragedy of the people directly affected;

extreme pollution in the Rockaway River, requiring court injunctive action to forestall building construction in eleven communities because of inadequate sewerage facilities permitting over five million gallons a day of raw untreated sewerage to poison the Rockaway River; and

the death of eight people during the great flood -- six of whom were children.

All of these catastrophies occurred within the last four years. For anyone to dismiss these ravages of nature by labelling them as unavoidable acts of the Almighty would indeed be a travesty and fraud against the people of this State.

It certainly was prophetic on January 11, 1955 when the Legislature adopted Assembly Joint Resolution No. 4 establishing a legislative commission to study and report to the Legislature as to the acquisition and development of the water supply resources of the State and their observations at that time, as expressed in the preamble to the resolution, stated:

"...The problem of the provision of additional adequate water supply for the citizens of this State in the immediate future is of paramount importance and requires solution at the earliest possible moment...." That was in 1955.

To understand the future, we must understand the past; to determine the proper course of action, based on knowledge and fact, it is most important to review a short chronology of the ensuing and resultant action of the Legislatures since that time.

The then legislative commission engaged the engineering firm of Tippetts, Abbott, McCarthy and Stratton first to prepare a preliminary survey and report of New Jersey's water resources and then to complete a comprehensive master plan for the development of these resources which, in fact, was submitted to the legislative commission on December 31, 1955, popularly known as the TAMS report, with the following comment:

"This, our final report, presents the results of our comprehensive investigation of New Jersey Water Resources. The basic water resources, both surface water and ground water, are covered in detail. Estimates of water demands to the year 2000 have been made and numerous plans and combinations of plans to meet these demands are presented. Legislative action, financial requirements and administrative organization necessary to implement these water supply plans are thoroughly discussed. A summary of the report precedes the main body of the report."

For your guidance and reference a copy of the TAMS report is submitted herewith as Exhibit II.

I think it is interesting, as an aside, to comment that in the population projection and in the estimated water consumption to the year 2000 in the TAMS Report, it was just about half of what has actually happened.

In order to expedite and to meet the exigencies of the water situation prevalent at that time, the Legislature, based on the preliminary TAMS survey report, passed legislation and an accompanying bond act authorizing the expenditure of \$100 million to

acquire and develop the Chimney Rock Reservoir site in Somerset County together with additional groundwater research in various areas of the State including the Wharton Tract. The matter was placed on public referendum in the Fall of 1955 and was voted down by the people and, therefore, the legislation never became effective.

In June 1956 as a result of previous studies, including the TAMS report, the Legislature enacted into Law Chapter 60, Laws of 1956, directing the Commissioner of Conservation and Economic Development to acquire the Round Valley Reservoir site (acquisition of land only), provided a direct appropriation of \$3 million for that purpose and specifically limited the water supply source for this reservoir to the Delaware River exclusive of its tributaries. It is significant to note that the legislation also provided that an in lieu payment of tax be made to municipalities affected.

In September 1956 the State Water Resources Advisory Committee was appointed by the Commissioner of Conservation and Economic Development and was comprised of representatives of industry, labor and agriculture. It is interesting to note that 34 industrial and commercial firms provided private fiscal resources to carry out the engineering and related studies conducted for this committee by the engineering firm of Whitman, Requardt and Associates. (See Exhibit III -- Committee's report)

As a result of their studies, on April 25, 1957 they recommended that Spruce Run and Stony Brook Reservoir Sites should be purchased immediately and construction of the facilities commenced as soon as possible thereafter. They further concluded that the prohibition restricting the source of water supply for the Round Valley Reservoir to the Delaware should be modified to permit the use of waters of the Raritan Basin.

In December 1957 the Legislature enacted into law an amendment to the Round Valley acquisition legislation permitting the use of water from the South Branch-Raritan River as an added source of supply for the Round Valley Reservoir.

In December 1957 a Senate Committee was established to review and update the work that had been carried out to that point. The establishment of this committee was no doubt the result of the extremely severe drought of 1957 which depleted the reservoir levels to minimums of record and storage would have been exhausted at that time but for the unusually heavy rains experienced in December.

The Legislature also appropriated \$250,000 to the Division of Water Policy and Supply within the Department of Conservation and Economic Development to conduct detailed studies and investigations required to evaluate the feasibility and practicability of the Spruce Run-Round Valley Reservoir project. This work in part was carried out by the engineering firm of Whitman, Requardt and Associates and the Legislature was kept advised from time to time during the course of studies. The final formal report No. 15 was submitted to the Legislature in August 1958 and is presented herewith as Exhibit IV.

On May 12, 1958 the Legislature enacted into law NJSA 58:21-1 directing the Commissioner of Conservation and Economic Development to acquire the Spruce Run Reservoir site (acquisition of land only), provided a direct appropriation of \$2 million for that purpose and provided an in lieu payment of tax to municipalities affected.

On the same date, based on the engineering planning and studies of the State Division of Water Policy and Supply, the Legislative Committee recommended to the

Legislature who, in turn, passed legislation and an accompanying bond act authorizing an expenditure of \$45,850,000 to design and construct the Spruce Run-Round Valley Reservoir facilities and a number of other comprehensive water resources measures which will be discussed in more detail later in this report. It is significant to note that the 1958 act (NJSA 58:22-1 et seq) did not provide nor make any provisions for the construction of a water distribution system from these reservoirs. The implementation of this act was contingent upon approval by the voters at public referendum in November 1958 and was subsequently approved accordingly.

Between 1954 and 1958, the people of the Delaware River Basin were subjected to disastrous losses from floods, interspersed by droughts, which resulted in the loss of more than 100 lives and millions of dollars in property damage. These natural disasters accentuated New Jersey's official demands for comprehensive development of the Delaware River Basin.

In 1956 the Governor of New Jersey, the governors of the three other basin states and the mayors of New York City and Philadelphia established the Delaware River Basin Advisory Committee. At their direction in August of 1956, the Committee proceeded to investigate the governmental and administrative requirements for a multiple purpose water resources development program for the Delaware.

The Advisory Committee, through the Water Research Foundation, obtained funds from the Ford Foundation enabling the states to study the problem. The study was completed in 1958-59 by the Syracuse University Research Institute.

After reviewing the basic recommendations of the Syracuse study, probably the most extensive ever made of a major river basin, New Jersey's Governor, and the

governors of the other states, and the mayors of Philadelphia and New York City, directed the Delaware River Basin Advisory Committee on September 30, 1960, to proceed immediately with the drafting of an interstate compact which would provide for full federal participation. The U. S. Corps of Engineers, meanwhile, proceeded with the most extensive and comprehensive survey ever undertaken of the Delaware River. The four states were thus ready for a comprehensive approach to the proper development of the River.

After more than a year of continuous negotiations, the Advisory Committee presented to the governors an interstate compact which received almost unanimous support from the four legislatures.

On November 2, 1961 President Kennedy and the respective governors signed the agreement formally establishing the compact.

It is important to note that the federal-state compact recognized for the first time the regional development of the water resources of the Delaware River Basin and, in addition, the basin commission will provide "effective flood damage reduction; conservation and development of ground and surface water supply for municipal, industrial and agricultural uses; development of recreational facilities in relation to reservoirs, lakes and streams; propagation of fish and game; promotion of related forestry, soil conservation, and watershed projects; protection and aid to fisheries dependent upon water resources; development of hydroelectric power potentialities; improved navigation; control of the movement of salt water; abatement and control of stream pollution; and regulation of streamflows toward the attainment of these goals...."

That is the breadth and scope of the charge under the Compact of the Delaware River Basin Commission.

If I may, Mr. Chairman, on the far right there is a chart. It is a little hard to see from here. But in the area of New Jersey, the Delaware River Basin Commission has jurisdiction and authority in their areas of interest, as provided by the compact in the State, of approximately one-third the land area and the resources of the State of New Jersey.

The allocation of New Jersey's water resources developed under this compact, however, still remains under the prior jurisdiction of the State. That means that on waters allocated to the State of New Jersey from the Delaware, one must first secure the approval of the State before they go for, in effect, ratification and approval of the Delaware River Basin Commission.

Furthermore, the Delaware River Basin compact does not negate the Supreme Court Decree of 1954 handed down in the New York-Delaware River Diversion Case which protects all other previous rights and diversions and can only be altered by unanimous agreement of all parties of interest to the decree. The compact placed under the aegis of the Delaware River Basin Commission the future development of the waters of the Delaware River Basin and related natural resources.

In order to provide for a method to distribute the water supply from the Round Valley-Spruce Run Reservoir system to the northeastern region of the State, in October 1962 the Legislature passed legislation which they amended in December 1962 enacting the Water Transmission Facilities Act (NJSA 58:5-31 et seq). This legislation amended and supplemented the North Jersey District Water Supply Commission Act of 1916.

In assigning this responsibility to the North Jersey District Water Supply Commission, the Legislature stated the following public policy:

"It is hereby declared to be in the public interest and to be the policy of the State to foster and promote by all reasonable means the prompt, efficient and economical transmission, treatment, filtration, distribution and use of the water supplies acquired and developed by the State. It is the purpose and object of this act further to implement such policy by, among other things, giving additional powers to certain public corporations heretofore authorized to supply and distribute water, to the end that such public corporations will be enabled to finance, construct and operate facilities necessary for the treatment, filtration, transmission and distribution of water made available by the State to municipalities and persons, pursuant to the provisions of the Water Supply Law."

That was the public policy expressed by the Legislature at that time.

On April 3, 1962 the Legislature enacted into law NJSA 58:16a-50 et seq empowering the Division of Water Policy and Supply and the Water Policy and Supply Council to delineate and mark flood hazard areas and to coordinate effectively the development, dissemination and use of information on flood and flood damages that may be available.

On January 13, 1964 the Legislature enacted into law NJSA 58:1-35 et seq which was an amendment to the Title 58 water law concerning diversion of surface waters of the State for domestic, commercial, industrial, agricultural and irrigation uses and other private purposes. The Legislature determined that

"increasing diversion of surface waters for consumptive uses in some areas of the State is depleting natural flows of certain streams to a degree which adversely affects the health and welfare of residents of areas contiguous to the lower reaches of those streams; and

"it is in the public interest to maintain the natural low flows of such streams and to regulate the use of the waters thereof in accordance with principles of equitable apportionment."

In view of the fact that the 1958 Water Supply Act provided the fiscal resources for implementation of water development, research and advanced planning programming, it is important to review and bring you up-to-date as to what has been achieved and accomplished under this legislation. I want to take this opportunity to stress that, among other legislative findings at that time, the Legislature stated specifically:

"There is an immediate need for a new major supply of water to meet the present acute water requirements in the northeastern metropolitan counties and in the Raritan Valley, areas which directly and indirectly affect the commerce and prosperity of the entire State."

The Legislature then directed the following:

- A. "Develop and construct a reservoir of approximately 55 billion gallons capacity in the area, commonly known as Round Valley, located in the county of Hunterdon, acquired or in the process of being acquired pursuant to the provisions of chapter 60 of the laws of 1956, hereinafter referred to as the Round Valley reservoir; together with such works, structures, pumping plants, pipelines, force mains, and other facilities as may be necessary or useful to divert or pump water thereto, release water therefrom, and provide for the storage of water therein. The source of waters for said reservoir shall be either or both the south branch of the Raritan river or the Delaware River, exclusive of its tributaries. Note: No provision was provided for the water distribution system."

<u>Date</u>	<u>Activity</u>
1. December 1958	Initial conferences held with representatives of the North Jersey District Water Supply Commission, Elizabethtown Water Company Consolidated, and the City of Newark relative to the sale of water to be produced by the authorized Spruce Run and Round Valley Reservoir Projects.
2. December 1958	Report submitted to the Commissioner of Conservation and Economic Development on the organization of a temporary Bureau of Design and Construction, to direct and supervise the further investigation and the design and construction of the authorized Spruce Run and Round Valley Reservoir Projects

ROUND VALLEY RESERVOIR

1. October 1959 Contract awarded to Barnett & Herenchak, Inc. for the design of portion of the relocated road at Round Valley Reservoir.
2. May 1959 Contract awarded to Porter, Urquhart, McCreary and O'Brien, for the design of the North and South Dams, Dike, Intake Tunnel, Portion of the Relocated Road and Appurtenant Works.
3. October 1960 Contract awarded to S.J. Groves & Sons, for the construction of the southerly portion of the relocated road to permit vacation of the existing road through the Round Valley Reservoir site. Construction completed in August 1961.
4. November 1960 Award of contract to Havens and Emerson, for the design of the force main and of the pumping station for the Round Valley Reservoir Project.
5. January 1961 Contract awarded for the design of the Administration Building.
6. March 1961 Two contracts awarded to C.J. Langenfelder & Sons, Inc. for the construction of the North and South Dams and Dike, the Intake Tunnel, Portion of the Relocated Road and Appurtenant Works. Contracts completed in April 1964.

I am giving you this only to show the order of magnitude of what it takes to acquire land, design, engineer and build a structure and put it into operation.

7. July 1962 Contract awarded for construction of the force main. Completed in March 1964.
8. March 1963 Contracts awarded for the construction of the Administration Building. Completed in April 1964.
9. September 1963 Contract awarded to Peter Kiewit Sons' Co. for the construction of the pumping station. Completed in September 1965.

10. September 1963 Contract awarded to Burlington Electric Co. for the electrical work for the pumping station. Completed in July 1965.
11. September 1965 Round Valley Reservoir and its operating appurtenances were completed.
12. December 1965 Initial pumping to fill reservoir begun.
The reason for that was because water was not available in necessary quantities until that time of the year, remembering that 1965 was the focal point in the intensity of the drought.

At present the storage in the reservoir at Round Valley is 28.7 billion gallons. The maximum storage capacity of this reservoir is 55 billion gallons. It is estimated that it will take approximately a year and a half to two years with adequate flow in the South Branch of the Raritan to finally fill Round Valley to its full capacity.

- B. "Develop and construct a reservoir of approximately 10 billion gallons capacity to be created by the construction of a dam or dams on Spruce Run and Mulhockaway creek tributaries of the south branch of the Raritan river, located northwest of the town of Clinton in the county of Hunterdon, hereinafter referred to as the Spruce Run reservoir; together with such works and facilities as may be necessary or useful for the storage of waters and to regulate the flow in the south branch of the Raritan river and of the Raritan river above and below its confluence with the Millstone river."

SPRUCE RUN RESERVOIR

1. January 1959 Contract executed to conduct core boring program at Spruce Run dam to supplement data developed by Special Report 15 and to determine the final location of the dam.
2. March 1959 In the Spring of 1959 contracts were awarded for services to determine the location of the relocated road.
3. May 1959 Contract awarded to Whitman, Requardt and Associates, for the design of the Spruce Run Dam, Dikes and Appurtenant Works.

4. October 1960 Contract awarded to George M. Brewster & Sons, for the construction of bridges and culverts on the Spruce Run Relocated Road. Construction completed in June 1961.
5. October 1960 Agreement executed with the Township of Union for the construction of the Spruce Run Relocated Road, and for the vacation of the existing Union Road through the Reservoir area.
6. October 1960 Contract awarded for the construction of the bridges on the Spruce Run Relocated Road to permit vacation of the Union Road through the reservoir site.
7. February 1961 Construction contract awarded to Hagan Industries, Elmhurst Contracting Co., Inc., for the construction of Spruce Run Dam, Dikes and Appurtenant Works.
8. June 1964 Spruce Run Reservoir was filled for operation as originally scheduled.

I make this point specifically because there has been some apparent doubt as to whether or not any water from either Spruce Run or Round Valley Reservoir complex has been utilized.
9. Fall 1964 The reservoir was filled.
10. June 1965 Temporary agreement entered into with Elizabethtown Water Company to provide emergency water supply during drought.
11. October 1966 Contract executed with Elizabethtown Water Company Consolidated, for 40 mgd, which evolved from a Supreme Court action.
12. April 1967 Contract executed with Elizabethtown Water Company Consolidated, for an additional 30 mgd.

So, in effect, out of the 190 million gallons per day available from the Spruce Run-Round Valley Reservoir complex, as of this date, 70 million gallons have been allocated by contractual agreement to the Elizabethtown Water Company.

Note: The Spruce Run Reservoir has been available and utilized for the purpose of supplying and supporting all of the demands for quality control and consumptive uses in the lower reaches of the Raritan River. Over ten billion gallons of water have been utilized for these purposes from this reservoir since the Fall of 1964 to present date.

- C. "Carry out a 10-year program of detailed geological and hydrological studies and ground-water investigations, inventories and reports throughout the State by means of test drillings, observation wells, and any other means necessary to determine ground-water resources, quality and supply potentials, and may expend or commit from the proceeds of said bond act an amount not exceeding \$125,000 in any 1 year plus any unexpended or uncommitted balance from any prior year or years and \$1,250,000 overall for the cost thereof."

GROUND WATER INVESTIGATIONS

The authorized groundwater investigation program was conducted in accordance with the recommendations of the New Jersey Water Resources Advisory Committee, for the most part under a cooperative agreement with the U.S. Geological Survey on a 50-50 cost matching basis, supplemented by a cooperative program with the Bureau of Geology and Topography of the Department of Conservation and Economic Development for four counties dependent upon rock well supplies. The bond funds appropriated for this program will be fully expended by the end of this current fiscal year.

County reports providing the basic data on current water use and its quality, by area distribution and aquifer, have been published for five counties: Cape May, Hunterdon, Mercer, Morris, and the Sayreville area of Middlesex County. Investigations have been completed and reports are in process of publication for 7 counties: Atlantic, Burlington, Essex, Monmouth, Ocean, Salem and the Rahway area of Union County. Investigations are underway and are expected to be completed by the end of this fiscal year for 6 counties: Camden, Cumberland, Gloucester, Sussex, Warren, and the Ramapo and Hackensack Valleys of Bergen County. Also projected for completion is a

report on pump testing and drilling in the Wharton Tract, and a quantitative aquifer study on the Raritan-Magothy Aquifer in Burlington, Camden and Gloucester Counties, to evaluate the water which can be obtained from that source, which means in fact that the Division and the Department have made an exhaustive research program and action program in the field, carrying out this requirement of the Legislature under the 1958 act.

As recommended by the New Jersey Water Resources Committee, an outpost salinity well network of some 300 stations was established in South Jersey. The water sampling program was expanded to include a network of some 500 stations: 400 in South Jersey, and 100 in North Jersey. Fifty-six wells were drilled for exploratory purposes, including one in Camden County, and one in Island Beach to bedrock.

- D. "By studies, tests and actual field experiments, determine the practicability and suitability in this State of developing and utilizing natural groundwater storage to supplement on-stream reservoir storage as a source of water supply, and may expend or commit from the proceeds of said bond act an amount not exceeding \$100,000 for the cost thereof."

PENSAUKEN SAND STUDY

The investigation and testing procedures recommended by J. Homer Sanford, sponsor of this project, and defined by the Water Supply Act of 1958 have been investigated to select a suitable site on the Millstone River in the Pensauken Sand Formation for the pilot test ~~planned and to~~ estimate the cost of such a pilot test. The investigation disclosed that the 100 thousand dollars authorized by the Water Supply Act of 1958 is not sufficient to cover the pilot test specified. Alternate procedures are being investigated.

- E. "Continue to research, plan and design ways and means of improving stream flows in the Raritan Watershed or in the Millstone Watershed or both, whether by river regulation reservoirs, pumping, flow diversion, water re-use, or other means, or any combination thereof, deemed practicable to meet the needs of the area or areas; and acquire, as and when authorized specifically by law after public hearing, real property in any area in said watersheds as shall be suitable as a site or sites for the establishment of an additional water supply facility or facilities including any real property in any area in said watersheds where the utilization of natural groundwater storage to supplement on-stream reservoir storage as a source of water supply is determined to be practicable and suitable. The proceeds of said bond act in an amount not exceeding in the aggregate \$3,000,000 may be expended or committed for the costs thereof."

- F. "Continue to research, plan and design ways and means of improving stream flows in any other area or areas, whether by river regulation reservoirs, pumping flow diversion, water re-use, or other means, or any combination thereof, deemed practicable to meet the needs of the area or areas; and acquire, as and when authorized by law after public hearing, real property in any such area or areas as shall be suitable as a site or sites for the establishment of an additional water supply facility or facilities including any real property in any such area or areas where the utilization of natural ground-water storage to supplement on-stream reservoir storage as a source of water supply is determined to be practicable and suitable."

These last two charges are relatively both the same, one handling the requirements in the Raritan Basin specifically and the other charge handling the requirements throughout the rest of the State.

Under these two provisions of the 1958 Water Supply Act, it was directed to continue reservoir studies and \$3 million was provided specifically for the Raritan-Millstone Basin and \$2 million for the studies of the balance of the areas throughout the State.

Safe yield and water demand studies authorized have been conducted in the main by the staff of the Division of Water Policy and Supply.

1. Water demand projections to the year 1990 have been completed by counties for the entire State for public, self-supplied industrial and self-supplied irrigation uses. A special investigation was conducted to determine past use and to estimate future use by manufacturing industries of New Jersey from both public and self-supplied sources.
2. Safe yield analyses and growth projections have been completed for ten of the major water supply systems serving 85% of the public water supply used in the nine counties of northeastern New Jersey: Wanaque, Newark, Jersey City, Hackensack, Elizabethtown, Passaic Valley, Commonwealth, Middlesex, New Brunswick and Perth Amboy. Similar studies were made for the Monmouth Consolidated Water Company in Monmouth County.
3. In addition to the necessity of acquiring the Hackettstown and Two Bridges Reservoir sites which have been investigated and studied by the U.S. Army Corps of Engineers, twelve potential reservoir sites have been investigated in depth to determine the land area

that would be necessary to acquire and to evaluate yield and storage capacity. Of these sites, nine are located on the Millstone-Raritan Basin (North Branch, Rocky Hill, Oldwick, Ravine Lake, Hacklebarney, Six-Mile Run, Confluence, South River, and Schooley's Mountain); one site in Monmouth County (Manasquan); and two sites on the Passaic River Basin (Hardscrabble and Myers Road).

Four of these sites (Six-Mile Run, Confluence, South River and Schooley's Mountain) have been accepted for active consideration on the Raritan-Millstone Basin. Two additional sites have been recommended for other areas of the State, namely, Manasquan in Monmouth County and Hardscrabble in the Passaic River Basin. Three sites have been rejected on the Raritan-Millstone Basin, namely, the North Branch, Rocky Hill and Oldwick; and three other sites, Ravine Lake, Hacklebarney and Myers Road, have been deferred from active consideration at this time under Priority One projects that we have submitted in our Capital Bond testimony to the Commission in March - I think it was March 25th. Preliminary studies have also been made on 25 smaller reservoir sites which will be developed to supplement groundwater supplies in the South Jersey region and also in Warren and Sussex Counties.

4. The implementation of New Jersey's first comprehensive regional river basin water and related land resources engineering and development program establishing, delineating and marking flood hazard areas of the streams, rivers and tributaries of the Raritan River watershed affecting seven counties and 69 municipalities of the Raritan River Basin is underway.

May I digress and say that on the Raritan River Basin chart there - and the next one, of course, is the Passaic Basin - but particularly on that Raritan Basin area, this is the most comprehensive flood plain delineation program, engineering program, being carried out in the country, partially supported by Federal matching moneys for the purpose intended, and specifically once and for all to be able to save the Raritan Basin from the encroachment on the streams and people literally building cities and towns and homes and everything else in the flood plain area.

This perhaps is one of the most important things as part of the water management program that we are accomplishing at this time.

