PUBLIC HEARING

on

SENATE AND ASSEMBLY BILLS ON WATER SUPPLY

Held:

Assembly Chamber
State House
Trenton, New Jersey
August 19, 1955
(Morning Session)

Before:

SENATE AND ASSEMBLY COMMITTEES
on
Legislature. Committee on REVISION AND AMENDMENT OF LAWS

Members of Committees Present:

Senator John M. Summerill, Jr., Chairman
Senator Thomas J. Hillery

Assemblyman David I. Stepacoff
Assemblyman William R. Vanderbilt
Assemblyman Benjamin Franklin, III

I N D E X

PROPONENTS

SENATOR JOHN M. SUMMERILL, JR. (CHAIRMAN): Will anyone who wishes to speak, please register.

This meeting is called for a public hearing on the Report of the Legislative Commission on Water Supply as filed and also on the bills which have been introduced or will be introduced to supplement that Report. Our procedure here today will be to call on the proponents first, until we run out of proponents. Then we will call on the opponents until we run out of opponents. We are going to try to give everyone unlimited time, but we hope you will realize that you are using up the time of everyone in the room. We anticipate it will take several days for these hearings, and we have arranged our home businesses accordingly.

I will ask that we have no demonstrations as the speakers speak, regardless of whether you are for or against. We are going to try to keep this orderly and give everyone a chance to have their say before the Committee. I have been asked to allow cross examination, but you must all realize that if we have two or three hundred people cross examining one speaker, it will create disorder. We are going to permit cross examination so far as we can by allowing anyone who desires to ask a question of any of the speakers to submit that in writing to a member of the Committee here, and the member of the Committee will ask that question.

We will adjourn at one o'clock and take from one to for lunch. We will then come back from two to four and are not finished at four, which I don't anticipate we we will be back Monday and commence again at ten

o'clock, and on Monday we will see what our situation is as to further hearings.

We are going to call on the speakers and if there is anyone who has not registered, we will ask that he come forward and register because we are going to call on the persons in the order as registered. Now, is there anyone who has not registered? If not, I am going to call on Senator Mark Anton of Essex County first. Senator Anton is Chairman of the Committee.

SENATOR MARK ANTON: Mr. Chairman, members of the Committee, and proponents and opponents of this Report: I think it might be well to point out that I am not a member of the Committee that is holding this hearing this morning. I am Chairman of the Legislative Commission that was appointed jointly by the Senate and General Assembly to study this water problem and make a report back to the Legislature. I will formally present to the Chairman of this Committee the Preliminary Survey submitted by the Engineers to the Legislative Commission on Water Supply. I will also present the Preliminary Report to the Legislature of the Legislative Commission on Water Supply. In doing so, I think it might be helpful to take just a moment to bring into sharp focus some very pertinent statements in this Report. I think it might be helpful to the members of the Committee and to those in attendance:

For instance, this Commission was appointed by Joint Resolution of the 1955 Legislature to study the water resources of the State and to recommend to the Legislature by August 1, 1955, what step or steps should be taken to ensure an adequate water supply for the immediate and more

distant future.

I think it is well that one point of the Engineers' Report can be brought out - I know it was encouraging to me - that the total water resources of our State are adequate to meet the total future needs of the State for an indefinite period. That is very important to us in New Jersey, because many States do not have adequate resources - are not blessed by nature, if you will, with adequate rainfall precipitation or river flow to supply their needs.

Now, as to what is recommended in the Report: I think that should be remembered by all of us here. I therefore quote verbatim from the Report, which I will hand to the Chairman. This is the Report of the Legislative Commission to the Legislature: "There are sound grounds, conclude the Engineers, for the selection of the Chimney Rock site for the development of a major water supply over that of Round Valley. We (the Legislative Commission) are able to say that in a physical and engineering sense, we concur with the findings of the Engineers that Chimney Rock appears to be a feasible site. There are still reservations to be answered regarding dislocation of people, the effects upon industry, the extent of acquisition of real estate, causeways and sanitation steps, the need for low flow augmentation downstream, and continued quarry operations. Such factors must be weighed against a possible needless expenditure of $40 million, and the advantage of full state control of a Raritan development," which means state control of our water supply.

"Therefore, we of this Commission" - not the one sitting here this morning, but the one reporting to the Legislature -

recommend to the Legislature that the resolutions to these reservations be obtained through public hearings of the appropriate legislative committees. There should be ample time for such hearings prior to the deadline for the submission of referendum legislation. We believe that if our reservations regarding Chimney Rock are resolved under public scrutiny, then the Chimney Rock development will best create an additional major water supply for the Northeastern Metropolitan Region within the next five to ten years."

To repeat myself, I think those are very salient points in the Legislative Report.

THE CHAIRMAN: Thank you, Senator. I will ask that this Preliminary Report be made a part of the record.

The next person registered is Mr. Gerald T. McCarthy of the engineering firm of Tippetts-Abbett-McCarthy-Stratton, the engineers who made the survey. Mr. McCarthy.

MR. GERALD T. McCARTHY: Mr. Chairman, Members of the Committee, and gentlemen: We have been engaged since May 3rd on a comprehensive water survey of the entire State, both of surface and ground water. Up to 25 engineers of our home office staff of 320 have been engaged on this survey, and in addition our ground water consultants and our mechanical hydrologist consultants. We have reviewed all previous reports, examined all major project sites for additional water supply for the Northeast New Jersey Metropolitan Area. Our July 15 Report establishes the need for additional water supply in this area by the time work can be constructed. With a normal margin of reserve, approximately 150 million gallons per day will be required by the year 1960, and an additional 130 million

gallons a day by the year 1980, and from 100 to 150 million gallons per day beyond that by the year 2,000.

After study and comparing all alternate supplies, we recommended that additional supplies to the existing systems of Newark, Jersey City, and the Passaic Valley Water Commission be developed for 77 million gallons per day, at an estimated total cost of $22,140,000. We recommended that the Chimney Rock project providing 70 million gallons a day additionally and treatment and transmission into the Northeastern New Jersey Metropolitan Area be developed at a cost of $53,860,000. This included additional land to bring the reservoir up to capacity for the ultimate project.

The second stage of this project will provide 130 million gallons a day at an estimated cost of $48,790,000 additional. We also recommended three bills, two of which are before the Legislature now. Our studies of still additional supplies beyond those recommended in the July 15 Report are in progress and will be reported upon in our December 15 report. However, we have satisfied ourselves that all of these future additional supplies will be of lower economic priority than the ones recommended in our July 15 report.

Thank you, Senator.

THE CHAIRMAN: Thank you, Mr. McCarthy. Has anyone any questions to submit in writing to Mr. McCarthy? If they have, will they bring them forward now.

Assemblyman Stepacoff desires to ask a question.

MR. STEPACOFF: Mr. McCarthy, you say this 70 million gallons contemplated per day would cost roughly $53,860,000?

MR. McCARTHY: Yes, sir.

MR. STEPACOFF: Then you say the additional 130 million

gallons for the 200,000 million gallons contemplated on the overall project will cost an additional $48,790,000?

MR. McCARTHY: Yes, that's right. That is in the report.

MR. STEPACOFF: Then over all, there is over 101 million dollars for this project contemplated?

MR. McCARTHY: Yes, that's right. That is in the report.

MR. STEPACOFF: In the drafting of the present bill, isn't it true that there is only 77 million allocated for this first initial project of 70 million?

MR. McCARTHY: The first project recommended would carry through the first stage of the Chimney Rock project, plus the transmission of this public supply system - $53,860,000--

MR. STEPACOFF: Well, didn't they propose to spend $23,000,000 for this additional 70 million? Wasn't that in the report?

MR. McCARTHY: There is $22,000,000 proposed for the expansion of existing supplies of 77 million gallons a day.

MR. STEPACOFF: Why would you have to spend $53,860,000 if you have sufficient supplies to produce your 70 million for $22,000,000?

MR. McCARTHY: Because on the existing supplies you already have your transmission and they are the most favorable immediate additional supplies. Once you develop those three expansions, then you start into the more costly water, of which Chimney Rock is the most economical.

MR. STEPACOFF: I don't understand the logic. You say $22,000,000 would be sufficient to augment the present

water supply systems in order to produce 70 million gallons per day. Is that true?

MR. McCARTHY: That's right.

MR. STEPACOFF: Then why would you have to spend $53,860,000 for that 70 million gallons?

MR. McCARTHY: If you would like to stop in our office and look over the cost estimates for pumping stations, reservoirs, force mains, producing plants, equalizing reservoirs, supply mains, and look over the correctness of the estimates, figure by figure, and add them up, that would be the answer to your question.

MR. STEPACOFF: Of course, we don't have access to your office and the facts.

MR. McCARTHY: You have access to our office upon clearance from the New Jersey Legislative Committee on Water Supply.

MR. STEPACOFF: That may be, but as I understand your report, you expect to spend $22,000,000 to produce 70 million gallons. Now you say there will be an expenditure of $53,860,000 plus the $22,000,000. I don't understand your reconciliation of your figures.

MR. McCARTHY: They are separate and additional supplies.

THE CHAIRMAN: Mr. McCarthy, I wonder if you will speak into the microphone so that everybody can hear.