5. In view of the fact that specific standards must be established for water quality use classifications in order to implement the State private surface water diversion act and to comply with the federal streamflow water quality classification standards, the State Division of Water Policy and Supply has initiated a comprehensive long range water quality monitoring program beginning with the waters of the Raritan River Basin.

It is necessary to monitor on a continuous basis the constantly varying chemical and biochemical elements of quality and this program will be accomplished by the installation of mobile automated laboratory field units, each monitoring 12 different chemical or biochemical elements. an extremely important program, meeting both the requirement of the law on private diversion, our State law, and also the Federal Water Quality Control Act.

6. The Department of Conservation and Economic Development and the Department of Health conducted a joint research study and field pilot tests on the utilization of the process of reverse osmosis to determine the practicability of the conversion of treated sewerage effluent and/or polluted brackish water into potable water supplies. This work was carried out at the Bergen County Sewerage Authority plant and also on estuarine areas of the Hackensack River.
7. Desalination (desalting-flash distillation process) research program, a joint venture by the Office of Saline Water, U.S. Department of the Interior, Department of Conservation and Economic Development and the Public Service Electric and Gas Company of New Jersey,

was initiated following the Northeast Desalting Team Report in June 1966. Presently this program is being carried out with a pilot plant prototype model desalter, evaluating and monitoring the feasibility of using polluted brackish water of the Hackensack River estuaries for possible conversion into public water supply, being operated at the Public Service Electric and Gas Company Marion Generating Plant in Jersey City. Other phases of this research will be extended upon receipt of conclusive data from the pilot model desalter.

By the way, both of these programs are extremely highly advanced in the country on this kind of actual pilot programming going on.

8. Under these sections of the act, after substantive study and engineering evaluation, if it were found to be in the public interest to pursue acquisition of some reservoir sites, recommendations were to be made to the Legislature who, in turn, were obliged by statute to hold public hearings on the matter. No reservoir acquisition could be undertaken without the express approval of the Legislature.

On May 9, 1966 Senate Bill No. 385 was introduced into the Legislature for the purpose of acquiring the Six-Mile Run Reservoir site in Franklin Township, Somerset County. The bill was not acted on by the Legislature.

On April 8, 1968 Assembly Bill No. 591 was introduced into the Legislature for the purpose of acquiring the South River Tidal Dam site in Middlesex County. The matter is still pending.

Legislation has been prepared for introduction in the Legislature in November for the acquisition of the Upper and Lower Manasquan Reservoir sites in Monmouth County. By the way, we have been working with the legislative delegation from Monmouth Co. on this. It is most significant to note that if all three of these legislative measures were to be enacted by the Legislature, the estimated cost would be approximately \$12 million for this acquisition program.

The entire funding under these sections of the act, the 1958 Act, amounts to a total of \$5 million. Before any recommendations could be made on the acquisition of reservoir sites, the forementioned studies, evaluations, etc. had to be performed. In view of this factor, there presently is available \$2.5 million for possible reservoir acquisition which obviously is nowhere near adequate to accommodate these pending legislative measures.

- G. A composite fiscal report of the status of the water development fund as of October 5, 1968 is hereby submitted as Exhibit V.

I call to your attention ^{in that report} that \$585,000 has been reserved for finalization of the State's overall comprehensive water master plan which is estimated to take approximately one year to finalize.

It must be specifically noted, however, that for any master plan to continue to be a viable working document continuing upgrading and

refinement is essential. This factor has been provided for in the details of our capital bond request. In addition, the priority one phase of the capital bond request has made provisions for additional funding to prepare detailed construction plans and specifications for priority projects that have evolved from the engineering and research programs conducted under the 1958 Water Supply Law. (All noted in Exhibit I)

May I interject this thought: In a number of recent reports, we keep getting the story that there ought to be a comprehensive plan for the State of New Jersey. In view of the order of magnitude of this part of the synopsis of the report I am reporting to your Commission plus the work that is going on in the other areas, it seems to me on master planning that 95 per cent of the master planning, at least as of this date, from the State's point of view is completed, vis-a-vis, the relationship of the 1958 act. And when we talk about the allocation of approximately a half a million dollars to finalize, we are now putting all the parts and pieces together.

JOINT FEDERAL-STATE WATER RESOURCES DEVELOPMENT PROGRAMS

- A. In 1965-66 a comprehensive groundwater research and evaluation program was carried out by the U.S. Department of the Interior and the State in the Passaic Glacial Basin in Morris and Essex Counties. Funding for this project was provided by the Federal Government under the drought emergency. It was a most valuable program in that it established the limited capabilities of the groundwater resources in that area of the State.
- B. In 1966 the State Water Resources Research Institute was established at Rutgers the State University as provided for under the federal Water Resources Planning Act (Public Law 88-379). Administered under the aegis of the U.S. Department of the Interior in conjunction with the State Departments of Conservation and Economic Development, Health and the Delaware River Basin Commission. Its primary function and objectives were to conduct basic and applied research programs related to water resources. Details of approved programming is submitted herewith as Exhibit VI.

C. Under the Federal Water Resources Council there has been established the North Atlantic Region Water Resources Study Program to evaluate the needs and availability of water and related resources and to investigate the various competitions for their use from the James River in Virginia to the Canadian border in Maine.

The objectives of the NAR study is to develop and document the information which decision makers need to guide the orderly and proper development of the region's water and related land resources. The study must provide broad-scaled analyses of water and related land resources problems, and must furnish general appraisals of the probable nature, extent, timing and form of measures for their solutions.

The Study is being conducted by the North Atlantic Division, U. S. Corps of Engineers under the direction of a Coordinating Committee consisting of water resources officials of the various states within the region and of affected federal agencies.

During the height of the drought emergency in 1965 the Congress directed the North Atlantic Division of the U. S. Corps of Engineers to conduct the Northeast Water Supply Study Program and institute comprehensive water supply planning for the North Atlantic Region from Virginia to Maine.

In view of the needs of the Northern New Jersey-New York City metropolitan area, particular emphasis will be given to the future needs of that area, and definite projects with alternates will be developed for meeting those needs.

A contract was awarded on September 5, 1968 by the U. S. Corps of Engineers, North Atlantic Division to Hazen & Sawyer and Metcalf & Eddy, Inc., for a

feasibility study of alternative regional water supply plans for the Northern New Jersey-New York City metropolitan area. The purpose of this contract is to develop feasible engineering alternatives for water supply systems to meet the needs in the Year 2020 to serve the Northern New Jersey-New York City metropolitan area, and to prepare a report thereon.

The study area in New Jersey consists of Bergen, Essex, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Passaic, Somerset and Union counties. It conforms to our Region 1 in all respects except that it includes Monmouth County.

It is understood the study will include, in addition to the optimum development of existing intra-state resources, such other sources as the Hudson, Delaware and Susquehanna Rivers Basins, the Great Lakes and the St. Lawrence systems, and the use of water desalination facilities.

E. On the Passaic River Basin the New York District of the U.S. Army Corps of Engineers at the request of the State and at the direction of the Congress has completed their final detailed comprehensive engineering and economic feasibility report of the flood control water resource development and basin water management program.

A flood damage problem of staggering proportions exists today on the Passaic River Basin. The problem has resulted over the years from a complete abuse of this natural resource. The Passaic River has been characterized, as the result of many engineering studies, as perhaps the filthiest and most unpredictable treacherous river in the northeastern part of the nation.

It is interesting to note that the damage which is still unassessable at this point on the Flood Rehabilitation Program of the floods the latter part of May is running into countless millions of dollars at this particular juncture.

The Corps of Engineers and State have studied this river to death.

Any further expenditures of public funds on additional studies would be a total waste of the taxpayers' money. The Corps of Engineers has projected four remedial plans to resolve this enormous long standing problem and the State has selected Plan C as the most economical, feasible, practical solution acceptable. The State, in concert with the Corps is now prepared to conduct two final public hearings on this matter. If, as a result of this effort, based on over 30 years of intensive engineering study and design, the State refuses to take any forthright definitive action in implementing this flood control-water management program, it will be tantamount to abandoning the Passaic Basin and its people to the continuing catastrophic ravages of this river.

Had we had two more inches of rain in that Passaic Basin in the latter part of May and early June, that two- or three-day period, the damage in that area and loss of life, as bad as it was, would have literally have been catastrophic - two more inches of rain in that area.

As basically important as the implementation of the 1958 Water Supply Law is, it cannot achieve in itself the intent and the mandate of the Legislature which was to provide a new safe dependable water supply to the northeast region of the State, and I

might add that the record is abundantly replete on this vitally important matter. In fact, this specific issue has been a primary focal point of every legislature, every legislative commission, every citizens committee recommendations, and every single engineering and planning study that has been carried out in this State since the early 1950's. In fact, the State has already invested over this period of time close to \$50 million to begin to achieve this goal.

The North Jersey District Water Supply Commission in attempting to carry out the mandate of the Legislature, as directed under the 1962 Water Transmission Facilities Act, has encountered almost insurmountable obstacles. Yeoman efforts have been extended in engineering and fiscal feasibility studies and contract negotiations, culminating at one point in agreement of all parties of interest, but subsequent legal entanglements and protracted legal court action has further delayed the construction of this project to the very date of today's hearing.

The State, through the Department of Conservation and Economic Development and the Water Policy and Supply Council, has extended every effort through public hearings and negotiations with all parties of interest to attempt to resolve this matter even though primary jurisdiction does not repose in these agencies. As a result of these efforts, agreement was again reached to proceed but negated by some of the parties of interest. In addition, the State through the department, advanced \$255,000 to the North Jersey District Water Supply Commission to complete the final preliminary engineering study and economic feasibility report to as accurately as possible determine the estimated cost of this project and also to determine what those costs would be to the individual parties of interest.

The Supreme Court of the State of New Jersey has already adjudicated that the contractual arrangements were binding on all parties of interest and the matter is now back before the Superior Court on other points of issue.

Full public debate and thorough appraisal of all matters of the people's business is fundamental and basic to our way of government and indeed our direct responsibility as public officials to the people but premediated willful obstreperism, for whatever the reason may be, is the greatest disservice of all. As the focal point of the fierce controversy on the construction of a water transmission system to the northeast region of the State seems to center around costs, the unwarranted unnecessary delay over the past three years has caused the people of this area countless millions of dollars in escalating prices based on approximately 8% per year increased construction costs and the extreme soaring interest rates on bond financing.

At this point it must be particularly noted that there should be no further debate as to the need for increased water supply in this area of the State based on the unalterable facts of measured consumptive use records and other impeccable sources who have fully studied this matter, including the Commission on Efficiency and Economy in State Government who reported in their recent findings and recommendations: "by 1990 New Jersey's growth and development require 2.3 times the amount of water provided for homes, industry and public uses." In the first nine months of 1968 - and this is an interesting fact. The chart is back here on that side. Would you bring that chart here. In the first nine months of '68 an additional 7.4 billion gallons of water have been consumed over the previous year in the northeastern region of the State which was on the brink of disaster and almost ran out of water supply in 1965.

I think we will have to take a minute to look at this chart. This particular chart indicates the severity of the situation in consumption from 1965. This is where the consumption on mandatory conservation measures ran, along the bottom of the chart, somewhere around 250 to 300 million gallons per day. Now if you look at 1967, the brown line, that was the amount of water that was consumed by the northeastern region of the State during these months as indicated on the bottom. It ran along roughly around 315 million gallons per day and it was pretty steady across this area (indicating). Then in the month of June, it jumped all the way up to 390 million gallons a day and then dropped off as it went through the rest of the fall.

In 1968 alone, in spite of the fact that we had the floods in May which would seem to some to alter the situation, we have used this added amount of water in here plus this added amount of water, the green area, over the year before, amounting to seven billion gallons more of water in that northeastern region in the last nine months over last year's consumption.

The City of Newark has vehemently opposed the mandate of the Legislature and the program that has been developed thereunder by the North Jersey District Water Supply Commission for the construction of this transmission system. Their concern, in the main, appears to be the estimated cost of the delivered water and also a question as to whether or not their internal water system is capable of distributing waters to other municipalities who are parties of the agreement.

In view of this situation, the City of Newark has projected an alternate proposal. The first phase of that proposal covering the construction of Dunkers Pond Reservoir in

the Pequannock Watershed has already been presented to the State Water Policy and Supply Council and the Division of Water Policy and Supply for review and evaluation. A public hearing has been held on the matter and decision on this application will be forthcoming in the near future. It is estimated that the Dunkers Pond Reservoir will produce 4 million gallons per day.

The Hoffman La Roche Plant in Clifton - Nutley uses over seven million gallons per day in that one plant alone.

In addition, four additional letters of intent have been received by the Water Policy and Supply Council covering other aspects of their program but no detailed applications have as yet been submitted to the Council.

1. In the letters of intent the City of Newark has indicated their interest in receiving an allocation of an additional 30 million gallons per day at the Bound Brook intake of the Elizabethtown Water Company to be transmitted from the Raritan River water system through the Elizabethtown Water Company's transmission main to the Newark distribution system. Newark was advised that in order for the State to act on this proposal that a joint application from the Elizabethtown Water Company and the City of Newark should be submitted with supportive engineering data as to how they propose to transmit the water requested. The application and details of this proposal have not as yet been received by the State.
2. The City of Newark in their second letter of intent requested an additional 20 million gallons per day of Raritan River water but no details nor formal application delineating the facts have been submitted as yet to determine how the water is to be diverted and transmitted to the City of Newark.

3. The City of Newark in their third letter of intent requested an additional allocation of another 30 million gallons per day of the purported unused State allocation of Delaware River water as reserved to the State under the 1954 U.S. Supreme Court decree which authorized diversion of a maximum 100 million gallons per day. Seventy-five million gallons of these waters are already committed under contract from the Delaware-Raritan Canal to Central Jersey water users and in addition, there is a "seepage factor" that must be considered which accounts for an additional 15 million gallons per day in the Delaware-Raritan Canal transmission system. At best at this time there is only a possible availability of 10 million gallons of unallocated water from the Delaware River under this decree.
4. The fourth letter of intent requests an additional 50 million gallons per day allocation from the Delaware River based on Newark's proposed Susquehanna aqueduct diversion plan. Although New Jersey has requested 300 million gallons per day allocation from the Delaware River Basin Commission, this matter is still being considered by that commission for a number of reasons:
 - a. The final detailed engineering and modus operandi of providing water supplies for the States involved in the Delaware River Basin compact has not as yet been finalized or resolved.
 - b. The ultimate points of diversion to be selected for Delaware River water will have a material bearing upon the optimum yield of the river for diversion out of the basin.

- c. Until these matter are sufficiently resolved, the State's full utilization of the requested 300 million gallons per day cannot be effectively determined at this time.

A cursory review of the preliminary engineering study of the Dunkers Pond pumped storage and Susquehanna Transmission aqueduct proposal of the City of Newark as it relates to time and cost of construction indicates the following:

1. The basic cost of raw water from the Delaware is undeterminable at this time in view of the fact that the final plans and specifications and estimates of cost of the Tocks Island project are not completed nor finalized.
2. Before water can be made available from the Tocks Island project, the time of completion of the program, provided that all projected schedules of land acquisition and construction, etc. are strictly adhered to, is estimated to be 1977 -- and more realistically 1980. Escalating construction costs and interest rates will have a material bearing upon the water costs from this source of supply.
3. The preliminary report further indicates that it is not possible at this juncture to accurately estimate the pumping costs at the projected Delaware River diversion location at Hainesport via the modus operandi of the Yards Creek project.
4. In view of the fact that the State Department of Health has issued an order requiring that the Newark Pequannock Reservoir waters be filtered and treated and the preliminary report provides for only a test pilot project at this time, it is not possible to estimate the overall added cost of total water filtration and treatment.

5. The preliminary report does not project how these added waters from the Delaware River are to be further distributed to potential customers from the Newark Pequannock system.

In view of these factors, and the only reason these points are raised is to illustrate that, at least based on the information available to the State, it is impossible with reasonable accuracy to project the cost per million gallons for the City of Newark's alternate proposal.

It must be made abundantly clear that this dissertation is not meant in any way to deter the City of Newark from further pursuing this water supply program, specifically and particularly in view of the fact that this added water supply together with the North Jersey District Water Supply Commission's diversion and an additional State's water supply program will all absolutely be necessary to meet the needs and water requirements of the northeastern region of our State -- even in advance of 1990.

Just one more point, Mr. Chairman, why we make that categorical firm statement is that in the TAMS Report they underestimated by almost 50 per cent the water demands in the northeastern part of the region in 1955. By factual measurement in consumption, not on hypotheses of engineers and what have you, by factual consumption, it is abundantly clear on every report that as we use 600 million gallons per day in the northeastern region of the State, by 1990 we are going to need 1.2 billion gallons per day. The North Jersey system will deliver 70 million gallons to the northeastern region, the projected program of Newark will deliver another 80 to 100. Obviously we are going to be short an additional 400 million. The State already has had advanced programming working with the Delaware

Basin to determine the diversion of the State's waters also into that region.

What I am saying specifically is both of these projects are necessary, no question about it. The point in question on need is proven a thousandfold and the point on fiscal costs is relatively clear on North Jersey, but completely in my judgment and in the judgment of the Department up in the air on the projection of Newark.

[The exhibits presented by Commissioner Roe can be found in the Appendix to this transcript, Vol. IV.]

ASSEMBLYMAN RINALDI: Commissioner, do you have any further remarks you would like to make before we commence questioning?

MR. ROE: I think everybody would like to shut me up.

ASSEMBLYMAN RINALDI: The reason I say that is this: Our time is now 25 minutes to one. We are going to take a recess at one o'clock until two o'clock. Senator Wayne Dumont appeared a short while ago and has indicated to this Commission that he would like to have an opportunity to testify briefly. Senator Dumont does have to leave the Chamber at one o'clock and accordingly has asked that we allow him to testify before one. I understand Senator Dumont's remarks will be brief and, Commissioner, if you will allow us to interrupt your testimony, - we certainly want you to come back and I am sure that this Commission has many questions it wants to ask of you - if I may do something I ordinarily do not like to do, if I may, I would like to interrupt your testimony and ask you to sit tight. I am sure we are going to be back with many questions, Commissioner.

Now, if I may, I would like to call on Senator Dumont

for his statement.

MR. ROE: If I may, the Commissioner is pleased to defer to the Senior Senator.

ASSEMBLYMAN RINALDI: Senator, welcome to these hearings. It is a pleasure to have you with us. I trust you need no identification, but for the record will you please identify yourself.

SENATOR WAYNE DUMONT, JR.: Mr. Chairman and members of the Senate and the Assembly, I appreciate this opportunity, and I am the Senator from the 15th Legislative District which comprises the counties of Sussex, Warren and Hunterdon, and one of your associates and mine is also here today and I know has a statement to make later, but I don't think there will be any duplication in what we have to say, and that is, Assemblyman Douglas Gimson, also from the 15th Legislative District.

I appreciate this opportunity to make an oral statement to you which I will try to keep short. I think perhaps I ought to state at the outset that I participated in a great many of the studies that were connected with the water supply program that was developed up as far as 1958 by the legislation of that year and some legislation before that time.

I was a member of the Commission, which as I recall was chaired by Senator Mark Anton of Essex County and which provided for the study that was made by Tippetts, Abbott, McCarthy and Stratton, who are usually abbreviated as TAMS, and under their report the recommendation was made, as I recall it, for the referendum which was defeated, I think, in 1956, if my memory is right, which would have provided for a reservoir at Chimney Rock in Somerset

County. That one was overwhelmingly turned down by the people of the State in the General Election of that year. And in 1957, some of us - and when I say some of us, I refer specifically to three legislators, former Senator Donal Fox of Essex County, the late Senator Robert Crane of Union County, and myself - undertook with the help of a great many distinguished citizens whose names I can't recall fully at the moment, but I know that they performed yeoman service on behalf of the State, from 1957 to 1958, involving approximately 15 months, in a commission of just a few legislators and a large number of citizens, to provide for the legislation of 1958 which came about as the result of a lot of study and a lot of work.

One of the people who served us extremely well and whom I regard as one of the most competent and dedicated State employees at any time in New Jersey's history was George Shanklin. He and members of his staff spent a great deal of time working with us. We had many meetings. We also took many field trips. We spent a day on the Delaware at Walpack Bend, which at that time was being considered almost as much as Tock's Island as a possibility for the dam on the Delaware. We also went over and spent a day in Middlesex County meeting with the Board of Freeholders there and that was the main reason, that particular day's meeting, why this \$2 million was included in Chapter 34 of the Laws of 1958, providing for the research plan and designing of ways and means of improving stream flows. As a matter of fact, that \$2 million was put in there with a legislative intention at the time, although not spelled out, of course, in the particular act, that that money would probably be expended for a reservoir site in the

Middlesex County area.

We spent time at Round Valley and Spruce Run, also at Stoney Brook which had been proposed. This is a site near Princeton which had been proposed by a citizens' committee, headed at that time by George Smith of Johnson and Johnson, for the purpose of reservoir sites. And after considering how much it would cost the State of New Jersey to acquire the land at Stoney Brook in a highly-developed, wealthy portion of the State, we decided to scrap that particular recommendation, follow the recommendation of the citizens committee headed by George Smith for Round Valley, and substitute Spruce Run for Stoney Brook.

So this led to the legislation of 1958. And I think it is important that your Commission, Mr. Chairman, - and I commend you for having sponsored the legislation that led to the creation of this Commission from both Houses - it is important that you review the money that may still be available, some of it, according to Commissioner Roe's testimony is still available from the bond issue of 1958, before any large program, additional large program, be engineered by the State Legislature in respect to providing considerably more money.

We tried, first of all, to provide a bond issue that would make sense to the people. It involved expenditures not to exceed \$39,500,000 for Round Valley and Spruce Run and a 10-year program of detailed geological and hydrological studies costing at the most one and a quarter million dollars, \$3,000,000 for continuing to research, plan and design ways and means of improving stream flows in the Raritan watershed or in the Millstone watershed or both, and then the \$2,000,000 which I mentioned earlier, and

\$100,000 which Commissioner Roe indicates is not enough money now, to conduct studies as recommended by a prominent hydrologist from Elizabeth at that time, Homer Sanford, who convinced us on the Commission that he had something that was worthwhile to propose. So we provided this \$100,000 primarily for underground water surveys in the area around Grover's Mill, which we also went out to visit and which is southeast of Princeton in Mercer County because we believed that properly used underground water reserves could be a tremendous asset in providing for the future water supply of the State.

Now \$100,000 at that time was considered to be sufficient, whether it is today or not, I am not qualified to say. But ten years ago we thought it was enough money and so did Mr. Sanford who recommended it.

So this bond issue totalled up to \$45,850,000. There was another important piece of legislation that passed at that time in 1958 which unfortunately despite many requests to both the present Chief Executive and his predecessor in office was never implemented by either one of them. Chapter 148 of the Laws of 1958 provided for the creation - this was Senator Crane's idea - of the New Jersey Water Research and Development Commission of nine members, three to be named by the President of the Senate, three by the Speaker of the Assembly, and incidentally those were to be members of their respective Houses, and three to be citizens at large to be appointed by the Governor of the State. This particular bill was signed into law by then Governor Meyner on December 16, 1958, almost ten years ago. It took effect immediately. To this day, neither Governor, Robert B. Meyner or

Richard J. Hughes, has ever made any appointments to that Commission. It was also provided with an appropriation of \$15,000 to get it under way. That money, of course, is still in the State treasury. It was never used because the Commission was never filled out and, therefore, the Commission could never organize and get to work.

The appointments were made in early 1959 by the President of the Senate and shortly thereafter by the Speaker of the Assembly, but the three appointments to be made by the Governor have never to this day been made.

That Commission, incidentally, was also to name a Water Advisory Committee - and this is all in Chapter 148 of the Laws of 1958 - to consist of fifteen members to be drawn from the State at large and to be appointed by resolution of the previous nine-member Commission, adopted by a majority of the members of that Commission. The appointees to the Water Advisory Committee were all to be citizens of New Jersey, not members of the Legislature, and they were to be selected so as to give representation to all three portions of the State, north, central and south, not necessarily in equal proportions, but to have representation from the three sections of New Jersey. Of course, that Water Advisory Committee was never named because the New Jersey Water Research and Development Commission was never completed.

So here was something that could have been done and many requests were made - I know that because I made a number of them personally to both Governors - to fill out the Commission.

It was never done and as a result of that, this Commission never got to function and that is why something in the nature of what you have created here, Mr. Chairman, by your resolution was necessary in order to take over some work that could have been done by that Commission, but could not have been accomplished because it wasn't filled out.

Now, aside from that, I think there is one warning which in a way gets into a problem separate and apart from water supply but which bears very pertinently on water supply at this time, and that has to do with the question of a jetport at Solberg in Hunterdon County. If you stand at the Solberg Airport and you look to the west, not more than four miles away at the most, you will see the hills that ring the Round Valley Reservoir. There are many citizens of this State - I could name one very quickly - Matt Adams, who was the predecessor to Commissioner Roe as head of the Department of Conservation and Economic Development, to whom I talked just last night as a matter of fact, who indicated that if a jetport is constructed at that site, it will destroy this water supply complex for northern and central New Jersey at Round Valley and Spruce Run. He indicated that if the Delaware River Basin Commission, for example, should approve the 300 million gallons per day on an application now pending before it, to which Commissioner Roe referred, with the 100 million gallons that the State of New Jersey has long been able to take out of the Delaware and with the water that goes through the Delaware and Raritan Canal, which might come eventually from Tocks Island by gravity flow or by pumping from around Frenchtown into Round Valley out of the Delaware at the time when Tocks Island is

completed and provides a uniform flow throughout the year on the Delaware, and if in addition to this water and that which would come out of the South and North Branches of the Raritan and all of the other possibilities that could add up to as much as 800 million gallons per day, all of that could be ruined by the construction of a jetport that close or even much farther away to not only Round Valley and Spruce Run, but also the confluence of the South Branch with the Raritan River.

I would think, therefore, that we must consider-- and certainly this can only be a personal recommendation and not just because I happen to represent the area where these reservoirs are located, but also because they were constructed primarily not for Hunterdon and Warren and Sussex Counties or Mercer County and for their use, but primarily to supply water in large measure to the heavily populated northeastern metropolitan counties of New Jersey-- that this Legislature and any Governor who would support that could very well be guilty of criminal negligence in letting a jetport settle there.

So I simply point out to you the danger that could happen, not just from the jet fuels alone, but from the heavy concentration of businesses, of roads and of people, in an area where presently there are two reservoirs of vital importance to the whole northern and central portions of New Jersey.

I make these observations because I served as Chairman of the Commission that worked out the legislation in 1958 and as one who spent much time on this and have, therefore, a little knowledge of it, but at the same time I realize we may have to get more reservoirs in the State. This is one of the reasons we

provided the extra \$2,000,000 as a matter of fact, which doesn't go as far today as it would have ten years ago by any means, but might be sufficient to buy one reservoir site at least. And I think that the Legislature should examine what is still available under the Bond Issue of 1958 which passed primarily because of the great and devoted work of an awful lot of citizens in this State who worked hard to put this Bond Issue across and who helped us to develop a program of legislation, five or six bills, which by the time they passed did not receive a single negative vote in either House of the Legislature and which we believe set up a basic program which can be added to particularly by implementation in the future, so we can have a proper water resources development program throughout New Jersey, for Northern and Central New Jersey especially and South Jersey where underground water resources are available and can be used through the timely acquisition of the Wharton Tract years ago, and consequently that we can have this for our people for the next century and beyond. Thank you very much for this opportunity to appear this morning.

ASSEMBLYMAN RINALDI: Senator, may I ask one or two questions?

SENATOR DUMONT: Yes, sir.

ASSEMBLYMAN RINALDI: Perhaps the other members of the Commission might like to ask a few questions too.

You have indicated that there may be still some money left from the 1958 Bond Issue to be used toward acquisition and construction of reservoir sites. Now I am sure that you are familiar with the capital needs study of the Governor's Commission --

SENATOR DUMONT: I am.

ASSEMBLYMAN RINALDI: -- which reviewed, of course, at length the recommendations made by Commissioner Roe and his department with respect to the minimal needs as to reservoir sites and construction of water transmission facilities.

It was the recommendation of the Governor's Commission that the rock-bottom, minimal sum necessary was \$90,850,000, which that Commission recommended be authorized immediately. Of course, as you and I are both well aware, no part of the present bond program which will be on the ballot before the electorate come November 5th concerns itself with the problem of reservoir sites and construction. Do you have any comment on this \$90 million figure? Do you think it is a realistic one? Do you think money should be spent by the State either out of current revenues or out of a bond program? I ask you this, sir, because you do bring to this Committee an excellent background. You have been in the water problem in your past years as a legislator and we welcome your views on this particular very substantial sum of money, \$90 million.

SENATOR DUMONT: It seems to me personally it is on the high side because until we see Round Valley and Spruce Run put to use - and as Commissioner Roe has indicated, it is going to take a while to fill Round Valley; it is not much more than half full now - but there is a reservoir with a 55 billion gallon capacity and Spruce Run not far away from it with another 10 billion gallon capacity. But, of course, the main purpose of Spruce Run was to provide down river flows in the South Branch of the Raritan so we could pump out of there 70 million gallons a day, except

during the period of June 15 to September 15, to get Round Valley filled. It can't be kept filled out of the South Branch of the Raritan without being supplemented by Delaware River water besides.

But it would seem to me that until we see how that program works out - and after all not a single line of pipeline has ever been laid from either reservoir and whether that is the right way to do it or you let the water down the Raritan and take it out of there, I am not sure - and certainly that is for people who know a lot more about engineering than I know -- but at the same time until we see how it works out and until we use perhaps the money that is still available from the Bond Issue of 1958, I am not convinced we need \$90 million.

ASSEMBLYMAN RINALDI: Senator, one of the things that has been of concern to me as I read the Governor's Commission's recommendation in asking the citizens of the State of New Jersey to spend \$90 million for reservoir sites and construction of those sites, the average citizen may well ask, well, ten years ago we voted upon a reservoir program and \$50 million approximately was spent to construct the Round Valley - Spruce Run reservoir complex and today there is only one customer for that complex and it still has a considerable amount of water to be sold which nobody has bought. Of course, many people say if we spent that kind of money for a reservoir complex back in 1958 and we still can't get water down to where it is needed because the pipeline hasn't been built, why should we spend another \$90 million for reservoir acquisitions because maybe we will have to wait another ten years for that water to be used, which comes to the next

question. I would welcome your comments on why the pipeline was not built and why it was not a part of the 1958 legislation.

SENATOR DUMONT: We decided in 1958, after a lot of consideration, that the best agency to construct a pipeline which was the means that was given to us at that time by the experts in the water supply field would be the North Jersey District Water Supply Commission because it was an agency already in being. As we all know, I think the Legislature hesitates more and more each year to set up another authority or another agency when there is already one in existence. So we believed that with that agency in existence, with the fact that it represented a number of municipalities combined in Essex and Passaic Counties, it was the proper agency to build the pipeline, to develop it. Why this failure has come about - I don't think I want to put the blame on any one person in particular or any group of people. Maybe we are all to blame for it. But the fact remains there isn't any pipeline and I think your point is very well taken, that before the people are going to buy another bond issue, which if it were \$90 million would be almost twice as high as the one they voted on in 1958, they have a right to ask: Why wasn't something done about getting this water to where it was supposed to go? Now Spruce Run has been full for several years and Round Valley today, according to Commissioner Roe, and I would say that is true when you look at it at the present time, is about half full. Therefore, it would seem to me that any sizable bond issue is not going to meet with the approval of the voters until we know what is going to be done with Round Valley and Spruce Run and until something is done with them.

ASSEMBLYMAN RINALDI: Is it your considered opinion that the pipeline should be built from the Raritan Valley complex to the area it was originally intended to be built to?

SENATOR DUMONT: Well, I haven't been in on all the change in thinking as to why a pipeline should not be built. But certainly that was the understanding that every single one of us on that Commission had in 1958 - that this was the way to get water to the metropolitan areas of New Jersey. We also wrote into that legislation, of course, that the two reservoirs could be used for all kinds of recreation - fishing, swimming, boating. We also wrote into it what I think is the only sensible formula we have in New Jersey for reimbursement for loss of tax ratables, but it only applies to Union and Clinton Townships in Hunterdon County where the two reservoirs are located.

ASSEMBLYMAN RINALDI: Thank you, Senator. Senator Dowd, do you have any questions?

SENATOR DOWD: No. Thank you very much.

ASSEMBLYMAN RINALDI: Assemblyman Cobb.

ASSEMBLYMAN COBB: Senator, you made a statement that was rather shocking to me - I might have read it in the paper, but I don't recall it - and that is the danger that - I'll use the word "proposed" - the proposed jetport at the Solberg site would create for these two reservoirs which represent a large investment of the taxpayers' money of the State of New Jersey. What does this danger consist of? You spoke of population growth and so forth in that area.

SENATOR DUMONT: It consists of - and these are not just my thoughts on this because, as I say, I talked to former Commissioner

Adams only last night and he has made, I think, public statements on this a number of times-- it consists, in the first place, of the jet fuels that could be eliminated from jet planes when they take off or land at a jetport which would only be a few miles at the most away. In fact, the runways might stretch almost to Round Valley. In addition to that, it would bring out a heavy concentration of population and nobody in the area which we represent is opposed to progress, although we feel and apparently many others in the State do, except the Port Authority and the major airlines and the FAA, that the right place to put the jetport is in the pine barrens or at Maguire or at Lakehurst or a combination of all of them. Now bringing out the heavy concentration of people, there is bound to be litter because not everybody is careful about where they dispose of what they have been using, etc. There are bound to be many more roads constructed and there are bound to be many businesses created. No one is against job opportunities, but I think it is a real danger to what is the only real water supply for North and Central New Jersey today and in the future, namely, Round Valley and Spruce Run, into which \$40 million of the people's money has been put. It is a real danger to take any risk whatsoever with those reservoirs and there is much testimony from knowledgeable people to the effect that such a danger exists.

You won't get that kind of testimony from the Port Authority or from the airlines because whatever they have to say would be biased naturally. They want a jetport and we know that is for the convenience of the people. Nobody is opposed to it being in New Jersey, but many of us are opposed to that

particular site in New Jersey.

The main reason why I am opposed personally to it is because of the danger that might exist to this water supply system. And I don't think we can afford to take that kind of a risk.

ASSEMBLYMAN COBB: Thank you.

ASSEMBLYMAN RINALDI: Assemblyman Fekety?

ASSEMBLYMAN FEKETY: Being the only Democratic legislator here, I will just say, thank you, for testifying.

SENATOR DUMONT: Thank you very much for giving me the opportunity.

ASSEMBLYMAN RINALDI: Senator, I would also like to thank you and, in fact, you have raised an area of concern which I don't think any of us were aware of. This problem of the jetport is certainly a very significant one and it is something to very seriously consider. Thank you very, very much for giving us the opportunity to hear from you. Thank you, Senator.

SENATOR DUMONT: Thank you. I appreciate it.

ASSEMBLYMAN RINALDI: It is now one o'clock. Commissioner Roe, we would like to call you back at two o'clock promptly and then we will proceed from there. If I may, I will adjourn temporarily these hearings until two o'clock, at which time we will commence promptly with Commissioner Roe for questions.

[Recess for Lunch.]

(Afternoon session)

ASSEMBLYMAN RINALDI: Could we please call the meeting to order. Time is moving along and we have a lot of ground to cover today.

Commissioner Roe, if we may, we'll continue with your testimony. Do you have any additional statements you would care to make before members of the Commission ask questions of you?

COMMISSIONER ROE: I don't think at this time, Mr. Chairman.

ASSEMBLYMAN RINALDI: Commissioner, you have outlined for us, in excellent form and fashion, the activities of your Department for the last several years and I want to thank you for that. It gives us the necessary historical background to further appreciate and to put into focus the problems that allegedly exist today. I say "allegedly exist" because this is one of the reasons why this Commission was formed, to find out, in fact, if there are problems. It has been alleged that there are many problems.

You may have missed my earlier remarks this morning to the effect that many different sources indicate that one of the factors that must be focused upon is additional planning. And I referred to the Capital Needs Commission Study, this past spring, which indicates: "There is evidence that more orderly planning might be achieved if there were a coordinating agency governing all present and future water sources and their distribution."

The President of the Public Utilities Commission,

Brendan Byrne, testified this morning that there are certain gaps within the jurisdiction of the various departments and I believe he seemed to indicate that there was a need for some planning in certain areas.

The Rutgers Forum Study of November, 1967, has indicated that there is need for additional planning. And, likewise, the Little Hoover Commission Study of November, 1967, also very pointedly states that "This study of water management in New Jersey, conducted by the Commission on Efficiency and Economy in State Government, discloses the urgent need of preparation of a statewide, comprehensive water plan."

The Regional Planning Association, in their deliberations about two years ago, indicated that they felt that there was a definite problem in the area of water management.

So, Commissioner, based on the conclusions of these distinguished reports, I ask you again, do you feel that there is need for additional planning or is that not a primary consideration?

Let me add one further statement. Do you feel that it's a matter of additional planning or do you feel that you have done as much planning as you can but that what you need are additional legislative tools?

COMMISSIONER ROE: Well, I think, first of all, in direct answer to the question, the water law in the State of New Jersey is a veritable legal nightmare, to begin with. I think, secondly, that the different

departments - let's put it this way, I think that the jurisdiction and responsibility in the main, throughout the State, in relationship to water resources is terribly fragmented, with all kinds of different areas of responsibility, and I think that the history indicates that over the last 15 to 20 years that anytime anybody comes up with a problem of water they get another committee going or they get another study going.

Now it seems to me to be axiomatic that our Department, the Department of Conservation, is responsible for the water supply per se. But I think there's an error in nomenclature. The water resources must in fact embody four elements. It's got to embody water supply, water quality, flood control, and flood flood plain management, all those four inextricably related. As it is now, a hodgepodge of responsibility has evolved over many, many years of change of legislation, etc.

Now, query: What is a comprehensive master plan? Not that I don't think I know, but the Delaware River Basin Commission is doing just that. The burden of the testimony we gave this morning was deliberately put together on fact to bring into clear focus the work that is going on and the fact that this will be placed in a single document within six months time.

That's not going to negate the point that we need additional planning. Planning has got to be with us continuously and we've got to continue on, and plan. And

we specifically requested, in our capital bond priority one, that funding, namely, \$10 million, be made available for detail engineering design of reservoir sites, and for additional comprehensive planning.

If a so-called, properly connotated, master plan, in some people's eyes, had been completed five years ago they could throw the plan away because the TAMS Report, which was a comprehensive plan, underestimated fifty percent the population growth and the water needs of the State in 1955, proving again that it's an upgrading type of thing.

Now I think one thing that I would like to call to your attention, Mr. Chairman, is that in the Economy and Efficiency Report they made the statement that, "In order to prepare a New Jersey water plan, the Commission recommends coordination and redirection of the work of many state agencies having jurisdiction over fragments of the water program through the establishment of a water plan development board," - we certainly do not fault that recommendation. - "composed of five members, including four present department heads and the creation of a small staff of experts to conduct the coordination work of the board and to guide the preparation of the plan. The special staff will compose a new division of water program and planning placed administratively in the Department of Community Affairs." It goes on to say that, "The Commission estimates that the special program control staff can prepare the New Jersey State Water Plan as recommended in three years, using both the facilities and staff of existing agencies which would not be disturbed

and with some supplemental expert assistance."

Now, when you take into consideration the order of magnitude of work that is done and completed in New Jersey's Master Plan by the State of New Jersey, the Delaware River Basin Commission, the Corps of Engineers and a host of other agencies, and when you take into consideration the fact that they seem to think that this kind of a program can be finalized with a small staff and a small group of engineers, it's utterly ludicrous.

You know, there's an old saying that goes, "You're never a hero in your own home town." And I think it's real interesting that the good Senator Dumont said today that in all his experience in the Legislature and in all his experience in water supply, his hat was off to George Shanklin, Director of the Division, as one of the most competent men in the country in this field, not in New Jersey alone. So here we have a situation suggesting, and God forbid, that a program be placed off on a shelf on another moldy, typical type of plan. That is not what water supply is all about. It is a necessity to use the most highly trained, highly educated professionals and technical people in the world. It is not a planning study.

Two other points. The present Division of Water Policy in the State of New Jersey, Water Policy and Supply, is woefully understaffed, woefully understaffed. People work around the clock. For five years, since I've been Commissioner of this Department, we have seven unfilled vacancies for hydrological engineer with the grand sum total

allocated of \$8,000 a year to hire them. You can't hire any technically trained person for that particular amount of money. And I said to them, "Would you please take away three of those engineers or four of those positions and give us, for God's sake, two or three more quality engineers at a reasonable salary so that we can hire them." It is not the same as a civil engineer or what-have-you. These people are as scarce as hen's teeth.

And one of the reasons we have to go out and hire consulting engineers is because of the puniary position of this State in a problem as inordinate and of the magnitude of this one, as I see it.

ASSEMBLYMAN RINALDI: Then, Commissioner, if I can conclude from what you said, it's not a question of formulating a plan or a new plan; you have engaged in planning; planning is an on-going process and it's not a question of forming a brand new plan at this point.

COMMISSIONER ROE: Absolutely.

ASSEMBLYMAN RINALDI: If I may then refer to another phrase that's become a word of art in this area, it's the word "coordination," and a lack of coordination or an aid for additional coordination. And once again I refer to the Capital Needs Commission and one of their additional recommendations was, "We wonder whether the combining of water resources and water pollution in a single department might not remove at least one unnecessary coordination requirement in a situation which is already overly complex."

Commissioner, what is your thinking with respect to

just one very acute phase of coordination, namely, the problem of water supply and the very definitely related problem of water pollution? These come under the jurisdiction of two different departments - water supply in your Department, water pollution in Dr. Kandle's Department of Health.

COMMISSIONER ROE: I would suggest that the observations made there are in some semblance of order correct. There is good coordination between the higher levels of office within the Commissioners, but I think there's room for a great deal of improvement in observations and goals and directions in a coordinated effort between the respective departments responsible for the over-all management program.

ASSEMBLYMAN RINALDI: Commissioner, do you think that all phases of water management, be it supply, pollution, recreation, - I think there are about eight different phases of water supply which are referred to, but all the divergent phases of water management, should they all be put into one agency or under one roof? Would this solve the problem of coordination?

COMMISSIONER ROE: Well, outside of water quality control and the responsibilities of the Public Utility Commission, the bulk of those items you talk about are in the Department of Conservation and Economic Development. In fact, the Division of Fish and Game has broader authority, under present existing laws of the State, unless the one law passes the Legislature this year, on stream flow quality, nee fisheries resources, than all of the State laws on health put together. And we find ourselves many times joining with

the State Department of Health and we take the initiative action, legally, where pollution is involved because the Fish and Game Laws of the State are stronger on pollution than the general over-all basis of the Health Laws.

However, all that notwithstanding, it seems to me that the coordination between water supply, water quality, regulation of water supply, flood control and flood plain management, should be under one agency.

ASSEMBLYMAN RINALDI: Therefore, you are suggesting that the problems of water quality and water pollution should be either in your Department or it should be combined with the department that handles water supply.

COMMISSIONER ROE: Under one agency.

ASSEMBLYMAN RINALDI: Commissioner, you referred before to the notion of cost of water and there are two factors that must always be considered in the area of water management and water supply, namely, the availability of water or supply of water, as such, and the cost of making that water available. Could you comment further on this relationship, supply vs. cost?

COMMISSIONER ROE: Well, there is an old axiom which goes, "Half of nothing is nothing," and the important point here is to recognize, in spite of earlier comments this morning, not Bob Roe or George Shanklin, but every single person who has studied, every agency, every legislative group, every legislative commission, since 1950, 1952, has said that we ought to be getting water to the northeast. If, in all due respect, the facilities were built at that time

then we certainly wouldn't be quarreling about the cost that we're talking about today.

Now it seems to me to be axiomatic that if we're going to deliver the water from Round Valley-Spruce Run we've got to get it there. The State has expended \$40 million to construct that facility and it seems to me that when we talk about the cost to get it there, if we had done the job, as I expressed in my testimony, three years ago and got on with it, when it's obviously needed, then it would have cost less at that point. And every day further that it's delayed, it's going to cost more again.

So it seems to me that when we're talking about quantity and costs - in the first place, there is not enough water in the northeast and the query before the house is, where can we get it from to put it there. That was the purpose of building Round Valley-Spruce Run, specifically

Now we don't have any way of getting it there and we're trying to build a pipeline. So whatever those costs are, they are going to have to be applied against that program. However, in the Transmission Act that was passed - I think that was one of the questions this morning and I think your question or one of the other gentlemen's question was, Why hasn't it been done?

Specifically the point in issue is this, that the law says - the law gave the responsibility and the authority to the North Jersey District Water Supply Commission, but the State did not appropriate a sou markee either to get the work started nor put up the full faith and credit of the State in

any way whatsoever. They simply made a categorical assignment.

Therefore, in order for North Jersey District Water Supply Commission to carry out the mission and mandate of the Legislature, in view of the fact that the Commission does not own, in fact, the fiscal resources and the physical resources of the North Jersey District Water Supply Commission, they are only the agency for the cities participating, they couldn't pledge assets for full faith and credit to go out and bond. So what did they have to do in fact?

They had to go, first of all, and work out a contractual agreement with 11 communities. In addition to that, they had to work out an additional set of interlocking agreements on 5 of the communities for an interrelationship with the City of Newark - they utilize part of the Newark System. Obviously, that isn't going to be done in five minutes.

After they get all done doing that and the contracts were ratified by ordinances adopted at the local level, which, in fact, said this, that if the town enters into an agreement with North Jersey and we approve this by ordinance, local legislation, then in that instance the full faith and credit, if you like it, of the town or city is placed behind that contract.

That's what it took to be able to try to get a realization to get this line built.

Now, in addition to that, the total amount of customers in quantity of dollars, they have 11 customers and

61 million gallons, rather, of water committed out of an estimated seventy. Above and beyond the 11 participants having to pay for their own 61 point plus million gallons, they're also obliged under this limited law to pick up the other 9 million gallons, besides, for somebody else's future use. So the cities not only pay for their own but have to advance the capital on an interim basis for the other 9 million gallons. The State did nothing, provided not one cent, to achieve this goal - an horrendous situation to give any commission to try to carry out.

Now in my judgment, the State of New Jersey is dilatory, dilatory in attempting to solve a problem and foisting this situation back on the consorting communities to carry it out, including the Commission. And it seems to me that in due course, after you have a chance to evaluate these facts, the Commission here ought to seriously be considering the obligations of the State of New Jersey to pick up at least the capital charge of the 9 million gallons that are involved.

One more point, if I may. It's interesting to note, converse - or let's say this, let's expand a bit upon some of the comments made this morning.

Under that 1958 Act, which was \$45,850,000, an obligation of the State of New Jersey, I wonder if anybody has considered as to how that bond issue is being paid off. Where is the money coming from to pay it off? And when one looks at the bond amortization schedule and the up-to-date accounting, the State of New Jersey has already expended out

of general treasury, general appropriations each year applied, better than \$19 million in interest and amortization out of general treasury. And the gross receipts so far, from the Elizabethtown contract, is \$1.8 million.

What I'm trying to get at, in fact, is this, that the State of New Jersey by not moving to get the line built, above and beyond the need of the water to the area, is now amortizing that full bond issue, almost that full bond issue out of general revenues of the State of New Jersey, at this juncture.

ASSEMBLYMAN RINALDI: Thank you, Commissioner.

Then one of the things that you suggest is perhaps the State should concern itself with helping to fund the Raritan Valley project.

COMMISSIONER ROE: I think the State is obliged to measure up to its responsibilities.

ASSEMBLYMAN RINALDI: Just to take a different tack for a minute, Commissioner, we're interested, of course, in knowing what, if anything, should be done by the Legislature to help out in this area of water supply and water management. Are there any areas of recommendation that you could make with respect to additional legislation and, parenthetically, I'd like to direct your remarks, additionally, to the recommendation that you made before the Capital Needs Commission. You spoke of a water arbitration board and you also spoke of possibly, I believe it's a water authority within your department, a water resources development authority within the State Department of Conservation and Economic

Development. So, could you expand on that, Commissioner? What additional legislative tools do you think are needed? And specifically direct your attention to those two bodies that you suggested before.

COMMISSIONER ROE: Well I think, initially, Mr. Chairman, that converse, if I may, to the comment made this morning, and I think this is germane, - converse to one of the comments made this morning and not to deal in debate, - the comment was made that if we have not as yet utilized the water from Round Valley-Spruce Run, how could we go to our people in the order of magnitude of the problem and ask them to consider further action.

ASSEMBLYMAN RINALDI: I made the comment.

COMMISSIONER ROE: Yes.

The second point, I think, along the line that was made this morning is, how can we ask for additional funding from the Capital Bond Commission when, in fact, we haven't again utilized all the water that's available.

But, you know, it's interesting to note, and I try to get this across, that the total appropriation in the '58 law was \$5 million in both categories to do all of the work that I expressed to you before. The three bills before the Legislature now, the one that we talked about in Middlesex County for the South River tidal dam, the Manasquan Reservoir and the Six-Mile Run Reservoir site, the sites alone, the land acquisition is estimated to cost \$12 million. And what do we have left? We have \$2.5 million left in that account. That is the end of that account. These would be in that

exhibit I presented to you.

ASSEMBLYMAN RINALDI: I take it, Commissioner, excuse me, you're directing your remark now to the statement made by Senator Dumont, --

COMMISSIONER ROE: I believe it was a statement made by Senator Dumont.

ASSEMBLYMAN RINALDI: -- that we should examine it to see how much more money is left in your till before we go out and try to get any more.

COMMISSIONER ROE: And rightly so. And there it is. There's \$2.5 million and we need \$12 million to buy the reservoirs, as far as we're concerned.

Now, therefore, what am I leading up to? We said in our projection, under priority 1, that the State must establish a water resources land bank where in fact we buy the reservoir sites in advance, for two reasons. The first reason, there is no state in the nation, barring none, as urban as this State nor growing faster than this State, as a full state. We have 950 people per square mile. We're using some 30,000 acres of land intensively every year in the northern part of the State, particularly, in rapid development.

In New Jersey truly exists an enormous competition for the use of the land. Reservoir sites are geographical structures peculiar unto themselves. And if the Legislature was to do anything for posterity that would be worthwhile, it would be to save those reservoir sites now because they're irreplaceable. And over the last five years in this

dillydallying debate, we have lost at least one-third of those reservoir sites already. Therefore, we talked about establishing a water resources land bank for reservoir sites and we projected, under our priority 1 scheduling, monies for that purpose and beyond.

We also said in that testimony that by all means it is right and proper that an in-lieu payment and tax structure be established, not only on reservoir sites - if I may take a little license here - but also on open space Green Acres land.

It is fundamentally wrong to burden the members of the community, the people of the community for a facility to benefit the whole State where the land is taken off their tax rolls and the remaining people in the community must make up that tax loss. I think, in my judgment, that that has to be corrected.

The second thing we said was that the State should program to build the reservoirs in advance of immediate need and provide the lead time to have adequate water available to guide our growth and development.

Now we've demonstrated that it has taken about seven years to get Round Valley-Spruce Run put together and built before it was ready to deliver a drop of water. And even in the diversion line, whether it's decided to be the North Jersey or the City of Newark's program, it's going to take anywhere from five to seven years before one drop of water out of those diversion lines is going to be available.

So we also come back and we say, what do we mean

to guide our growth and development? When the Hoffman LaRoche Company, again in the north, was looking for a new site for their \$100 million complex for the manufacture of vitamins and pharmaceuticals, we were fighting between our State and North Carolina and the final decision, what it hinged upon, had to do, if a site could be located for that corporation to keep this facility in New Jersey, - and it specifically evolved around the capability of the water supply to support that.

It isn't a question of our developing a water supply to support the industry, but the first question that industry asks us today, in view of the fact that we're pharmaceuticals, chemicals and refineries, heavy water users, what about the water supply? before they select a place in the State of New Jersey. So we say that that ought to be considered and done immediately.

We also say something else. We suggested that there ought to be some thought given to provide grants-in-aids to municipalities or water companies on a fifty-fifty basis to upgrade and improve their internal water systems.

The point remains that one of the big problems during 1965 was that it was impossible in many instances to get the water from one town to another because the interlocking water mains were smidgen in size. Many of those towns haven't done a thing on their internal water systems for fifty years.

If you recall the conflagration that was based in

Queens about three years ago, where a whole block went up in smoke, it wouldn't matter if we brought every fire engine in northern New Jersey to that spot if there are only six and eight and ten inch mains to be able to bring water through those cities.

How are they going to use the air space in Newark and in other areas along the line if the internal municipal systems are not corrected and put into proper shape?

And then we went ahead and we said a few other things. We said, in recognition that total water management in our State evolves around water quality, water supply, flood control and flood plain zoning, it is important to note that major water flood supply control studies are intensive. A substantive plan, we said, about delineation, and we said one other thing on that, if I can find it. Oh, here. We said that we must seriously consider the establishment and implementation of restrictive and selective zoning on the headwaters of our rivers, in effect, prohibiting these basic water source areas to be utilized by complex manufacturing process admitting deleterious quantities of organic or inorganic waste. In other words, we've got to start considering that now, as we see it in the State of New Jersey.

We said that the Water Policy and Supply Council of the State of New Jersey and the Commissioner ought to have standby statutory power, extended to them by the Legislature, with the authority to act in any emergent or impending emergency where water resource problems are involved.

The Governor had to implement an emergency resolution

based on World War II statutes in order to be able to bring order out of chaos in the water crisis of 1965.

Then we said there should be established by legislation a permanent standing water board of arbitration, having sufficient authority so that their decisions would be binding upon the parties of interest in water disputes without having to burden the courts in long, lengthy judicial proceedings. In other words, in spite of all of the negotiations and discussions and hearings, the Water Policy and Supply Council does not have the unilateral authority to adjudicate a matter of arbitration under the statute today. And that was part of the delay in what happened basically in the debate between Newark and North Jersey.

Then we said that there are basically two alternative methods of financing water resource development capital improvement programs. One is a general state bond issue, approved by referendum in which the full faith and credit of the State would be pledged and the cost of which would be ultimately amortized by revenues derived from the sale of water, as is the case in the Round Valley-Spruce Run Project.

Although this method would, no doubt, achieve the lowest bond interest rate, it would also reduce the borrowing capacity of the State thus possibly affecting the bonding capacity for other capital improvements.

In this method of financing usually the bond amortization period is shortened which results in initially higher water rates, as is the case of the 28 year bond

amortization schedule on the Round Valley-Spruce Run System.

By an act of the Legislature, this is the second method, we could establish a water resource development authority or commission, within the State Department of Conservation or anyplace else the Legislature chose to put it, which would have authority to issue revenue bonds. These bonds would be amortized by the revenues derived from the sale of water and would not reduce the State's general borrowing capacity. Although the interest may be slightly higher, a longer amortization period is usually available under this method of financing which, in effect, would result in initially lower water rates. But it's possible to float a 40-year bond issue with a deferred amortization payment for the first ten years so that only interest payments would be required during the initial phase of the construction program.

In view of the fact that construction costs are, as we said before, increasing yearly at an estimated rate of five to seven percent, any slightly higher interest rate would be more than offset by accelerating the construction programming during the first ten year period. In order to effectively carry out this type of program, however, in our judgment, it would be necessary to initially provide the funding by general revenue bonds for the acquisition of the reservoir site.

Now there are people who become frightened about an authority and I agree with someone who made a comment this morning, philosophically and objectively, that anything

that private enterprise can do should be tested first before government gets in and muddies it up, in my personal, general opinion.

On the other hand, when we talk about private enterprise building the Delaware River Basin Complex, let them come forth and build it. - maybe hundreds of millions of dollars involved. When we talk about building the diversion line to the north, that a private enterprise will come forth and build it, but no one has come forth and no private enterprise has that type of fiscal resource to begin with in the first place.

Therefore, in the order of magnitude, it would seem to me that the State should be obliged to build the base reservoir sources and supplies and they should be obliged to build the transmission systems on revenue bond producing methods, in my humble judgment, which would be amortized and pay for itself from the users.

ASSEMBLYMAN RINALDI: Thank you, Commissioner.

I am going to defer to my colleagues for additional questions. Once again we're running late on time. And if I may, Commissioner, I see there's another member of the Legislature here, Assemblyman Gimson. I'm sure that none of the prospective witnesses have any objection to Assemblyman Gimson joining us at the table since this is a matter not only of concern to us but to the whole Legislature. Assemblyman Gimson would you care to join us?

(Assemblyman Gimson joins members of Commission)

ASSEMBLYMAN RINALDI: Maybe we'll reverse the

procedure, Senator, we will leave you till last and start with Assemblyman Fekety at this point.

ASSEMBLYMAN FEKETY: Thank you, Mr. Chairman.

Commissioner Roe, do you feel that the State is obligated, as far as the reservoir, the supply and the transmission? How far, with the transmission, would you feel that the State is responsible or should be responsible for?

COMMISSIONER ROE: In the absence of a private company, such as some of our big companies, to be able to carry out a major transmission line, a major transmission line, from a region to a region, is all I think the State at best should be required to handle, a major transmission line such as - in other words, if we can't resolve it in the case before us then the only alternative is for the State to build it. But I think in general policy the State should be required to build the reservoir supply, as it did in Round Valley-Spruce Run, and also be responsible for the major distribution lines from those reservoir facilities.

ASSEMBLYMAN FEKETY: These are trunk lines up to a point.

COMMISSIONER ROE: Trunk lines, right. No distribution into communities or anything. Major trunk lines.

ASSEMBLYMAN FEKETY: So all we do is reduce the problem that's going on today, which is the complete transmission line. All we do now is reduce the length of the transmission. Now we bring it to a region. Now we leave

it up to that region to transmit that water to the municipalities involved.

COMMISSIONER ROE: Well, essentially I think the lines go into respective areas of the State where, short of the southern part of the State, there are substantive facilities there already that can be interlocked, as we did during the drought. In other words, I think that the region, without disturbing the entire water structure of the State, which would be the final solution you might say, - that carrying water from region to region would be a proper function of the State, in my judgment.

ASSEMBLYMAN FEKETY: Well this is fine thinking. The only thing is that it's a little bit too late, seeing that the region in question right now is going to commit themselves to bonds.

COMMISSIONER ROE: Right.

ASSEMBLYMAN FEKETY: Now it will be just their luck that they commit themselves to bonds and then a year later the State says, well, we'll finance transmission. It sounds good now but it does them no good a year later after they've committed themselves.

COMMISSIONER ROE: Well I think the only point there is that - if I may say this in all due candor and maybe perhaps a smidgen of humor, is this point that as the matter now again reposes before the Superior Court and time ticks on and none of us, of course, can judge what the Superior Court and then perhaps the Supreme Court is going to say, nor can we ascertain whether the parties of interest

will go back to the courts again. So someplace along the line, between the Court's decision - and if that can be resolved by judicial procedure, fine; if it can't, that matter has to be resolved some other way. That's the point I'm trying to make.

Now why the State should - and I don't mean this as any affront, of course, to members of the Legislature, most of them aren't here at this time, but how we can presume to feel our job is done because enabling legislation has been passed, which has not been able to be effective as of yet, and due to the fact that we're responsible in carrying on State Government eighty-five percent of the bonding and interest at this juncture out of general revenues, we have to be distressed, to say nothing of the point of view of the lack of water in that northeastern region, the quantity of water itself. That's what distresses us at the department level, looking for a solution.

ASSEMBLYMAN FEKETY: I gather from earlier testimony here that some of the private companies felt that the water business is a static business and that the demand is not expanding which is contrary to all you've testified to here this morning. I received two conflicting remarks here this morning.

COMMISSIONER ROE: Well, regrettably, I was not privy to the early part of that discussion. But having been the official Gunga Din of this State for five years, and again meaning no affront, I think it's interesting to note that on recorded facts, not on engineers' projections, on measured

recorded facts, which are depicted on the consumptive use in that area, somebody doesn't have the right facts someplace.

Now if we go back to the engineering and take the hypotheses that developed from the TAMS Report, as testified by the good Senator this morning, up to today and every single document, barring none, barring none, every single legislative commission, every single Legislature of this State from that date has come out with the pronouncement, be on with it, we're desperately short of water in the northeast, up until 1965.

Let me tell you what almost happened there. I don't know whether you're privy to this yet or not. In July, between July and August of 1965, when we had to impose water rationing on that area of the State, we came within weeks of running out of water literally and figuratively in a goodly portion of the northeastern part of this State. No question about it. We had to go to the extent, finally, of pumping 5 billion gallons of water out of Lake Hopatcong through a million dollar plus line, overland line, funding provided by the Federal Government in part, to be able to save the day and that is what saved us from running out in December of that year. Had we run out of water, literally and figuratively, it would have cost the State of New Jersey tens of millions of dollars a month because the first area to be shut down, and designated to be shut down, was the industry in the northeast corner of this State which supplies sixty percent of the economy and jobs of the State of New Jersey. That was the order of magnitude of the severity

of that situation.

I look around this room today and there are some eminent, qualified engineers in this room, nationally, and there's no one that's going to say that Bob Roe isn't telling the gospel, God's honest truth, backed up in complete support by the facts in the matter, not hypotheses as to what may happen.

And then when we reflect again in 1968, and we look at that increase of 7 billion gallons more consumed this year, with no substantive direction to resolve this matter, we're in trouble, believe me, in the northeastern part of the State particularly, right now.

ASSEMBLYMAN FEKETY: Then there is a desire that this is an attractive industry.

COMMISSIONER ROE: Yes, sir.

ASSEMBLYMAN FEKETY: Now you made a statement that private industry has not come forward. Now may I pose this question to you: Have you approached private water companies to come forward to invest in the water business?

COMMISSIONER ROE: Well, let me say this. Private water companies - well, let's not fudge it - the Elizabethtown Water Company came forward at one time and suggested along the line that they would build a facility to the north, that they'd consider it, at one of the - I think it was the Capital Bond hearing - except for the point of view that they're in no different position, vis-a-vis the point of cost or the users unless they had the customers to do it. They would have to go out on their corporate bond issue based on something

so they would pledge the basis of their existing system. Now if they had to carry a program like that for ten or twelve years, the only way they could do it would be to go back to the PUC to get an authorization to increase their rate structure. So, in fact, by their building it, without having the customers, vis-a-vis part of the problem we're faced with today, the water customers in their service area, in our judgment, - the cost to the water customers in their area would have to go up.

Elizabethtown, I understand, recently has suggested that perhaps they would undertake a consideration of building a distribution line from the Round Valley North Dam into the Somerset County area - Somerset-Watchung area. The only danger on that at this juncture is - this is complicated - we have combined the yield of both those reservoirs to be released in the South and North Branch and gathered up at a point of optimum yield where the full amount of the water, the maximum amount of water is available at Bound Brook.

If they were to take water at this juncture directly from the North Dam, if that were the case, they would reduce the effective yield of the Raritan system by close to 70 million gallons a day.

Now we have no objection - please believe me I wouldn't have any affrontry on Elizabethtown, they're one of the finest companies in the Country, there's no question, but if the private companies can come forward - and we've discussed it with them - and say, well, all right, we'll take this on, we in the Department would certainly have no objection, just

to get the line done.

ASSEMBLYMAN FEKETY: Well now it's a case of who makes the first move.

COMMISSIONER ROE: We've had discussions with them but nothing in substance to say that they're ready to present a proposal to us.

ASSEMBLYMAN FEKETY: Well, right now we have Spruce Run and the only customer we have at Spruce Run is Elizabethtown. So whereas you have just spoken that if Elizabethtown had gone on their own the rates would have gone up to their customers.

COMMISSIONER ROE: No, if they built a different line.

ASSEMBLYMAN FEKETY: If they built a different line.

Now, in reverse what we've done is, the State has build Spruce Run and the private water company, Elizabethtown, is the only customer.

COMMISSIONER ROE: Except for this point, - I'm glad you brought that up because that's important, - Elizabethtown is preparing to come in for 20 million gallons additional, right now, and North Jersey District Water Supply has their application hanging in limbo, to the State, for 90 million gallons until they can resolve the point of the distribution line.

In other words, we have already had a year and a half's dialogue in presentations made by the North Jersey District Water Supply Commission for the 90 million but they cannot effectuate their application at this time and finalize

it until they resolve the right to build the line in the first place.

So, between Elizabethtown's seventy, presently committed and being used, and the 90 million to go North Jersey, seventy to begin with and twenty in reserve, is 160 mgd, and 20 more to go to Elizabethtown shortly. So, in fact, if these movements take place, all but a smidgen of the Round Valley-Spruce Run complex will be committed, all of it.

ASSEMBLYMAN FEKETY: In other words, we're going to wind up with fifty percent being diverted to a private water company, of the entire reservoir.

COMMISSIONER ROE: Yes, sir. But the private water company, if I may, is franchised to service a goodly portion of the central part of the State, in fact, clear on up to Elizabeth, the City of Elizabeth.

ASSEMBLYMAN FEKETY: And I think it ends in Elizabeth, is that correct?

COMMISSIONER ROE: Right.

ASSEMBLYMAN FEKETY: That's all for the time being.

ASSEMBLYMAN RINALDI: Assemblyman Gimson, do you mind if we defer to the rest of the Commission first and then we'll get back to you.

Assemblyman Cobb, do you have any questions?

ASSEMBLYMAN COBB: There's a question in my mind. I understood that there were no pipes connected to Round Valley and Spruce Run and then I read or was told that there was a transmission line. What is the actual case?

COMMISSIONER ROE: When they say there is a

transmission line, they mean there's a transmission line from the Hamden pumping station to pump the water into the reservoir. There is no distribution system from Round Valley Reservoir.

ASSEMBLYMAN COBB: And this is the part that's in dispute right now, that's in litigation, or whatever term you wish to call it. I believe the City of Newark is the stumbling block?

COMMISSIONER ROE: Well I would liken it to say that the City of Newark perhaps is a bit obstreperous at this point.

ASSEMBLYMAN COBB: Well, you chose the word, I'll agree with it. I don't like it no matter what we call it. I haven't made a study of this, I'm an innocent bystander, so to speak, but I presume that when the reservoirs were built plans had been made as to where the water was going to go and, as you said, North Jersey District Water Supply was - I don't know whether it was you or not - was designated as the proper or a good body of people to handle it because they're in the business and they knew what the water business was like and then Newark fell out of the charm of this and decided to build another reservoir which was what, 4 billion gallons?

COMMISSIONER ROE: Four million, Dunker's Pond.

ASSEMBLYMAN COBB: I couldn't believe that figure, 4 million gallons.

COMMISSIONER ROE: It's an 11 billion gallon reservoir producing 4 million gallons per day.

ASSEMBLYMAN COBB: Per day, that makes better sense to me.

How are the bonds being amortized now on this.

COMMISSIONER ROE: Round Valley-Spruce Run?

ASSEMBLYMAN COBB: Yes.

COMMISSIONER ROE: Out of the general treasury of the State of New Jersey. Up to date \$19 million plus has been expended out of general treasury and the income against that expenditure is \$1.8 million.

ASSEMBLYMAN COBB: Which is not good.

COMMISSIONER ROE: No. It's costing us - let's just take this typical year, the 1968 year, it cost the State on that year's bonded amortization interest charge \$3,026,000 and we received \$843,000 from the Elizabethtown contract. In fact it's about \$2.1 million this year alone that just went to the amortization schedule.

ASSEMBLYMAN COBB: In view of the importance of this problem - I suppose I shouldn't ask you this question because I don't think you're in a position to answer it, but it seems very, very strange to me that the Courts would not have acted more promptly upon this matter. I think it's a matter of emergency and isn't something that should be just part of a court backlog. I think it's very important to the people of the State of New Jersey and your Department and the Legislature that we get this water working. It's a tremendous investment, it's costing the taxpayers a lot of money, and I feel if the courts are going to decide, which seems to me that this will be the answer, there should

be a decision on it.

COMMISSIONER ROE: Well, if my memory serves me right, I think it was November, 1967, that the Superior Court, Judge Mountain, ruled on this case. Newark appealed the case to the Supreme Court. The Supreme Court adjudicated and said that in their judgement, on the issue of whether or not the contracts were binding, the Supreme Court upheld that matter. Now Newark again has gone back to the Superior Court and has raised additional issues. So it's back in court again. It's been going through courts, I'd say, for at least a year and a half, at this juncture.

ASSEMBLYMAN COBB: And you did say substantially the entire inflow to those two reservoirs is already committed.

COMMISSIONER ROE: Well it's committed 70 million gallons exactly by contract at this juncture pending application of North Jersey for 70 plus 20 reserve, 90 more, which is 160, and 20 pending from Elizabethtown which would be 180, just about the full yield.

ASSEMBLYMAN COBB: Supposing the Courts say that Newark is not responsible to be a party to this, what position does that leave us in?

COMMISSIONER ROE: Well, not wishing to beg the future, if that should be the wisdom of the Court then I'm sure the North Jersey District Water Supply Commission would have to devise a new method or, if that weren't possible, to come back to the Legislature and say, I'm sorry, we attempted to implement your directive but have been unable

to do so for these reasons.

ASSEMBLYMAN COBB: Well I was thinking that there might be a happier answer in that you spoke of the commitments already being so large, which is a nice way to have it, that's what it's there for, to sell, to be used, that if Newark stepped out of this that there would be additional requests that you could comply with from some of the private water companies that might want to pick up a bit.

COMMISSIONER ROE: To answer your question directly, I think in fact, as we expressed, the four communiques that we have from the City of Newark, outlining some of their requests from that water supply, and we've asked them for additional applications, - I'm sure that the City of Newark would and plans to effect their formal applications for water from that system too.

ASSEMBLYMAN COBB: That's all.

ASSEMBLYMAN RINALDI: Senator Dowd?

SENATOR DOWD: Commissioner, the water that's offered for sale at Round Valley and other reservoirs, Spruce Run, is it?

COMMISSIONER ROE: Right.

SENATOR DOWD: - is offered for sale to any water company whether it be municipal or private. Is that correct?

COMMISSIONER ROE: It's offered for sale on the basis of an allocation. In other words, a private water company or a municipality or a group could come to the Water Policy and Supply Council, file an application with

that Council and request an allocation of water and then, in fact, after public hearing, if the Council and everybody agrees, they would get that allocation. The answer is yes.

SENATOR DOWD: And as to the price between water at Round Valley or private companies, is there a substantial difference in the cost to either private companies or to municipalities?

COMMISSIONER ROE: No. The base raw water charge is \$32.00 per million gallon at Bound Brook, based on what we referred to as the demand charge rate. In other words, the demand charge rate has been developed over the total yield of the reservoir systems and over the bond amortization period. So everybody would pay the same at that point in the river, \$32.00 per million gallons for the raw water. That doesn't cover filtration and distribution. They take care of that themselves.

However, they pay that demand charge rate whether they use the water or not, whether they use the water or not, because they in effect have a priority right, a proprietary right to that water supply once it's allocated to them.

SENATOR DOWD: And how does that relate to what they might buy at some other source or from other sources?

COMMISSIONER ROE: In my humble judgment and based on the facts of the State, as I know them, short of your own private well supply there is no other public source for raw water that has as low a charge as that one, barring none.

SENATOR DOWD: You make a distinction between raw water and some other type of water.

COMMISSIONER ROE: Raw water means that is has not been processed or filtered, nor has it been delivered to the place where you're taking it, wholesale, in effect.

SENATOR DOWD: Wholesale.

COMMISSIONER ROE: Yes.

SENATOR DOWD: I understand that some municipalities and some private water companies can buy or sell water for approximately \$190 a million gallons, whereas I understand further that the water cost to a municipality in Essex County would be somewhere in the neighborhood of \$400 a million gallons.

COMMISSIONER ROE: Well it depends if they're selling wholesale water or retail water.

SENATOR DOWD: The cost to purchase that.

COMMISSIONER ROE: Well, if they're buying from - I don't understand exactly.

SENATOR DOWD: The cost to purchase a million gallons of water by a municipality or a private water company would differ to the extent of possibly \$200 per million gallons.

COMMISSIONER ROE: If the system were built, such as the case of Newark's system, the Pequannock System and also the Wanaque, North Jersey, - and I'm sure they can speak more directly to this question than I can - if the system were built 25 years ago or 30 years ago, it was built on dollar value at that point. So, in fact, as they amortized and set up their amortizing schedule at that point the cost of the water was lesser and those uniform

rates have carried through to this day. If we apply a 1958 construction program of \$40 million and then add 1968 dollars to construct a transmission line from Bound Brook to the metropolitan region --

SENATOR DOWD: You have to absorb present day costs.

COMMISSIONER ROE: That's right, basic capital costs.

SENATOR DOWD: But there is a substantial difference between what may have existed 30 years ago or what may have been created two years ago.

COMMISSIONER ROE: Of course.

SENATOR DOWD: And as a result thereof there's a substantial cost, maybe 50 percent, resulting from inflationary problems or other economic problems, to the purchase of this water.

COMMISSIONER ROE: Part of this could be true.

SENATOR DOWD: Do you think then that there should be some control over the right to sell water whether it be controlled privately or municipally or by the State, so that there wouldn't be this competitive nature in the total picture of water conservation and distribution in this State?

COMMISSIONER ROE: Well I think there is to this degree, I think that as far as private water companies are concerned they are controlled under the Public Utility Commission. However, where public commissions and public suppliers are concerned, they have more freedom of movement based upon the capital amortization debt and the cost of

carrying their system. I think one thing ought to be done, that this myth of debate on cost, which is based on estimates and I think a little Ouija Boarding, ought to be stopped, because I think that the towns that are trying to make a decision here now are caught right in the middle not knowing exactly what to do because part of the programming is based on estimated costs. One man estimates it one way, one man estimates it another. And I think it's a disservice, besides that. I think that's a disservice to the people because delay ensues and this is part of the problem we're faced with today.

SENATOR DOWD: Do you think that this source of water which was created ten, twenty, thirty years ago by various agencies, whether they be public municipal agencies or private agencies, and the need as you projected here for waters at Round Valley and those I think in Manasquan and other areas, - when do you think that they will level off where there will be a relationship between current costs and what has been purchased, as you said, at the dollar for dollar value back in --

COMMISSIONER ROE: I don't think they ever will. Let's just take the case of Newark. As they develop their systems further, you know over a period of twenty or thirty years, they level out costs on the basis of when they start a certain thing. There's a time, of course, when you write off the amortization and interest on a project and, in effect, that's part of the capital debt is paid. Now theoretically at that point the rate should drop, if you eliminate the

bonding, but if they have to go on and build additional facilities it's obvious that the rate is not going to stay static or drop, it's going to go up, it has to.

SENATOR DOWD: Have either private companies or municipal companies continued to keep abreast, as they've seen it, of the creation of water supply either by reservoirs or other systems concurrently with what you have projected here?

COMMISSIONER ROE: Well I think that the private companies and the commissions of the State that are responsible have the same basic problem in large measure that is faced now by North Jersey District Water Supply Commission. In order to go to the street, in effect, and sell revenue bonds, they have to have contractual obligations to back up those revenue bonds or they must take their existing capital base of existing reservoir systems and pledge that as part of the security. This is part of the problem. Now when you start taking --

SENATOR DOWD: Is that being done, to your knowledge?

COMMISSIONER ROE: This is exactly the procedure, for example, that North Jersey is attempting to do. This is exactly the procedure that our good friends in the City of Newark are trying to do.

SENATOR DOWD: Keep abreast as you are on the State level.

COMMISSIONER ROE: Oh, yes.

SENATOR DOWD: And is there any control by your department or other state agencies as to the extent to

which they can go in keeping abreast or even in advance of the needs which might be in conflict with what has been projected here by way of maps and other explanations.

COMMISSIONER ROE: Very good question.

Let me say this, in all due respect to the City of Newark, North Jersey and every other water engineer, private or public, in this State, the job that these people did on the Board of Engineers that was formed in 1965 which saved this State from going dry is extraordinary and they should all be given a medal. But everybody worked together then. We exchanged waters. We turned on valves, we opened valves. We put in temporary pumping stations and the full weight of energy, everybody working together because it was a common crisis and no one could stand alone. But like so many things happen in a family, you know when things get going along pretty good then brothers wander along the line and then they become the oracle of wisdom in the field to be achieved. And it seems to me, if I may say this in all due humility, that nobody has the right, no one has the right, in my judgment, to put their desires and what meets their needs best over the top of the other people in this State wherein a basic commodity, such as water supply, is involved.

SENATOR DOWD: Well in what sense do you mean "their needs," in what sense do you mean that?

COMMISSIONER ROE: Well, it's not wrong that engineers should disagree on a method of doing something. It isn't wrong that there should be a difference of opinion,

as I suggested in my discussions earlier. But I do think it's wrong to attempt to destroy one project just to get your own other one built when it's abundantly clear, and for God's sake if it isn't now it never will be, - it is abundantly clear that both the North Jersey System, the Newark Program that's projected, and an additional State program which is being worked on now is going to be essential to bring the water that's needed into the northeastern part of the State. All three of them are needed. So to kill one, to prove what point, I can't understand, quite frankly. Not to do the other and fight the other, brothers scrapping in the arena, for what purpose? to achieve what goal, what end? What is the story here? Maybe that's what ought to be asked. Why? When both facilities are needed, I don't know nor does any other engineer on my staff or the Water Policy Council or anybody else know.

SENATOR DOWD: We hope to find that out in the next two days.

COMMISSIONER ROE: I hope so.

SENATOR DOWD: It seems to me that an issue which is presently being litigated has woven itself through the entire hearing so far, and it's unfortunate because I think the total picture in New Jersey, the total development of New Jersey is much more important and I think it transcends what might be personality clashes or technical legal matters. But I wonder if, as I indicated, - I'm not so sure you answered my question - whether you do exercise or the State or your Agency exercises any control over coalition of

private companies in privately attempting to keep abreast of the water needs, both as to source, supply and distribution, in the State. You've indicated that some are projecting further developments and I think you made reference to a municipally-owned one, but are private companies and can they, in your opinion, keep abreast of the water needs by the creation of reservoirs and distribution lines and the ultimate distribution to the consumer?

COMMISSIONER ROE: I would say, in the main, that's true.

SENATOR DOWD: You think that they could.

COMMISSIONER ROE: I think they could and I think in large measure they do.

SENATOR DOWD: Now again the word "coordination," but what coordination is there between state, municipality and private industry, that is worked out so that there is not an overlapping or working at cross purposes or duplication of effort in the total - and I'm only now talking - I'm not talking about water control, flood control, because I'm sure that that would by nature be outside of the realm of their concern, but I'm talking about the sale and distribution to the consumer. What relationship is there between the State, municipal and other governmental agencies and private companies in a total plan where both are working together? Is there such a coordinated effort that you know of?

COMMISSIONER ROE: Well, I think, if I understand your question, first of all, the exchange of information

and direction is pretty fluid through our State, you'll pardon the reference, literally and figuratively, in knowledge. The function of the State Department of Conservation, nee the State Water Policy and Supply Council and Division is legion, streamflow encroachments and all the things you mention. But in addition to that, the Water Policy and Supply Council is a quasi judicial body who literally allocates, after public hearing and engineering support, water supplies, both ground water and surface water, throughout the State to the communities or to commissions and agencies serving a group of communities or to private enterprise. It could be a company such as Elizabethtown or Middlesex Water or it also could be an individual manufacturing plant, as is the case in many instances, ground water and things of that nature.

So there is a constant vitality going between at least our Department and the community in general throughout the State. However, neither our Department nor the Council intrudes in the affairs of the community as they interrelate amongst themselves, unless we're called upon to do so, or arbitrate or work with them.

SENATOR DOWD: Recently I think there was a problem in Morris County wherein a private industry was using ground waters, I think that's subterranean waters?

COMMISSIONER ROE: Pardon me, sir.

SENATOR DOWD: I say recently I think in Morris County a large industry there was concerned with a source of water, I think they were using gravel packed wells or

some other -

COMMISSIONER ROE: Yes.

SENATOR DOWD: And at the same time the municipality was attempting to create a water utility. Is that resolved within your jurisdiction?

COMMISSIONER ROE: Yes, they --

SENATOR DOWD: Now, getting back to my earlier question, a situation like that, I would assume, would result from the lack of communication between private interests, municipal governments who attempt to and some who do run their own water industries, and private water companies.

COMMISSIONER ROE: Or the fierce competition for the resource. You know where there's a matter to be resolved and communications and dialogue and technique, that's one thing, and I think this perhaps answers a little more succinctly your other question. It is not at all unreasonable to believe that in the State of New Jersey there aren't some fierce battles fought between areas of interest for the same resource.

SENATOR DOWD: And this happened, the State is being a party to that battle too, isn't it?

COMMISSIONER ROE: Well, we're supposed to be the arbitrator.

SENATOR DOWD: But you're also a participant.

COMMISSIONER ROE: Continuously.

SENATOR DOWD: Is that correct? A participant in the sense that you also want --

COMMISSIONER ROE: That's so.

SENATOR DOWD: And I'm not objecting to it, just so I understand, that you also are in a sense participating in the creation of water sources.

COMMISSIONER ROE: We're up to our ears in it every hour on the hour. I agree with you.

SENATOR DOWD: Does there exist any coalition of private interest in water source and water distribution in New Jersey that works in conjunction with your Department?

COMMISSIONER ROE: We work in --

SENATOR DOWD: Or with individual companies.

COMMISSIONER ROE: Mostly with the individuals but they consult amongst themselves and work together and sometimes they get into a scrap over an area.

SENATOR DOWD: If you'll bear with me for a moment.

I think part of the early testimony indicated, by I think the first witness, that there was no problem by private water companies - and I think he's using the word "private" water companies as opposed to municipal companies - in taking care of the needs during the emergency. Did you find that to be so?

COMMISSIONER ROE: Well, it depends on what they mean by private water companies. If they're talking --

SENATOR DOWD: Well I think he used it as opposed to municipally owned water companies.

COMMISSIONER ROE: But if they're talking about the giant water companies, that's one thing but if they're talking about --

SENATOR DOWD: The distinction was made. I'm not talking about the hundred, or so, small development type water companies, I'm talking about the forty, or so, large companies that we recognize, without naming them.

COMMISSIONER ROE: If the State of New Jersey had not entered into the emergency program and gotten the best engineering brains in this State together, including the private and public water companies, and established a board to run the northeastern water system, we would have run out of water in both companies. It was essential. All systems were blended together during that period.

SENATOR DOWD: Well I may digress back and forth here but just from notes I've made, I'm curious to know, we went into pollution and I think to a degree sanitary sewage disposition, which is necessary in my opinion and an element of concern in water.

Are there various standards or do the standards differ for the discharge by industry into certain streams abutting or in the proximity of the industries? Are there various zones or a difference in standards where the discharge may be different in zone A as opposed to zone B, etc., speaking broadly in terms of industrial development, regionally or otherwise. What are your thoughts on that?

COMMISSIONER ROE: Under the Federal law, in June of last year it was mandatory that all the states in the nation, by Federal law, administered by the Department of the Interior, develop what they call Uniform Stream Flow Classifications, and in those Uniform Stream Flow

Classifications they had one year to perfect that on a nationwide basis, under Secretary Udall. And this was a combined effort between the health departments, primarily, in respective states and we, of course, got into it because of our area interest in fish and game and water supply. And out of that evolved basic criteria, and I'm glad you asked the question. They call those criteria and the standards FW-1, FW-2, FW-3.

FW-1 is pristine water never touched by human hands.

FW-2 is potable water supply good for recreation and fishing and that sort of thing.

FW-3 is not a potable water supply but it can be utilized for stream flow augmentation and for recreation and fish life.

We know in the particular field and expertise we're involved in that FW-2 standards that have been established for potable water supply can be completely deleterious to fish life.

Now, quite frankly and objectively, the first thrust of water quality management, federalwise, in the standards that are being developed by the states, is based on what they refer to as the oxygen demand, primarily, of the water from pollution. We say, categorically, and the purpose of our stream monitoring program we mentioned during our testimony, we're going much further than that. We're going ahead and literally quantitatively measuring 12 different basic elements within the water supply because we're concerned, and rightfully so, in implementing the private

diversion act, over the cumulative chemical wastes which can be different and is different than just oxygen demand of the stream from pollution, putrifaction and that sort of thing.

For example, up in the northeastern part of the State at Hackettstown Hatchery - I'm sure Doug will remember this - in 1965 there was a firm there that had manufactured tools, and case-hardened tools, used a half barrel of cyanide mixture every day. They had been doing it for 20 years. So one day the fellow dumped it on the ground in the same area he did it before but it happened to rain that one day during the drought and it was one of those quick flashes, it picked up that material and brought it a short distance into the hatchery and we lost one-third of the fish in the hatchery in one shot because of that cyanide mixture. No amount of oxygen demand would have resolved that problem alone.

And in the complexities of New Jersey's industrial wastes is their cumulative chemical wastes that we're concerned with. And that's why we're on the advance program in the research and work and monitoring that's going on, and also to implement the state laws on that.

SENATOR DOWD: Are there various streams or various regions that you have defined as to --

COMMISSIONER ROE: Yes. The whole state has been classified by streams and estuarine areas and rivers and tributaries under the F-1, F-2 --

SENATOR DOWD: Under the Federal Act, right?

COMMISSIONER ROE: Right.

SENATOR DOWD: I think you have answered most of my questions. Thank you very much.

COMMISSIONER ROE: Thank you.

ASSEMBLYMAN RINALDI: Thank you, Senator.

Assemblyman Gimson, would you care to ask a question?

ASSEMBLYMAN GIMSON: I've had some experience with Commissioner Roe before at hearings and I would like to ask if maybe he could answer a couple of these questions without making a speech.

COMMISSIONER ROE: I can't. It's impossible.

ASSEMBLYMAN GIMSON: Possibly because of repetition and using the numbers so often, you keep referring to 190 million gallons of safe yield out of the Spruce Run-Round Valley and yet the reports that I've studied in the last few weeks from your office show a safe yield of 140 mgd and I wonder which one of these figures - maybe George Shanklin could tell us - is nearer true.

COMMISSIONER ROE: Well I know what he's going to say if I can encroach upon my good Chief Engineer's time. The debate between the 190 and the 140 or 160 really is a debate that I don't think is germane for this reason. The 1965 drought of record has never occurred, never occurred and been recorded, so that all the water engineering and water yield and so forth were based on previous records that have been recorded.

If you plug in the order of magnitude of that drought against the water yield of the system, we materially

reduce the water yield throughout the entire state by probably thirty to forty percent. No one has ascertained, as yet, including the United States Corps of Engineers, the Delaware Basin, ourselves, anybody else, exactly whether that drought was a ten year drought, a hundred year drought, a thousand year drought. When will it happen again. So within the engineering circle, having not been resolved, is the point of how those figures should be plugged into the over-all yield of our rivers and streams.

So as far as we're concerned, the reservoir yields 190 to 200 mgd.

ASSEMBLYMAN GIMSON: And the 160 is probably a safe yield.

COMMISSIONER ROE: I'd say it's 190. I'm not one to accept a thousand year draught to be the criteria to base the engineering on.

ASSEMBLYMAN GIMSON: You feel that you will be able to sell 190.

COMMISSIONER ROE: Yes, sir.

ASSEMBLYMAN GIMSON: Now you said that you're now selling 70 to Elizabethtown. You're letting it out down the South Branch.

COMMISSIONER ROE: Right.

ASSEMBLYMAN GIMSON: And there's a loss of approximately .9. Their pickup is what, 61?

COMMISSIONER ROE: Well, we have to maintain by law a minimum of 90 mgd flow at Bound Brook gauging station for stream flow quality and then our people release by

notification from Elizabethtown the quantity they need. Now it happens to be that sometimes - well, this is going to get complicated - on some days they may take considerably more than 70, and other days they don't take any. It's the average yield that they take.

ASSEMBLYMAN GIMSON: The average yield is somewhere around 62, though, that they take.

COMMISSIONER ROE: Well I don't know that to be --

ASSEMBLYMAN GIMSON: Well you said that the loss because of a lack of --

COMMISSIONER ROE: They could only be taking 40, but they're paying for 70.

ASSEMBLYMAN GIMSON: They're paying for 70 but you stated earlier that because of the lack of a capital facility to transmit the water they're being charged for 70 and only getting around 62.

COMMISSIONER ROE: No, you're mixing apples, if I may. I said this, as far as Elizabethtown is concerned, if they're going to draw 70 mgd as a mean average draw from the river, they draw it. In fact they probably on some days at peak times during the day will draw a lot more than that. We have no problem in providing Elizabethtown 70 mgd average yield at any time, simply because they're drawing directly from Bound Brook at Bound Brook. If, however, - the point I did say - if they were to build, as one idea had been projected, a separate pipeline from the North Dam of Round Valley into the Somerset County area, then they would reduce the yield of the Round Valley-Spruce Run

Reservoir Complex, at optimum yield at Bound Brook, about 60 million gallons a day.

ASSEMBLYMAN GIMSON: That's not the area you were testifying that I was talking about.

Let's go into the area of money that you stated the State is now carrying the bonds. What was the income from Elizabethtown last year, actual income?

COMMISSIONER ROE: The income from Elizabethtown last year was \$843,000. It was \$556,000 the year before and \$417,000 the year before, or a total of \$1.8 over three years.

ASSEMBLYMAN GIMSON: An average of about six hundred?

COMMISSIONER ROE: Right, sir.

ASSEMBLYMAN GIMSON: And the debt service on the bonds currently is \$2 million?

COMMISSIONER ROE: The debt service? You mean in principal? Oh, I'm sorry, I beg your pardon, I haven't got that book. The total combined interest and debt service as of this year, because it's a sliding scale, is \$3,314,500.

ASSEMBLYMAN GIMSON: And you're selling about half the yield of the water now?

COMMISSIONER ROE: No. We're selling 70 mgd, and we can sell between 190 and 200.

ASSEMBLYMAN GIMSON: That's if you can let the water out of Round Valley.

COMMISSIONER ROE: In due course.

ASSEMBLYMAN GIMSON: But right now would you say that the Elizabethtown payments to the State are on schedule?

COMMISSIONER ROE: Yes.

ASSEMBLYMAN GIMSON: And without the efforts of your office to construct and allow for the use of Round Valley water, it will not go any higher?

COMMISSIONER ROE: Oh, wait a minute now. I just don't understand the good gentleman's question. What do you mean, our efforts?

ASSEMBLYMAN GIMSON: Well, you have a hole in the ground with a lot of water in it, isn't that right?

COMMISSIONER ROE: Yes.

ASSEMBLYMAN GIMSON: You have no way of getting that water out of there so you have no future prospects of selling that water, do you?

COMMISSIONER ROE: Well, if I may, in all due kindness, when we talk generically then I have to talk factually. The Round Valley Reservoir per se has been constructed precisely, lock stock and barrel, nut and gasket, as the Legislature directed, without any method of getting the water out of the Reservoir --

ASSEMBLYMAN GIMSON: As the original plan..

COMMISSIONER ROE: As the original project. Now --

ASSEMBLYMAN GIMSON: What about your plans to --

COMMISSIONER ROE: -- we, in turn, have come back to the Legislature and, on the basis of achieving an optimum yield out of that river basin, said that part of the works have to be modified, and in order to achieve that, this is what we have to do. And then the good Legislature came back and said, well, go ahead and make an economic feasibility

study, engineering feasibility, and come back to us and let us know, which we did at the last budget meeting and we put an appropriation in. And now we have the final plans and specifications being engineered and ready to go out to bid - when? George.

MR. SHANKLIN: The drawings will be in about six months from now.

ASSEMBLYMAN GIMSON: And now these plans are to let the water out where, Commissioner?

COMMISSIONER ROE: Well, we'll have the capability, Doug, to do two things, one is to still implement the use of the North Dam as projected, and for a reason, by the way, and in addition to that to be able to lease that water out to South Branch-Rockaway Creek.

ASSEMBLYMAN GIMSON: Now when you let the water out of the Rockaway it will go back down to South Branch-Raritan?

MR. SHANKLIN: North Branch.

ASSEMBLYMAN GIMSON: And will be picked up where, by whom?

COMMISSIONER ROE: It will go past the confluence right on down and go to the point of optimum yield at Bound Brook. However, if anybody wishes to draw off above that point for diversion they can do so.

ASSEMBLYMAN GIMSON: All right. Now, you have applications in totaling slightly more than 180 mgd.

COMMISSIONER ROE: We have applications pending, right.

ASSEMBLYMAN GIMSON: If you approve these applications

and for all intents and purposes I'd say you've now sold the capabilities of the reservoir and there may be a little left, according to whose figures you use. What water will be available for the Central Jersey Areas of Hunterdon and Somerset?

COMMISSIONER ROE: Well, we have projected the construction in our priority 1 capital project for the building of the confluence reservoir which will produce roughly 50 mgd more, and also the design of Round Valley is such, as originally designed and can be augmented to handle Delaware water in due course.

ASSEMBLYMAN GIMSON: With the construction of another pipeline.

There was legislation passed, Commissioner, in fact about the time that the reservoirs were under construction, that actually gave all the waters from the watershed and its tributaries and everything else to the State of New Jersey. And in that legislation there was what has been called a mandate to construct a transmission line to provide water to Northeast New Jersey. Do you feel that this mandate is actually a legal one?

COMMISSIONER ROE: You mean by the Legislature? The only one that would give a mandate would be the Legislature.

ASSEMBLYMAN GIMSON: Well they say a mandate from the Legislature to build this transmission line, referred to in testimony previously.

COMMISSIONER ROE: In my judgment, when the

Legislature speaks it's a mandate. When they create public policy it's a mandate, it's the direction that they go in until some other Legislature changes it or it's carried out.

ASSEMBLYMAN GIMSON: You can't build a pipeline without money, though.

COMMISSIONER ROE: Well I mentioned that point that regretably with the mandate there wasn't any fiscal resources applied.

ASSEMBLYMAN GIMSON: But I keep hearing this mandate for a pipeline and when there's no money I wonder how you achieve such a mandate.

COMMISSIONER ROE: Well maybe perhaps my use of words may be different but I kind of look at the Legislature as being the major body of this State which speaks. If in fact the Legislature said to North Jersey, be on with it and build the line, and provided the law, I would expect that the Legislature expected it to be carried out.

ASSEMBLYMAN GIMSON: Do you feel that if the decision is to go forth with the building of a pipeline that might cost, what \$100 million or \$200 million?

COMMISSIONER ROE: No, North Jersey, what is your figure?

MR. SHANKLIN: \$67 million.

ASSEMBLYMAN GIMSON: \$67 million, giving us a total of the Round Valley cost in the pipeline of \$100 million. Would you think that we should go into another referendum for this money?

COMMISSIONER ROE: Well, in my categorical judgment from this point of view, if we cannot resolve the matter amicably or with the Courts speaking on the matter, then I think the State Government is absolutely obliged to move ahead with it without further delay.

ASSEMBLYMAN GIMSON: And do you have an estimate then, with that additional cost added to the reservoir cost, of the value or the cost of raw water at the point of terminus of the pipeline?

COMMISSIONER ROE: Well you wouldn't do it that way, Doug. The raw water at Bound Brook would be \$32.00 per mgd at Bound Brook. The estimated cost by taking the figures that are available of the feasibility study made by North Jersey District Water Supply, by Gilbert and Associates, pegs the price at 5 percent interest at \$251 per mg at that terminus point.

ASSEMBLYMAN GIMSON: And that's still raw water, right?

COMMISSIONER ROE: No, that's process treated, filtered water.

ASSEMBLYMAN GIMSON: That's all the way.

COMMISSIONER ROE: Yes.

ASSEMBLYMAN GIMSON: Everything except final delivery.

COMMISSIONER ROE: That's right.

ASSEMBLYMAN GIMSON: I think the only thing I can figure is that you've left no water for us.

COMMISSIONER ROE: There's plenty of water, --

ASSEMBLYMAN GIMSON: We have all the reservoirs but no water.

COMMISSIONER ROE: If you come and get it.

ASSEMBLYMAN RINALDI: Thank you, Assemblyman Gimson.

If we have no further questions directed to the Commissioner, I'd like to thank the Commissioner, for your testimony, for your time, and we hope that what you've said will prove helpful to the Commission in it's deliberations.

Thank you, Commissioner.

COMMISSIONER ROE: Thank you very much.

ASSEMBLYMAN RINALDI: I'd like to state that we are running late. We invariably fix too large an agenda for the day but I suppose that's as it should be.

At this time I'm going to somewhat reverse the field and go from State Government right down to the municipal level before we go back up to a semi-public agency.

I would like to call on the Mayor of a municipality which is directly involved in the northeastern area, Mayor Walter Davis of Bloomfield. Mayor Davis represents a community which is one of the Raritan Valley participants, represents a community in Essex County which is directly affected by this problem of Northeastern Water Supply, and represents a community which was very much involved in this very serious crisis of 1965. Mayor Davis of Bloomfield.

W A L T E R D A V I S: Thank you, Mr. Chairman.

ASSEMBLYMAN RINALDI: Do you have a statement, Mayor?

MAYOR DAVIS: Yes, I do. I would like with your permission and the indulgence of the Commission to have the opportunity to read it and then I will make some short remarks and if you would like, I will make myself available for any

questions that might be directed to me.

I would like at this time to introduce Mr. Friedman who is the Town of Bloomfield's Engineer.

The drought of the early 60's proved unequivocally that the water resources that service the northeastern communities of New Jersey were inadequate; that additional planning and supplies were needed to quench the thirst of this burdening metropolitan area. Consumers who had taken for granted a commodity universal in use were now taking emergency measures to assure the delivery of this priceless liquid so necessary for health, industry and fire protection. Many additional wells were drilled and developed, dams and reservoirs constructed and pipelines laid.

On November 4, 1958, the New Jersey Water Supply Law and its companion Water Bond Act was overwhelmingly approved by referendum vote. The purpose of which was to insure through long-range planning the availability of adequate future supplies in all parts of the State; to insure the protection and orderly development of statewide ground water resources and to provide as authorized the new water required to meet the critical demands of the northern metropolitan area by the design, construction and operation of storage facilities to augment the natural resources of the South Branch Raritan Basin.

The 45-3/4 million dollar bond issue was authorized when it was assured by the Commissioner of Conservation and Economic Development — that a net income could be derived from the sale of water by the construction of the necessary reservoirs to serve the immediate and future demands of the northeastern metropolitan and Raritan Valley areas.

The emergency needs for water in the northern communities were solved in part with the end of the drought and by necessity with the construction of additional facilities, rationing, leakage studies and improved metering. Studies show that in established populated cities and cities whose population migrated westward, the water crisis was nearly at end. Should a drought occur again, it's possible these same communities would be faced with the same dilemma. If one examines data on the normal passage of water in and out each city, the industrial city remains stable and only in cities and communities with high population growth rates has the water consumption per capita increased disproportionately, mainly because of lawn sprinkling and air conditioning.

Meanwhile, the costs for the proposed pipeline, filtration system, raw water and appurtenant work subscribed to by the eleven municipalities in the North Jersey Water District has increased from \$165 to \$245. per million gallons.

In the Town of Bloomfield's particular situation, subscribing for six (6) M.C.D. at a daily cost of \$1470. actually amounts to \$735. per M.G. for the two (2) M.G.D. that will be used now, this is exclusive of distribution costs. Our present water utility budget would double, indicating a need to double our existing water rate to the consumer. Economically and justifiably this is not feasible since the consumer

will be paying for water, a commodity, that will be delivered and consumed in the year 2000, the benefit being derived by the consumer in the 21st century.

Good Planning - Yes, but in equity and investment - No!

There are many solutions to this problem we face - alternate routes; several pipelines constructed at different times; the possibility of community development along the proposed line; new sources; Federal or State financing and grants. What shall it be?

One proposal which could have been included in the 1958 Water Act was unified action by various groups interested and desirous of solving the State's water problems.

An example is the progressive leadership organized in California known as the Feather River Project Association, which brought together men representing many diverse water interests and by round-table discussion of their problems made possible a cooperative program with statewide support for the development of the water of California in the best interests of all the people of the State. The approval by the people of California of a 1.75 billion dollar bond issue provided the means to develop the waters of the Feather River Project and to transport such water from the areas of surplus to the areas of need. The ultimate success of this program is not in the construction of project facilities but in the delivery of the water.

As demands for water draw drastically upon present sources of supply, conflict between Federal, State and Municipal or private control has intensified. This problem is national in scope. The most frequent criticism of State administration agencies may tend to

be summary and even arbitrary in their determination of application for permits to produce water. One approach to end this impasse may be the Model Water Use Act which incorporates the best features of many state systems. It provides for a State Commission. Its aim is to provide comprehensive and paramount control over all the water resources of the state. Above all, no satisfactory system will work in the absence of an efficient system of administration.

In conclusion what is important to consider is the ultimate user, the consumer and equitable rates that must be applied to pay for this project. Since the project costs are out of proportion for a reasonable and justifiable rate structure, other sources of revenue must be found.

1. The State would conscientiously consider the financial assistance of this pipeline in the form of deferred principal payments and low interest notes.

2. The active participation of the Federal Government, noticeably absent until now, to guarantee the bonds of the municipality or North Jersey District Water Supply Commission.

3. And finally, a State grant for planning and development of this worthwhile water line.

Gentlemen, I think that you can see that the grave concern of the municipalities - and while I am not empowered to speak for the municipalities I think that to a great extent I mirror their concern, and this is conveyed to me as a result of continuing communication that we have had in this regard - their concern is two-fold, one the adequate supply of water and, two, the prohibitive cost.

I would just like to say that with the present figures that we have available in Bloomfield, to defray the capital construction, as well as pay for the water, it would cost us in the vicinity of \$583 per million gallons. We are currently paying approximately \$180 per million gallons. So you can justify the concern of the municipality. And again I say that other communities are in the same boat.

We are constantly concerned about the available supply. We were to a great degree, let's say, subjugated to the same drought conditions as all the other communities, and while we tried to receive additional aid, it was not always forthcoming. It is not easy to get a community who has an available source of water, such as an underground supply, to automatically, upon your request, divert that water to your use. We must have some permanent source.

I think what we are all concerned with is the fact that many years have gone by since we entered into this contract and during this time the costs have escalated far beyond what was originally anticipated.

I think also that Newark's action in divorcing itself, or attempting to divorce itself, from the contract will be taken into consideration by the other municipalities because of the impact of the cost upon them. They are only waiting to see the outcome of Newark's suit. And, of course, this gives us grave concern for the eventual construction of this which all of us recognize is so necessary. We're all impaled upon the horns of the same dilemma, needs vs. cost, and we're asking you people to help us solve this.

I don't think that there has been sufficient attempts made to enlist federal aid. I see all over reflections of vast amounts of federal monies going to other states. I would like to point out again that New Jersey is the most highly urbanized state in the Union and yet we receive the lowest amount of federal money. And with the problems of urbanization, I'm sure that we quite agree that water is one of them. And in this regard I do think that we require greater consideration and certainly more money from the federal government.

The implications that Commissioner Roe referred to before in having the industries turned off as the first measure in taking drastic steps for the conservation of water would have vast implications not only upon the State of New Jersey but upon the country as a whole. And with all of these vast implications I do think that the federal government should be made more cognizant of their responsibility as far as the State of New Jersey is concerned.

I also think and hope that the Legislature will undoubtedly provide some means of helping us with the present contracted obligation, whereby we are obligated to pay for water that, there's an excellent possibility, we may never use.

It would appear that we were very generous, Bloomfield and the other participating municipalities in our original request for water and for the amounts that we contracted for, realizing that we were contracting for a long period of time and now we are forced to pay for this generous request

that we have obligated ourselves to.

I am hoping that the Legislature will take this into consideration when it is finally drawn up.

Above all, we are saying simultaneously that we recognize the immediate need for the construction of this and we urge you to do what you can to alleviate the cost and we are also urging that you do what you can to get this pipeline constructed.

It would seem to me that Commissioner Roe, as a department, has thoroughly analyzed the water resources of the State but to me this is merely the conception. We are not even into the period of gestation, as I see it, yet and certainly aren't into bringing this to maturity. And I do think that we have to have some type of an authority, reluctant as I am to accept authorities, but somebody who is responsible for the administration of this to bring it into fulfillment. And this is what I urge you to consider, gentlemen, in your deliberations.

ASSEMBLYMAN RINALDI: Thank you very much, Mayor Davis.

I would just like to point your attention to an area which may afford federal relief to communities. I am frankly not that familiar with it but it seems that federal financing is available through the Department of Housing and Urban Development. Now to what extent a community can avail itself of funds from HUD to build water facilities and sewage treatment facilities within a community, of course, would have to be determined directly from that Department, but it is

one department which does provide funds for communities.

I am sure, Mayor, that you and your colleagues governing the tax for Bloomfield have considered that and I would urge you to continue to consider that area.

With respect to your other conclusion, I agree that each community is faced with the constant dilemma of supply vs. cost. Both of them must be kept in constant perspective and the problem is how do you reconcile the two. You want to have the water available and yet, of course, you cannot involve yourself in a price which becomes totally unreasonable.

Of course, with respect to the fact that water basically costs a lot less than any other commodity, vis-a-vis say the cost of raw electricity, it's still very, very cheap. As somebody said, a cubic yard of water costs a lot less than a cubic yard of dirt. But this is a real problem that every community has.

I have suggested, as has Commissioner Roe, of course, with respect to whether the State could specifically help out on the Raritan Valley project. I made my comments known at one of the hearings up at the Wanaque headquarters this spring. You attended those hearings, I believe, also, not hearings but those conferences, Mayor, that I would hope that the Raritan Valley participants could somehow get together and unite in their thinking because it seems to me, and I'm drawing certain conclusions now and I think they're pertinent, it's hard for groups to come to the Legislature and ask for help, financially or otherwise, when those groups among themselves still haven't been able to determine

what the best procedure and the best course of approach to their water problems are. And as I indicated back in March, I would have urged that Newark and all the other Raritan Valley participants get together, determine whether or not you should have a pipeline, and then come to the State of New Jersey for help, because I cannot see the Legislature helping 12 participants which are fighting among themselves.

Now that's just parenthetically a side remark. But this is a problem, it seems to me, that the Legislature would be faced with.

I think your problem, and it's the problem that every community faces, obviously, you want to keep the cost within reason and yet you've got to have an available water supply because, don't you agree, Mayor, that if the water is not there you'll pay anything for it?

MAYOR DAVIS: Well, water, of course, is one of the basic requirements of life but there are also other basic requirements of life which you have to have to sustain it. And you can't spend all of your money on one at, let's say, the depreciation of the other. And, therefore, you must, let's say, take into consideration all of them in due proportion.

In regard to your statement that you would like to see a unified approach, I would like to convey at this time that there's been nothing more unified than the thought of trying to get additional money to defray our obligations.

ASSEMBLYMAN RINALDI: So with respect to the

thought of coming to the Legislature for money, you're all in accord.

MAYOR DAVIS: That we are.

ASSEMBLYMAN RINALDI: Most people are in accord when it comes to that.

Senator Dowd, do you have any questions?

SENATOR DOWD: No, I have no questions. Thank you very much, Mayor.

MAYOR DAVIS: Thank you.

ASSEMBLYMAN RINALDI: Assemblyman Cobb?

ASSEMBLYMAN COBB: Well I'm quite puzzled with the Mayor's problem. I say "puzzled" and I can't think of any solution. The problem is that they want the water but they want it at the price that they feel that they can afford. Sort of like a man who wants to buy a Chevrolet and he has \$2,000 and he's asking General Motors to make him a Chevrolet for \$2,000.

Now I'm open to any suggestion on the part of engineers or anybody else as to how you can deliver water to your town for the price that you feel that you can afford to pay - you haven't said it but I would say it's somewhere around \$300 maybe a million and anything above that is going to be too costly to use. You say you pay \$180 now and under the plan that's been outlined to you it's going to cost \$580?

MAYOR DAVIS: \$583.

ASSEMBLYMAN COBB: Well that's a difference of \$400.

MAYOR DAVIS: It's considerable. It's not just the difference between a Chevrolet and a Cadillac, I think it might

even be, let's say, a lower price car. We'll settle for the Oldsmobile or something in that category.

What I am saying is or what you are reflecting is essentially correct. It's not that we are solely here throwing ourselves, if you will, on the mercy of the court, what we are here trying to do is to accurately display the the disparity between what we are paying now and what we are going to have to pay. And I'm quite sure with the amount of money involved that you can recognize the magnitude of the problem.

ASSEMBLYMAN COBB: All I can say is I'm glad God doesn't raise the price of water to us.

ASSEMBLYMAN RINALDI: Thank you, Assemblyman.

Assemblyman Gimson?

ASSEMBLYMAN GIMSON: No questions.

ASSEMBLYMAN RINALDI: Thank you very much, Mayor Davis, for your remarks.

MAYOR DAVIS: Thank you, gentlemen.

ASSEMBLYMAN RINALDI: I would like to call on the North Jersey Water Supply Commission, Chairman Brumale.

Chairman Brumale, would you identify yourself, please.

J O S E P H R. B R U M A L E: I am Joseph Brumale, Chairman of the North Jersey District Water Supply Commission.

Mr. Chairman, and distinguished members of the Commission, I too want to say, thank you for inviting me here today and giving me the opportunity of making a statement to you for whatever elucidation we might offer.

I might say that my statement will probably take 15 or 20 minutes but if you wish to ask questions and continue the session, I'll be glad to answer such questions as may be put to me. But, in any event, if you wish to continue further questions, I might ask that the questions be deferred until tomorrow morning and our Counsel will be very glad to answer such questions as you might wish to ask.

ASSEMBLYMAN RINALDI: In other words, you would come back tomorrow, if necessary?

MR. BRUMALE: If necessary.

ASSEMBLYMAN RINALDI: Because we do have two additional witnesses. We would like to conclude - it's ten minutes of four now and hopefully we would like to conclude between five and five-thirty, if not even sooner.

MR. BRUMALE: Well, I'll be glad to stay as long as you gentlemen wish to have me stay.

ASSEMBLYMAN RINALDI: Suppose you proceed with your statement and we'll see how the time goes. And if we have to call you back tomorrow, thank you very much for making yourself available.

MR. BRUMALE: The North Jersey District Water Supply Commission appreciates this opportunity to review in detail all of the events and the general background of the Raritan Valley Project and to furnish our recommendations as to how this project may proceed.

I believe it essential at the outset to stress the need for this program. Northern New Jersey's very economic life may well depend upon it. Commissioner Roe, with whom we have worked closely on this program, indicated earlier how important water is for the State's future growth. For all practical purposes, many of the major water supplies in New Jersey have no surpluses. This means that meaningful industrial and even residential expansion cannot be achieved unless additional supplies are developed.

The 11 municipalities which have subscribed for approximately 61 million gallons daily (m.g.d.) from the Raritan Valley Project will need this total amount by 1977, and by 1980 the full 70 m.g.d. for which we are planning will be required.

As a matter of fact, our studies show that the demand for water by our present partners and other communities in North Jersey will be so tremendous that even a greater supply will be required than what is now contemplated. We will have more to say on that point later.

The NJDWSC operates the Wanaque Reservoir system which supplies water to nine northeastern New Jersey communities which in turn furnish water to a total residential and industrial population of more than one million people. We are, in fact, the largest public or private purveyor of potable water in the State.

The Commission was formed in 1916 and the Raritan Valley Project represents our third major undertaking. Like its predecessors, the Wanaque Project, our first undertaking, and the Ramapo expansion in the early 1950's, the Raritan Valley program requires the Commission to administer a major water program to be funded by the participating communities. This means that once the self-liquidating bonds are retired, the cost to participants per million gallons drops to operational expenses only, or roughly one-third the cost experienced during the life of the bonds. Thus any community with the foresight to enroll in a cooperative venture of this type is assured of three substantial benefits:

A guaranteed water supply facility in perpetuity; a stable cost during the life of the bonds; and tremendous savings once the bonds are retired. As the participating communities own the project outright, the ownership principle, of course, represents still another benefit which cannot be overlooked.

It is doubtlessly because of these considerations that the Legislature, recognizing our success with the earlier projects, in 1962 mandated that the NJDWSC would build the Raritan Valley treatment and transmission facilities.

The idea of tapping the Raritan River as a major water supply is not new. In fact, the NJDWSC in 1954 issued a report, "The Round Valley Project for the Metropolitan Section of the North Jersey Water Supply District," which called for construction of the Round Valley Reservoir. That report was the foundation upon which the Round Valley Project was ultimately based. Extensive hearings were conducted before the State Water Policy Council which eventually decided that the State should handle the reservoir building program. The first plan presented by the State, for construction of the Chimney Rock Reservoir, lost on referendum in 1955. When the Round Valley-Spruce Run proposal was substituted in 1958, it won overwhelming voter approval and the State built the reservoir.

Meanwhile our Commission, with the aid of a federal grant, undertook an engineering study to determine transmission line routes, required treatment facilities and costs. This study envisioned treatment facilities located at Round Valley and transmission facilities running from this point eastward to the Newark-Elizabeth boundary line with take-offs for several municipalities along the route. This study was followed by an extended series of hearings before the State Water Policy and Supply Council to determine the method for charging for water developed under the 1958 referendum. This culminated in 1964 with the decision by the Water Policy and Supply Council and Commissioner Roe to treat Round Valley and Spruce Run as a single project. Without going into the details, this meant more water at a less costly rate than had been anticipated.

The NJDWSC was designated by the Legislature in 1962 (Chapter 58 Laws of 1962) to construct the pipeline and treatment facilities on the basis of contracts with municipalities.

There was, however, a problem, and it proved to be a substantial one. While the Legislature and the voters had authorized sufficient funds to build the reservoirs, no funds were appropriated to deliver the water from the reservoirs to the area of need.

Since there was no money as an inducement to prospective communities to enroll, it was understandable that communities initially were reluctant to unite themselves in this program despite their need for water and the obvious advantages of participating in a self-liquidating project. Even though our engineers had indicated that drafts from the reservoir would exceed our dependable yield in the early 1960's, prospective subscribers chose instead to believe only what was visible. What they saw was that the reservoirs were full. It was only because of the now historic drought of 1961 to 1966 that we succeeded in convincing enough subscribers to sign contracts to assure a sufficient volume to plan the program. Total subscriptions today stand at 60.925 m.g.d. derived from the following communities:

Bayonne, 12.00 m.g.d.; Bloomfield, 6.00; Cedar Grove, 2.50; Elizabeth, 12.00; Glen Ridge, 0.175; Kearny, 5.00; Newark, 15.00; Nutley, 3.00; South Orange, 0.25; West Caldwell, 2.00; and Verona, 3.00.

Once the project was officially joined by contract, we continually kept all the partners fully informed of all engineering and other progress.

On November 3, 1966, the NJDWSC selected the engineering firm of Gilbert Associates of Reading, Pa. to prepare all of the necessary engineering work for the construction of the Raritan Valley Project. We had every reason to believe that the project was now well on its way toward fruition. However, one of the participants, Newark, had second thoughts about its participation for reasons which never really

have been completely clear to us. Whatever the reasons, though, the Newark City Council in mid-February, 1967, voted to sever its participation in the Raritan Valley Project. This applied both to its commitment for 15 m.g.d. and to its contract to enter into cooperation agreements with various partner communities which would have to secure their water via the Newark system rather than directly from the Raritan Valley line. The Commission had no choice but to go to court in an effort to void Newark's attempted withdrawal.

Even before the matter went to trial, numerous attempts to resolve the impasse were made by us with Commissioner Roe and the State Water Policy and Supply Council. Representatives of the North Jersey District and the City of Newark met frequently in Trenton with Commissioner Roe and the Water Policy Council in an effort to reach a solution. The Commission, while stressing that it was supervising the program at the specific mandate of the Legislature in the best interests of all participants, nevertheless attempted to reach an amicable agreement with Newark so as not to jeopardize the project. After months of negotiations and countless meetings, principally with Newark but also with the other partners, we reached agreement on every issue under dispute. In fact, much of the language of our informal agreement was exactly as recommended by Newark. It began to appear as though a solution was imminent.

In addition, through the efforts of Governor Hughes and Commissioner Roe, the State agreed to guarantee the payment for a preliminary engineering study and feasibility report undertaken by Gilbert Associates. This cost, amounting to \$255,000, would be financed by the State in the event the project was not completed. Otherwise, it would be included in the overall project cost.

The agreements worked out between the NJDWSC and responsible officials of the City of Newark were never concluded because of Newark's refusal to execute the settlement. Thus the City's attempted repeal of its Raritan Valley contracts remained unchanged. The NJDWSC had no choice but to reactivate the frequently adjourned court

hearing to block Newark's attempt to withdraw.

There is no need to dwell upon the time consumed during the protracted court hearings, except to note that it meant further costly delay - costly in both time and money - for the project. Early this year, Superior Court Judge Worrall F. Mountain sustained the position of the North Jersey District. Newark, still not satisfied, appealed and the case was certified for direct hearing by the New Jersey Supreme Court. The high court on June 29 unanimously upheld Judge Mountain's decision, declaring that Newark's argument concerning the price for water "is clearly without merit" because "provisions for fixing the rates carefully follow" the formula established by law in such cases. Copies of the two court decisions are being introduced into this record.

That should have settled it, but Newark continues to obstruct the project and resist the Supreme Court judgment. In August, Newark brought suit against the North Jersey District and all the other Raritan Valley partners. In its complaint, filed with the Superior Court, Chancery Division in Essex County, Newark once again is attempting to rescind unilaterally its agreement to participate in this vital water supply program.

While we are confident that the courts will again substantiate our position, we are distressed that further litigation can only mean further delay, creating new uncertainty and, when the project ultimately is completed, still higher costs.

As to the engineering report itself, which we formally received at the beginning of this year, Gilbert Associates concluded that the most practical project for the various partners would be a 70 m.g.d. line with expansion capability to 90 m.g.d. in order to meet the future demands of the North Jersey area. This would entail purchase of a sufficient right of way to build a parallel pipeline when the need becomes evident. Our 50 years of experience in the water business underlines the need to move quickly in purchasing rights of way. We have found that prospective water supply line sites should be chosen as early as possible since they have a habit

of disappearing quickly otherwise. It becomes essential to plan for the future, providing additional facilities at minimum cost to future subscribers, while lowering rates for present partners as subscription commitments grow.

Gilbert had studied four alternate plans, two for 70 m.g.d. programs and two for 90 m.g.d. The recommended pipeline route would cover 26.6 miles and be three miles shorter and \$9-12 million less costly than a more northerly route which had been the basis of one earlier study. Other earlier studies recommended this southerly route.

Under the recommended design, Raritan River water would be fed into a 72-inch raw water main from the point of intake near Bound Brook and transmitted to a treatment plant near Martinsville in the Washington Valley. After complete treatment (coagulation, sedimentation and filtration), the water would be pumped through a 72-inch force main eastward through the Washington Valley to a balancing reservoir - balancing the system when pumps are overtaxed - in the vicinity of Scotch Plains. The water would then flow by gravity through an 84-inch main to interconnect with Newark's 60-inch pipeline near the Newark-Elizabeth boundary in Newark. A copy of the Gilbert report is attached.

The rate to each participating community for delivered water for a full 70 m.g.d. program would range between \$146 for operation and interest plus \$71 for amortization and \$177 for operation and interest plus \$74 for amortization, depending upon interest rates. When the bonds are retired, the price will drop to merely operational cost, expected to be approximately \$70 per million gallons for the Raritan Valley Project.

We have reviewed this report in depth with the Raritan Valley partners and have made every effort to provide them with any and all information they seek. Communities did express some concern about the cost for water and we explained to them repeatedly that we had no control over any price increase above earlier projections, caused largely by high interest rates and the normal inflationary spiral produced by

delay. We did, however, have some recommendations as to how their financial burden might be alleviated and we will review these with you shortly.

Because of the Supreme Court's decision in the Newark case, in effect telling us that we were obligated to proceed promptly - both by legislative and court mandate - the Commission on August 15 authorized the issuance of \$4,500,000 in temporary bonds to finance preliminary work on the water transmission system. We authorized this temporary financing on the specific recommendation of our bond counsel. Of course, we are now prevented from proceeding because of the new litigation.

We also think it important to note that we even went so far as to seek a federal grant to cover at least part of the cost of the program. Unfortunately, with the recently announced cutback in federal spending, this was not forthcoming. We worked closely with the Governor's office in seeking additional funds from the Department of Housing & Urban Development. This agency recognized that the critical need for the proposed facilities was evident but was unable to provide us with any meaningful financial assistance.

That, then, is a summary of what has occurred with the Raritan Valley Project to date. We all must recognize that the Raritan Valley Project must be completed if we are to build New Jersey's industrial and commercial might to their full potential. Still, we cannot expect a few communities to assume the whole burden for the project for posterity. Fortunately, there are a couple of options open to the State which may yet provide the financial solutions that we are jointly seeking.

You will note that while we are speaking of a 70 m.g.d. project, subscriptions to date total only 61 m.g.d. This means that the various partners would have to pick up the cost for the unsubscribed 9 m.g.d. until such time as additional communities enroll. As a result, the per m.g.d. cost for water could go as high as \$282 rather than \$251 per million gallons, including amortization, at the 5 percent interest figure.

Since the future of the whole State may well be at stake, it would be entirely appropriate for the State to agree to bear temporarily the cost for the

unsubscribed 9 m.g.d. - in effect making the State a 9 m.g.d. partner in the project. This is really an insurance policy designed to guarantee that the project proceeds. As additional subscribers enroll, they would repay the State for any outlay it may have made. In fact, if we were able to secure this commitment from the State, there is every reason to believe that no outlay would even be necessary. With the State willing to provide this kind of a guarantee, additional communities doubtlessly will move quickly to become partners.

Coupled with the unsubscribed water problem is the fact that several of the partners have overestimated their future water needs, thereby substantially raising their per-million-gallon rate. The total amount of oversubscription is between 3-5 million gallons. While this does not sound like a large amount of water, for a few of the smaller communities it means paying twice what other Raritan Valley participants will be paying.

We would urge the State to agree to pick up this amount as well for a total of approximately 13 m.g.d. Again, we stress that this would only be until a sufficient number of additional subscribers enroll and in all likelihood the State will never have to expend any funds as subscribers. Even if such an expenditure were necessary, the State would be repaid in full by future subscribers.

Recently the NJDWSC presented a supplemental plan which may prove to be the key to the success of the Raritan Valley Project. This is a method which could relieve Newark of obligations for major reconstruction of its water distribution system in order to accept exchange water in line with the various cooperation agreements. Our plan is for construction of a bypass line around Newark which would start at the present terminus of the 84-inch diameter line at the southerly end of Newark's 60-inch diameter line, run eastward to the New Jersey Turnpike and then northerly paralleling the Turnpike to the Belleville Turnpike. Existing transmission mains could feed Kearny and Bayonne.

This bypass line, which has won an extremely favorable reaction from most of the partners, may represent a key to New Jersey's long-term growth. It would have a beneficial effect not only upon those already enrolled in the program but also many others who would doubtlessly subscribe in view of the line's potential for the long awaited development of the Meadowlands. If the so-called bypass line were constructed as proposed through the Meadows in Union, Essex and Hudson Counties, possibly with a short extension into Bergen County, the Newark water system certainly would not require the extensive renovations which that City's officials claim are otherwise needed at a cost upwards of \$7 million. That cost, Newark has maintained, would have to be passed on directly to those with which it has cooperation agreements, boosting their water price accordingly.

Construction of the bypass line would offer many benefits, among them:

Bayonne (12 m.g.d.) and Kearny (5 m.g.d.) would draw water directly from the bypass line, thus alleviating their responsibility to pay Newark for distribution and filtration of Wanaque exchange water.

The line would reinforce Newark's distribution system by providing large volumes of water to the easterly side of the City. Thus, Newark would be surrounded on three sides by large diameter mains and Newark would be relieved of some pipeline construction needed on the easterly side of the City.

Since Newark's distribution and exchange capabilities fall far short of the ultimate capacity of the Raritan Valley transmission line, the bypass line could easily fill the void for New Jersey's metropolitan area. The direct availability of large volumes of water might well give the Meadows the potential to be the most valuable large land mass in the world. The 10-mile bypass line, as indicated, would run through the heart of the Meadows in Union, Essex and Hudson Counties, and it would be a simple matter to construct a short extension into Bergen County. It would be particularly helpful to Elizabeth, a 12 m.g.d. partner in the Raritan Valley Project, because of its considerable holdings in the Meadowlands.

The Hackensack Water Company has nearly exhausted its potential for development of its existing water resources. Future supplies must come from the Ramapo River or the Raritan River Basin and the latter is the most logical source for a variety of reasons. The bypass line would place Raritan water within easy reach of the Hackensack Water Company for its Bergen County requirements. Incidentally, Hackensack Water has indicated an interest in such a proposal. Of particular significance to the present partners is that a 20 m.g.d. commitment from Hackensack Water would reduce the base cost to those partners approximately \$30 per million gallons.

By bringing Raritan Valley water directly to Kearny by the bypass line, a portion of the 11.3 m.g.d. which Kearny owns in the Wanaque supply could be made available to other municipalities if this is mutually beneficial. This would be by way of a cooperative agreement between Kearny and those municipalities requiring exchange water.

It is quite apparent that from the standpoints of both economy to present partners and potential industrial growth throughout northern New Jersey, engineering studies should be undertaken of the feasibility of this bypass line. We have been encouraged by the partners to present this feasibility study proposal to you today. Who would pay for these studies? Since the State already has agreed to guarantee the cost of the initial Gilbert engineering feasibility survey for a total of \$255,000, it seems logical that the State will want to gather all the facts relating to this program. As a result we would strongly urge that the Department of Conservation and Economic Development, with the Legislature's approval, undertake an additional study on the feasibility of the proposed bypass line, with particular emphasis on its likely impact on New Jersey's long-term economic growth.

We have informally discussed this possibility with Commissioner Roe and he is most receptive to the idea. It is difficult for us to estimate the cost for this study at this time but we are confident that it would not exceed \$100,000. This figure is insignificant when viewed in its proper perspective. Consider what

this line could mean to New Jersey's future growth. Consider, too, that the State continues paying more than \$3 million annually in interest and amortization on the Round Valley-Spruce Run bonds. The two reservoirs are built and have a considerable amount of water in them, but there is no way yet to deliver meaningful quantities of this water to the real area of need. It is imperative that action be taken promptly to guarantee that the transmission lines are constructed to that area of need as soon as possible to meet the various communities' present and future requirements. It is within this framework that the possibility of the bypass line cannot be ignored. The State should not overlook the tremendous potential of this line as an adjunct to development of the Meadows.

In summary, we are asking this Commission to consider acting in three areas:

(1) Committing the State to guarantee 9 m.g.d. in unsubscribed Raritan Valley water, but with the understanding that any money expended will be returned to the State by later subscribers.

(2) Taking up a 4 m.g.d. slack to aid those communities which have over-subscribed to Raritan Valley water, again with the understanding that the State will be fully repaid once additional subscribers enroll.

(3) Approving a feasibility study to consider construction of a bypass line. Should the line prove feasible, the State should give serious consideration toward financing its development. The bypass line may well represent an unparalleled opportunity for future northern New Jersey industrial and economic growth.

There are those who have maintained that the State should build the Raritan Valley line itself. We would note, however, that it would cost the State the same amount of money to build the line as it would cost us - and the partners would never gain proprietary rights. No one seems to quarrel with the idea that the Raritan Valley supply must be tapped for the benefit of many northern New Jersey

communities. A coordinating, non-profit agency like ours is the most practical vehicle to assure for the cities future water supply at the lowest possible costs.

There is but one option to our plan, and that is a proposal by the City of Newark to supply water to the Raritan Valley partners. Attached is our analysis of the Newark proposal. It indicates that a community considering the Newark plan must be prepared to pay at least \$146 more per million gallons for that water than for Raritan Valley water.

It is imperative that we proceed forthwith with this vital program. There is no logical reason to wait any longer. At a recent meeting of the Commission and Raritan Valley partners, Chairman Rinaldi himself stressed that costs were secondary to availability of water. We agree wholeheartedly, yet are prepared to do everything within our power to assure that the cost be kept as reasonable as possible.

Thank you.

ASSEMBLYMAN RINALDI: Thank you, Chairman Brumale. Do you have any further comments you would like to put on the record aside from your formal statement?

MR. BRUMALE: No.

ASSEMBLYMAN RINALDI: Mr. Wilensky, would you please identify yourself, sir.

O S C A R R. W I L E N S K Y: My name is Oscar R. Wilensky. I'm Counsel for the North Jersey District Water Supply and I would like to supplement the remarks of our Chairman and primarily try to answer some of the questions

that have been raised by members of your Commission which were very important, in my judgment, and should be answered a little differently from Commissioner Roe's because of our experience.

For the record, I would like to say that I'm a former member of the Assembly. I was Majority Leader. I was a State Senator. I was Chairman of the Water Supply Committee and had the same problems that you have.

ASSEMBLYMAN RINALDI: That's refreshing.

MR. WILENSKY: And I have been Counsel to the North Jersey for 30 years and was appointed Special Counsel by the State in the Delaware River Case with the State of New York.

I think I have been in more water hearings than almost anyone in the State, both legislative, Water Policy, Courts and whatnot, but there are certain fundamentals that I feel you ought to know about because I gather from your questions that they sort of have remained unanswered and it should be helpful to you in forming a judgment.

First, some of the fundamentals, which are proper.

What is the difference between a private company and a public company or a municipal agency in the handling of a water supply? And there's one fundamental difference and it's a matter of choice.

A public agency issues its bonds and it generally requires about six percent to cover the interest and amortization of its bonds over a period of 25 to 40 years. And when the bonds are paid off, all they have is operation.

On the other hand, a private company, because of the tax laws, is entitled to earn six percent forever on its invested capital, depreciated, of course, each year, after federal income taxes which would be about six percent and, in addition, they are usually allowed two-and-a-half percent amortization.

So for the same water, this is what the law provides, a private company has to start off with getting fourteen percent on its investment whereas a public agency only has to raise six percent. That gives the public agency a very strong advantage.

Some of the private companies have done an excellent job in spite of that situation and they manage their affairs very well.

So that municipalities have a choice and some have taken the public ownership position and others say, we don't want to be bothered with the problems and we'll have a private water company serve our people.

Another thing that the Chairman, particularly, pointed out is the vital necessity for getting this water to the area of need and although the cost sounds like a lot and it is a lot when you multiply it out, but to the actual consumer it is a very, very small amount in his total expenditures.

We're talking about \$250 a million gallon. That's two-and-a-half cents a hundred gallon. And an average family of four would use 200 gallons a day or five cents a day. That's \$250. Just to get it to the municipal

distribution system, filtered, cleaned and delivered and everything else, 26 to 30 miles away, it costs five cents a day to that family.

Now, in addition to those costs, the municipality or private water company has to add on the cost for the local distribution, collecting, the meters, and so forth and so on. So that when you're talking about \$250 a million gallon or \$300 or \$200, it is infinitesimal when you stop to consider the service that's supplied. And that's what I think you were trying to bring out, Mr. Chairman.

Now it is true that in the early days, when these things were advocated, lower figures were offered because the project was considered less and also the total figure that was submitted was not all-inclusive.

For example, in the report we have now there are items in there, about \$9 or \$10 million, that you don't think about. For example, there's a year's operating expenses that you must have of a couple of million dollars; there is bond discount for over a million some odd dollars; there's interest during course of construction of several million dollars. These must be added to the basic cost. And that's one of the reasons that the price structure has to go up plus the interest rate and then inflation.

Now in North Jersey, I've been with them for 30 years, and I've done business with over thirty some odd municipalities. And the difficulty has been that we in the State, the people that study these problems, know that ten or twenty years from now we're going to need this water

and nobody is doing anything about it. It's very hard to interest municipalities to invest money, to look to the future for 15, 20 or 25 years.

The drought of 1961 and '66 finally brought to the attention of these people whom we've been after for years that something must be done and that these things can reoccur. So we got some action out of these people.

I attended those hearings with Senator Dumont, spent a lot of time with him and there was a very definite reason why they left the pipeline out. The State of New Jersey at that time was the first state in the Union that was going in the water business to build reservoirs. That was the first time in the history of the United States that a state had gone into it. And they felt at that time, as they said, we'll get the water together and everybody come and get it, make your own arrangements to get it, either individually or collectively or otherwise. And they said, we can't put a bond issue on to cover all the transmission systems in the future because everyone knows, in the water business, when you construct a reservoir or system for say 70 mgd it isn't used the first day, it may take 15 years before the full capacity is used and somebody has to take the losses for ten or fifteen years, and they are substantial, as Commissioner Roe is pointing out now. From the time you finish it until the time you use it to full capacity somebody has to pick up the tab.

So there has been discussion of a state water authority issuing bonds. Well, if the State doesn't guarantee the

bonds, you can't sell the bonds because there is nothing to back them up. If you are only going to charge people for water as they use it, who is going to pay for the unused portion of the water?

So when we put together this program with the Legislature and officials of the State, we had to provide that each municipality that decides to become a participant must pay for the water whether it uses it or not. In other words, the burden for providing for that city's future water needs over the next ten, fifteen or twenty years had to be anticipated by that municipality and they have to bear that burden.

Now that's nothing new. Our project at Wanaque and the Ramapo was completed in 1930 and most of the cities issued their own 40 year bonds and gave us the money and we built the project and managed it for them. Now those bonds are almost all paid off and the actual price for the water when the bonds are paid off is only going to be about \$45 a million gallon. Now if we have to filter it, as the State has now ordered us to, it will go up another \$30. But they now have a total investment of over \$30 million fully paid for and they have a bonanza. And in most of the communities, instead of reducing the water rates, which they had a choice to do, they use the surplus to help in other municipal expenditures.

In Jersey City or Newark or Passaic Valley Water Commission, the three cities of Passaic, Paterson and Clifton, their biggest asset and their best asset is their water systems

that they've paid for over 30 or 40 years. They now have a tremendous asset and this goes on substantially in perpetuity. That is the advantage of the municipal ownership.

And the City of Newark, back in 1930, at that time it was developed for 100 mgd and there were only thirty or forty mgd being used. And Newark water cost them over \$400 a million gallons at that time because they weren't using it all. And that was true in every municipality. So they paid through the nose in the early stages and now they're reaping the benefit. And that's the way every water system operates when it's municipally owned. You have to pay the big price in the beginning in order to get the advantage at the end.

And the State of New Jersey is doing the same thing. It's true that it's going to be a self-liquidating project but the State will only issue 28 year bonds and in all probability it will take 35 years or 40 years for the State to get back its money but they're going to get it back, just as sure as people are going to use water. So it's only a case of someone taking care of the deferred charges.

Now there was another question and I think this Committee had in mind and there have been reports to you about water management, and I just want to give you my personal viewpoints, not the Commission's, because I've lived with this thing.

The fault of the development of water supply is that prior policy of the State was that any city or municipality or any private water company only planned for itself. It planned for no others. And they sat around

until they thought it was time for them to move and they would make an application. And they go to the State to get an application and it looks good to the State and they grant it. No consideration in prior years was given to the regional demand which is now being given a lot of consideration and has been given consideration by Commissioner Roe's department because we're all integrated in Northeastern New Jersey, we've got to think of the whole thing as a unit.

Now some State authority should have the power - we may not need any new ones but you might give the power to the present agency - to say to a municipality who doesn't have a water supply, you can't go shopping around for cheap water, you've got to go and get your water from this source because this fits the total plan, so that there's no duplication.

Now why is it there's cheap water around. When, let's say, the City of Newark or any city, Jersey City, develops its water supply it has a good cushion in there and they're not using it yet but they are going to need it in ten years. Temporarily it's good business to sell the surplus during that period, so they go around shopping and say to this municipality, we'll sell it to you very cheap, because it's surplus, and it helps to keep down their cost. When the supply is used up then they have to say to this municipality, you have to get out of our system and go somewhere else, or you've got to pay us a new price because we have to build new reservoirs or facilities.

So I agree with those people who say that you need

water management, both for the development of the sources of supply and for the methods of distribution, and to whom and where the water should go and why.

Now there are individuals today, individual cities, some may and some may not have the ability to go out and buy all the reservoir sites that are required, and I think everyone before that Capital Needs Commission substantially agreed that if there are reservoir sites that definitely can be determined to be available for future use of the State, they should be acquired now because many good sites have disappeared over time. Development takes place in these areas and local opposition develops and you can't build a reservoir.

So, in my judgment and I think in the judgment of all good-thinking water men, the State would have to pick up that loss and buy these reservoir sites long in advance of the time that they will be needed, otherwise they will disappear.

That is something that the State will have to finance and they will lose money until it's used and until the reservoirs are developed.

Now when it comes to distribution systems, you have to plan too, and the plans must be to bring the water from the area of supply to the area of need.

I think there has been plenty of testimony here that the Passaic River Watershed has been substantially exhausted as far as further development. The Hackensack river is exhausted as far as further development. And it was for that reason that Round Valley and Spruce Run

were developed and specifically in the legislation it provided to meet the needs not only of North Jersey but Central Jersey as well. The river's in that area and they're entitled to water.

And I think that thus far that balance is being created because Elizabethtown has seventy and they want twenty more, that's ninety, and we easily see ninety more in the future so that really half of it will be going to the central area and ninety will go to the northeastern area. When we get to that point, then the State has plans for further development to bring in water from the Delaware River.

Now there were also some questions raised by some of you gentlemen about federal aid. I want you to know that we've been to Washington plenty of times and the Governor has a special man, that he got somewhere, who does nothing but help municipalities in trying to develop money. And the best that we could get was if we were able to dot every I and cross every T, would be a million and a half dollars for this project. And the reason for that is, the Federal Government had a limited amount of money and they have a bureaucratic rule that they will not give more than a million and a half dollars to any individual project. Well that leaves us out entirely as far as a project of this size. The law reads very well but they didn't supply the money. I mean, it's all very fine propaganda, they're going to take care of water supply and pollution and everything else but when it comes to it, the money isn't there so we have to face the realities of life, and if we have to move

from the Federal level down to the State level, that's why we're here. And I think the people in New Jersey maybe would rather that the funding that's necessary for these things be done by ourselves instead of relying on the Federal Government. We'll tax ourselves and we won't have to go to the bureaucrats in Washington, we'll just have a few of them here and we can always talk to the members of our Legislature and get a little action because I've found that's very helpful in this State.

Now as I say, I want to dismiss from your minds, if possible, the need for any state water authority. You do need more authority in the State to have a master plan for the development of the sources. And there must be an order. They should have the power to direct municipality A and say, you must go into this transmission line and you must go into that transmission line, so that there's some order out of chaos, because we have cities applying, and that's one of the causes of trouble, one is ten miles away from the end of the line and the other is two miles away and there's no cohesion. Now people in the same area should be served by one source and not by two or three different sources. It's a very complicated different thing and yet I don't think we ought to destroy the ownership of these supplies, whether public or private, because there is an advantage in each municipality owning its own system and eventually having something. Just like an FHA mortgage, when you pay it off you like to have your house instead of paying rent all your life.

Now these are just some of the things that I saw that I thought I might be helpful on in expressing my views. And I certainly submit myself to any questions that you want to ask because I think I've studied the thing from every angle and read every law, and drafted many myself, and maybe if they had listened to me 25 years ago when I was in the Legislature they wouldn't have had this trouble. I had a bond issue for \$80 million to loan money to the municipalities to finance their own projects, to help them, but we didn't have the drought at that time, we didn't have the five-year drought. But that's all water over the dam. I think now we're faced with this application.

As to the situation with Newark. The City of Newark filed another suit. We feel it's only for the purpose of delay and, for your information, the courts have provided a special day, October 21, at which time we are moving to dismiss the complaint and we are hopeful that we will be successful.

I must say that the Supreme Court did - someone asked why the courts didn't move faster - the City of Newark appealed to the Appellate Division and we had to certify to the Supreme Court and they accepted it quickly and gave us an early date for argument and they decided it very quickly. So I can't blame the courts except to say, the ability to use the courts is the cause of delay and not the courts themselves. Each side has thirty days to do this and thirty days to do that and so that was one of the problems.

We don't honestly feel that we will be plagued with this litigation for more than this one suit or an appeal either by ourselves or Newark and it could be disposed of probably before the end of the year.

We have already made arrangements for our permanent financing. We have an underwriting firm. All of this is based upon the full faith and credit of these municipalities. And, true, they should be given credit for stepping forward and trying to do something for themselves while other cities lay back and let the State do it all.

Now if the State builds, you can rest assured that the municipalities will not want to pay for what they think they are going to need, they are going to pay for only what they use, which would then mean that the State has to finance the difference.

So you will be taking on a greater annual burden than what we're discussing here today.

This suggestion of Chairman Brumale is a minimum thing which we think is fair and equitable for you to help foster the policy of the State for the municipalities to do something for themselves.

Now any municipality that comes in later is not going to get a bargain, it's going to have to pay back for the period that they weren't in the project. That's the way our contract reads and that's the intention, I think, of Commissioner Roe and our Commission when they discussed it. The earlier they come in the cheaper it will be.

Our Commission has developed a project which can

be very easily expanded for an expenditure of about \$4 million more. The project will then be capable of being expanded to 90 million gallons a day which then, as you will see in the report, reduces the price of water because then the total cost is divided by 90 instead of by 70. So that will come just as sure as God made apples, because we know that the water is going to be needed.

So that eventually the municipalities will be getting water at a cheaper price than now set, those that are in it now, and the total picture will only be bright when the total of 90 million gallons is fully contracted for and used. And then when the bonds are paid off they reap a bonanza because they own the project and they only have to pay for operational expenses.

Now let's take a large city like the City of Newark. They use 100 mgd for themselves and their customers and they have their own source of supply and they get from the Wanaque source of supply and they buy from Elizabethtown Water Company. Because their bonds are almost all paid off, both on Wanaque and Pequannock, substantially paid off, their water, I'm sure, costs them very, very little. And when you match the 100 million cost with the cost for the additional 15, it's going to average out very, very small because fifteen is the higher cost and the hundred is the lower cost. And when it comes to their consumers, as I pointed out, it's going to be a fraction of a penny per day and yet they're making a federal case out of this thing.

There are things behind the scene that I don't

think necessarily have to be discussed here, so I will not do it. We have our ideas but I don't think it's going to be helpful to the Commission necessarily to get legislation or to get financial help which is the primary importance of this meeting.

I will be glad to submit myself to any questions today or tomorrow morning, as you please.

ASSEMBLYMAN RINALDI: Mr. Chairman, I think we will continue with our questioning and try to conclude your testimony today. You have indicated that somewhere there should lie the power to direct a municipality or a water consumer where to go to get his water.

MR. WILENSKY: Right.

ASSEMBLYMAN RINALDI: That probably comes within the broad scope of probably the coordination of our water supply. Where do you think that power should lie?

MR. WILENSKY: Well, my own view is, being that the North Jersey is involved in the thing and strictly in North Jersey we could be the agency. But it need not necessarily be us. I don't think the Commission is begging for that authority. It could just as well be in the Department of Conservation and Economic Development or the Water Supply Council - it would make no difference - as long as somebody has that power.

ASSEMBLYMAN RINALDI: Does that thought somewhat parallel the thought of Commissioner Roe's Water Arbitration Board?

MR. WILENSKY: His board that he had in mind was simply to arbitrate disputes between municipalities as to costs. It was a thought that I had given to him during the emergency when everybody said, "Well, you are ordering us to do this and ordering us to do that, but who is going to pay for it?" So I suggested that they put in arbitration and that is what we have. But I think it isn't arbitration specifically. I go further than Commissioner Roe, although he indicated it to a certain extent. He was more interested in the development of the resources, the source of supply, and didn't go down into the distribution thing.

I think that his agency or anybody in his department or group in his department should have the authority to say to this municipality, "You shouldn't skip over all these sources of supply and get your water over there. You should get it here because they have the water available and have contracted for it and it is available for you." For example, we have 9 million gallons now that is unsubscribed for. I can think of a half a dozen municipalities that ought to pick up that 9, but they are out shopping for cheap water and Newark will come to them and say, "Oh, we will sell it to you for less," or Elizabethtown Water Company will say, "We'll sell it to you for less," or Jersey City. The result is, they go in on temporary contracts and this 9 million gallons is not subscribed for and we know that this is where they should go. By all logical and engineering means, this is where they should go for their water. But I don't blame them for shopping.

So I say that the little differential in cost should not be the determining factor in ordering a municipality to go to this location for his water supply. Otherwise, you can't plan the whole northeastern part of New Jersey. It is a hodgepodge. I know of pipelines that were built and never used because that particular municipality found out they could get water from another town and they discontinued the use of a pipeline.

Passaic Valley Water Commission sends water, I think it is 12 or 13 miles away, to Harrison, New Jersey, way over in left field and there are other sources of supply right next to Harrison. Now the logical way to do it is that Harrison should be taking, let's say, from Jersey City and the water that Harrison uses should go to some other town closer by. Then Passaic Valley has a pipeline

that hasn't been used. To me it has always been ridiculous because certain towns go into expenditures for pipelines based upon a temporary arrangement which is not going to be the permanent arrangement.

In the drought when Newark was worse off than any municipality in the State because of itself and its customers, they had to build this emergency pipeline to the Elizabethtown Water Company. They spent 3 1/2 or 5 million dollars to get that line in there and they had to do it fast. They have a contract with the Elizabethtown Water Company at a very cheap rate, \$132 a million gallons. Why? Because it is surplus water. But they can only take it eight months a year. They can take it not during the summer months because during that period Elizabethtown needs the water for itself. So they get that water for eight months a year. They say, "All right, we'll take it from them for eight months a year and in the meantime we won't use our own reservoir." Now that's a good system, but it is a "catch as catch can" problem and I simply point that out to you, that when Elizabethtown is going to need that water for itself, Newark can't rely on that water and the State approved of only a ten-year temporary contract because it is not a good permanent arrangement under the present setup.

Now there may be differences of opinion on that, but I simply bring that to your attention, that there has to be somebody who says to Newark -- By the way, Newark started off in this project and they applied for 5 million. Then they applied for 10 and then they applied for 15. And their tongues were hanging out for water. Now they have this temporary arrangement and they say,

"Well, this is all right. We will build a reservoir up at Dunker's Pond and then we will jockey it around to get it." But that is not the way to run a good water system. There has to be somebody up above who says, "No, Newark, if you need more water, you go to the Round Valley system and get your water there and preserve that water for Central Jersey, even temporarily, and not to go shopping for customers." This is most unusual. Here is Newark hungry, itself, for water and yet it is out looking for customers. Now should the City of Newark be the total water agency for the State or should the thinking and the planning be in Trenton or in the North Jersey Commission, if you want? We don't ask for it, but if you want to give us that power, we would take it. But we think somebody ought to have that power to say, not only as to the source of supply, but where you are going to go. The State has the facilities and they know exactly where the demand is. They have their studies on population and industry and what not. That is what I think they mean by water management. That is what I think it means - real management. True, it won't be the State's money, but it is the State's water. The State ought to be able to say, "If you are going to use our water, this is how you are going to use it." One city may have to pay a little more and another one a little less, but that's the facts of life.

Water is too vital to be kicked around for a few dollars difference in price. Somebody has to say, "It is our water and we want to give it to the people of New Jersey where it is needed and this is the way we are going to operate." In that respect, I personally feel that water management is necessary. It would have saved a lot of trouble in the past years.

ASSEMBLYMAN RINALDI: Mr. Wilensky, what you have been referring to in your comments, isn't that basically what the Delaware River Basin Commission has been doing with respect to the consumers that lie within its jurisdiction?

MR. WILENSKY: Within its jurisdiction, right.

ASSEMBLYMAN RINALDI: Are you suggesting a Delaware River Basin Commission type approach to New Jersey's water problems?

MR. WILENSKY: In effect, yes.

ASSEMBLYMAN RINALDI: The Regional Planning Association points to it as a model commission and it suggests very strongly that New Jersey may well implement its whole water program with such a commission.

MR. WILENSKY: In other words, regions of New Jersey should be set up and the State should have its plan for where the water is going to come from, how it is going to be brought there and the major distribution lines, and they should not let the municipalities shop around for water.

ASSEMBLYMAN RINALDI: In other words, water is such a precious commodity today and the demand for it is going to increase so substantially during the next 20 or 30 years that we cannot continue to use our water resources in the way we have used them in the past. Is that a fair conclusion?

MR. WILENSKY: That is a fair conclusion.

ASSEMBLYMAN RINALDI: Thank you.

ASSEMBLYMAN COBB: Mr. Wilensky, you are an attorney at law?

MR. WILENSKY: Yes, I am.

ASSEMBLYMAN COBB: I think I forgot that listening to you.

I enjoyed your remarks very much. I listened to them attentively and I think they were lucid and they were intelligent and they were practical. I was very happy to hear your opinion that you think the difficulties with the City of Newark will be resolved within a reasonably short length of time and I would like to have the pleasure of nominating you as the water czar of New Jersey, if the opportunity ever came up. Thank you.

MR. WILENSKY: Thank you very much. Maybe when I retire from North Jersey, I will do that as a side line.

SENATOR DOWD: I just have one question, Mr. Wilensky. You indicated that you feel there should be some authority to designate to the municipalities as to where they should get their source of water.

MR. WILENSKY: Right.

SENATOR DOWD: Are you also including private water companies --

MR. WILENSKY: Yes.

SENATOR DOWD: [Continuing] -- being subjected to that authority?

MR. WILENSKY: Yes. I think we wouldn't have too much of a problem with them. Remember, with municipalities ---

SENATOR DOWD: I mean interchangeably, any project, whether it be municipal or otherwise.

MR. WILENSKY: Sure. Let me say this, when you deal with municipalities - we found this over and over again - we start to do business with one group of municipal officials and all of a sudden they have an election and the whole package has to be redone all over again. Then you find another municipality and get them

squared away and then another election comes in and that is all changed. I find this with municipalities, if they are told and if it is fair - if they are told what to do and the State orders it, they go back to their people and say, "This is what the State wants us to do and we are going to do it," and you take the politicians off the spot, if you will pardon the expression, and you do. They say, "We've got to do it." They are always looking for somebody to say that's what it is, just like when they make up their budget, they have debt service, they have no choice - they have to put it in. It takes the boys off the spot and I am being very practical about it. A new man comes in and says, "I didn't make this deal. It's terrible. I think we ought to rescind it," and what not. So I think you would be doing the local officials and the local community a favor and I think the people in New Jersey are ready for it. I think they are tired of hearing all about all these fights and water problems. And I think you will go down in the State's history as one Legislature that saw the nature of the problem and solved it, and that's what they want - water in the tap at a reasonable rate - and any of these prices, believe me, are reasonable.

Methods of collection are local problems and that's another matter. But to bring pure, filtered water to a city line for five cents a day for a family, it seems to me we are talking about peanuts in comparison to all the other problems the people have to face in their lives.

ASSEMBLYMAN RINALDI: Thank you.

Assemblyman Gimson, do you have any questions?

ASSEMBLYMAN GIMSON: Just one thing to clarify it in my

mind. North Jersey has contracted for 70 mgd. In fact, don't you own 70 mgd of the water resources of Round Valley-Spruce Run?

MR. WILENSKY: No, we don't own that. We applied for it.

ASSEMBLYMAN GIMSON: Now you are suggesting that the State of New Jersey charge you only for the contracted amounts that you presently have out, 61.

MR. WILENSKY: Sixty-one.

ASSEMBLYMAN GIMSON: Then would you make available to the State that nine to resell or would you like us to hold that for you for the time that you might be able to sell it?

MR. WILENSKY: No, whatever we don't have, the State can resell it to anybody at all.

ASSEMBLYMAN GIMSON: So you would like to reduce your contract to 61 instead of 70.

MR. WILENSKY: Yes, but in order to issue the bonds - whoever contracts for the use of the water has to contract for 70 and so we are saying to the State, "We don't have any municipality right now that has signed for it and we are asking you to sign for the nine, pay for it, until a municipality is ready to use it and then they will pick it up from you." There are a few municipalities who honestly, I think, over-extended themselves a little bit. That is the reason you heard from Bloomfield for the high price of water. They had included in there not only the water they are using, but the water that they are not going to use which they have to pay for and that sort of doubles it up. It is a little high.

ASSEMBLYMAN GIMSON: Well, it is just like you intimated earlier, it is a good thing the drought came along.

MR. WILENSKY: Oh, yes.

ASSEMBLYMAN GIMSON: Or you probably wouldn't have been able to sell the 61.

MR. WILENSKY: It would have taken us another ten years.

ASSEMBLYMAN GIMSON: All right. Would you then if we said we would let you out of your contract for 70, feel justified in letting your consumers out of their contracts to the point that, let's say Bloomfield would only want 4.8 instead of 6?

MR. WILENSKY: Whatever the State would pick up, we would relieve those municipalities that are hardest hit of their obligation. For example, we know one municipality signed up for 3 and they really only need 1 or 1 1/2. That burden is too much for them.

ASSEMBLYMAN GIMSON: So if you reduced your 61, what amount of water, in effect, would you then be needing?

MR. WILENSKY: If we took, say, 14 off the 70, there would be 56 million gallons a day that was contracted for that the cities would have to pay for. The State would in effect lease the balance of the water so we could issue the bonds for the whole 70 and the municipalities would be paying for the 56 even though a lot of them still wouldn't be using all that water. It is still a big burden.

MR. BRUMALE: It would be between 4 and 5 million gallons that some of the municipalities have over-subscribed plus the 9, it would be 13 or 14.

ASSEMBLYMAN GIMSON: In effect then, you are over-subscribed, they are over-subscribed and we come down to somewhere around 56 or 54.

MR. WILENSKY: Something like that. I want you to know this: When the contracts were drawn, it was anticipated -- this is nothing new to the cities, but, you know, the administrations change -- the contract provided that we had a right to build a project of a certain size and that when we had 50 million gallons a day subscribed for, the contract became effective. Now the City of Newark was the fourth of the eleven municipalities that signed up and then at the end, the tail end, the last one made the contract effective because we went over the 50. The contract became effective. Now if Newark was let out with 15 million, we couldn't proceed with the thing because we wouldn't have 50 million gallons a day. They have 15 out of 61. So the contract would be ineffective and we couldn't proceed.

ASSEMBLYMAN GIMSON: Well, in effect, aren't you asking the State to do for you what Newark is doing to you?

MR. WILENSKY: No. I would say this: I am not too concerned - I am a lawyer and I have been in courts a long time and know a good case from a bad case - I am not too concerned about Newark's suit. The Supreme Court, I want you to know, showed a very great interest in this whole water problem. Some of them were familiar with it. Some of them were counsel to Governors in the past and they knew all about it. The problem here that we are presenting is that some of the municipalities equitably are saying to us, "All right, the water is going to cost - it could be \$251 a million gallons if there is a 5 per cent interest

rate - but we have over subscribed." A municipality has subscribed for 2 and only needs 1. The water is going to cost them \$500 a million gallons. They didn't have the foresight to check it out.

We are trying to help that municipality a little bit and make them provide at least for their reasonable future. Also we are saying, it is a little unfair to ask municipalities who have subscribed for 61 to carry the ball for the other 9 million gallons because they are not going to use it - somebody else is going to use it. They are really financing municipalities that haven't come in. So we are saying, instead of the municipalities financing future municipalities, we think that the State policy should be that they will temporarily finance that 9 million gallons a day. Eventually it will be all paid.

ASSEMBLYMAN GIMSON: Isn't this the same type of charge that used to be used in the bulk electricity program?

MR. WILENSKY: I am not too familiar with that, so I couldn't say.

ASSEMBLYMAN GIMSON: In other words, you contract; where you use it, you are O.K.; if you don't use it, you are paying for it anyhow.

MR. WILENSKY: Yes.

MR. BRUMALE: What they are asking, in effect, is that they pay on a use basis rather than on a committed basis.

ASSEMBLYMAN GIMSON: Although this would extend the repayment program to the State in effect. We would still be coming out somewheres nearly right. Would you suggest that maybe this might be an approach to look at in the future for financing water?

MR. WILENSKY: I have a suggestion on that. I discussed this with Commissioner Roe and I know the appropriation procedure. They raised the question: How can the State commit itself to pay annually each year for a certain number of years? Isn't that creating a debt for the State and how can one Legislature bind the next Legislature?

ASSEMBLYMAN GIMSON: You can by a bond referendum.

MR. WILENSKY: Yes. But I said to them, "well, the State leases buildings for 20 and 25 years for Motor Vehicle Stations or other office buildings and that has been held to be legal and each year the Legislature appropriates the rent for that particular place and this could be considered in the same category. The State would lease the 9 million gallons a day, pay for it, but as it is picked up by another municipality, they would have to reimburse the State for their expenditures over a spread-out period. Now the same thing with this extension which I didn't dwell on, but the Chairman did, this is a very, very important extension affecting - I don't know if anybody here is from Bergen County - - affecting Bergen County materially, the Hackensack Water Company.

ASSEMBLYMAN GIMSON: That is that ten miles through the Meadowlands?

MR. WILENSKY: That's right. There too, Boonton and Kearny would be interested in leasing their proportionate share of that line, but there would be unused capacity. Now the Hackensack Water might lease it in the future - I am pretty sure they are going to have to do it - or some other municipality in that area is going to need it or even Newark in the Meadowlands.

So for any unused capacity, if the State will follow the policy of saying, "Now you municipalities go out and do as much as you can and prepare a project commensurate with the future requirements and whatever you cannot commit yourself to or those who can't, we will subsidize you temporarily only," - subsidize those who haven't come in - "and we eventually will have to be repaid by you," so without a bond issue and without going to tremendous expenditures you are saying, "Those people who need the water - you must go out and extend yourself to a reasonable limit and for those areas and needs which for a little bit are far beyond your requirements, we will be temporarily of help," then you don't need any bond issue. But you do have a policy and although Commissioner Roe feels it is within their administrative power, I told him, and I think that the matter is of such importance, it should not be done without legislative approval. I think you ought to provide the direction and authority to a department to go into such an undertaking. And if you do, you don't have to have a bond issue.

ASSEMBLYMAN GIMSON: Now you propose to pick your water up from a pipeline being built out of the North Dam of the Round Valley Reservoir.

MR. WILENSKY: No, we are going to take it right from Bound Brook.

ASSEMBLYMAN GIMSON: You are going to take it from Bound Brook and the confluence also.

MR. WILENSKY: Right.

ASSEMBLYMAN GIMSON: Now Commissioner Roe and George Shanklin have proposed that water can be used in the Round Valley

area, put back in the river after its use and picked up and used again at the confluence by both Elizabethtown and North Jersey with little loss of water.

MR. WILENSKY: On reuse, did you say?

ASSEMBLYMAN GIMSON: On reuse.

MR. WILENSKY: Well, only those municipalities in the Raritan drainage area - after they use their water, they clean it up and put it back - they do that in the Passaic River - will get it back. North Jersey water will not get back to the Raritan.

ASSEMBLYMAN GIMSON: No, I am not talking about North Jersey water; I am talking about water in the Hunterdon-Somerset area that does lie in the Raritan watershed.

MR. WILENSKY: -- would be reused.

ASSEMBLYMAN GIMSON: Now this same type thing was tried for years in the Passaic River and the situation now in the Passaic River is what?

MR. WILENSKY: It is very bad because all the municipalities have not put in proper sewage treatment plants and the State Board of Health has just gotten an injunction against a lot of municipalities in Morris County saying you cannot develop any further until you provide these proper sewage treatment plants to treat the water before you put it back in.

ASSEMBLYMAN GIMSON: You don't see any problem in reusing the water though.

MR. WILENSKY: There is no problem if you treat it and that is not cheap. As a matter of fact I think it costs more to treat the sewage per million gallons than it does to provide the

water. But water is being reused.

ASSEMBLYMAN GIMSON: So you have 70. Elizabethtown has 70.

MR. WILENSKY: And they are asking for 20 more and we were going to ask the State to reserve the second 20.

ASSEMBLYMAN GIMSON: That is 180.

MR. WILENSKY: That would be the whole 180. That doesn't mean there is no water for the area. Temporarily all that water is not going to be used and the State's plan is and Round Valley was designed - and I think it is one of the finest things that was designed - so that when additional water is needed, we will get it from the Delaware and that will provide a couple hundred million gallons a day. So I don't think that the State is going to give this water away in perpetuity. By the way, the State Water Policy Commission only gives these grants on a 25-year basis and sometimes less because they have learned from past experience you don't give it away forever because conditions change and I think that would answer your question.

ASSEMBLYMAN GIMSON: Would you like to buy Round Valley?

MR. WILENSKY: Would I like to what?

ASSEMBLYMAN GIMSON: Would your organization like to buy Round Valley?

MR. WILENSKY: We were originally going to build it and then there was a big hassle between the people in that area and the others. Then it was resolved that the State would take it over and there would be water for both. Round Valley was originally proposed by us just for North Jersey and there was a lot of trouble in the area

because they felt we were taking water out of the area and transporting it elsewhere. The conclusion was finally reached that the water belongs to all of the people and not just part of the people. So there was a fair compromise. I think it was fair. We have to look at it as a group and not be so provincial. And I think the State is acting properly in looking to the Delaware, not just for this area, but for all areas. When I was in the Legislature, we voted to buy the Wharton Tract, 100,000 acres with tremendous subterranean waters, all for the protection of the future of Southern New Jersey and they don't need it and probably won't need it for another twenty years, but I think it is one of the finest investments made. So South Jersey has that tremendous resource for fresh water, whereas the northern part and the central part of New Jersey have to look to three rivers primarily and subterranean waters, and that is, the Raritan River, the Passaic River and the Hackensack River. Those are the rivers that we have interstate. When I was in the United States Supreme Court case, we had to show that our developments are limited by those three rivers, and we have to go to the Delaware River for our additional water.

ASSEMBLYMAN GIMSON: Now will you answer my question? Would you like to buy Round Valley?

MR. WILENSKY: If I had the money, I sure would because I will tell you this much - I know that when the bonds are paid off, you have a bonanza. Now there is a clause in there that I got in there for the benefit of the cities and somebody is going to wake up to it some day, and that is, when the bonds are paid off, the State cannot charge any rate - it can only charge

its operational expenses. So the Elizabethtown Water people - anybody buys from there - when those bonds are paid off, the State won't charge \$32 a million gallons. They will probably charge \$5, \$6 or \$7.

MR. BRUMALE: There would be no charge for raw water.

ASSEMBLYMAN GIMSON: Then we won't sell raw water.

MR. WILENSKY: I will give you another rule of thumb. In most developments you will find that two-thirds of the cost is interest and amortization and one-third is generally the operating expenses.

ASSEMBLYMAN GIMSON: I noticed that provision in there.

MR. WILENSKY: It is in there. Did you see it? Well, I take responsibility for it.

ASSEMBLYMAN RINALDI: Thank you very much, Mr. Wilensky and Chairman Brumale. We have no further question and the time is growing late. It is quarter after five. Our last witness, Mr. Capen, a very distinguished water man in the State, has graciously consented to come back tomorrow and, accordingly we will end the testimony today. Thank you for your time and information.

MR. WILENSKY: It has been our pleasure.

[Hearing adjourned]