MR. McCARTHY: As I understand your question again, you realize that on the one hand you have 77 million gallons a day expansion for existing supplies for twenty-two odd million

dollars, and on the other you have 70 million gallons per day of new supply at Chimney Rock at an estimated cost of $53,000,000. Those are separate. They add up to 147 million gallons at a total cost of $76,000,000.

MR. STEPACOFF: Then that sum of $48,790,000 for an additional 130 million gallons per day is an additional figure?

MR. McCARTHY: That is additional; that is so. That would bring the total additional supply of 147 million up to 277 million.

MR. STEPACOFF: Then your overall plan is to spend $277,000,000 to accomplish this?

MR. McCARTHY: No, that is million gallons.

MR. STEPACOFF: How much would you spend for that 277 million gallons?

MR. McCARTHY: Twenty-two million, plus $102,000,000; roughly, $124,000,000.

MR. STEPACOFF: Now, do you have any records available, Mr. McCarthy, with reference to the breakdowns in each particular county?

MR. McCARTHY: Yes.

MR. STEPACOFF: How much have you estimated to allocate of these funds for Middlesex County?

MR. McCARTHY: The allocation of the various charges has not yet been estimated.

MR. STEPACOFF: It has not been?

MR. McCARTHY: No. We have estimates of the water demands and supplies and the supply deficiency in each area. I think that is a matter for the authorities created to

administer this project to make the allocation.

MR. STEPACOFF: Well now, you have put Middlesex, for example, in the northeastern group. That is Region 1, is that true?

MR. McCARTHY: That's right.

MR. STEPACOFF: And you say you do or do not have any figures as to how much you propose in gallonage to give to Middlesex County?

MR. McCARTHY: We have figures on how much water would be provided for Middlesex County.

MR. STEPACOFF: How much water additional do you contemplate giving to Middlesex County?

MR. McCARTHY: I don't think we have that available here. If you will state that in writing to the Legislative Commission on Water Supply, we will furnish you an answer to that.

MR. STEPACOFF: Well, of course, I come from Middlesex County myself, and my people in my county would like to know how much more water they are going to get under this proposed plan by you and just what it is going to cost them. I think that is quite fair, and it would seem to me that the engineers should have for the benefit of the public these particular figures. If you are going to buy anything and pay for it, you want to know just what you are going to get and what you are going to pay for it. It would seem to me that every other county would be vitally interested in that same problem.

MR. McCARTHY: We can develop those forecasts if we are instructed to by our client.

MR. STEPACOFF: Except this, Mr. McCarthy - I don't think the public here would have the benefit of those figures while you are just supplying them to our Committee.

MR. McCARTHY: I repeat that if you will address your question in writing to the Legislative Commission on Water Supply and they instruct us to submit a breakdown, we will so do it.

MR. STEPACOFF: Mr. McCarthy, can I suggest to you, in fairness to the public, and I think every county has that same interest - and more particularly, in fairness to Middlesex County - that on our next adjourned date those figures be submitted by you in public? Would that be a reasonable request, do you think?

MR. McCARTHY: (Addressing Senator Anton) Are you in accord with that, Senator Anton? Once the committee has approved that, we will furnish it.

MR. STEPACOFF: I don't follow you - "once the committee has approved it."

MR. McCARTHY: You should address that question to the committee.

MR. STEPACOFF: We are addressing it to you as a witness in these proceedings, and I think we are entitled to have the facts and figures. I think that is the purpose of this hearing. We are all vitally interested in getting facts and figures. As a member of this committee, I would implore you to present those facts openly so that everybody can have the benefit of them and so that this will not be in effect a star chamber procedure with signals between the

Engineers and the Committee.

MR. McCARTHY: I believe we can get clearance to do that.

MR. STEPACOFF: I don't think you need any clearance. As a member of this committee, I would ask that that procedure be followed, and as a representative of the people. I don't take issue with your statement, but I think to serve the purpose of this hearing in a matter of such vital interest to the State, that we should all know, the public in general, exactly what is contemplated to give these particular counties and how much it will cost, how they will be assessed. I think that is perhaps one of the basic reasons for being here.

THE CHAIRMAN: I think if you will address that request to the Chairman, he will present it to the Legislative Commission.

MR. STEPACOFF: I will be glad to make that request.

THE CHAIRMAN: (Addressing Senator Anton) He is making that request to you, Mr. Chairman.

ASSEMBLYMAN WILLIAM R. VANDERBILT: I have a question directed to Mr. McCarthy from the floor by Mr. Charles Engelhard, which reads as follows: "Are the Engineers at this juncture prepared to state that the use of the Delaware River water will not be (a) desirable; (b) necessary to the solution of New Jersey's water problem in the future?"

MR. McCARTHY: I think that depends on how far ahead in the future you are looking. We have recommended

the use of 20 million gallons per day of the Delaware water supply in the second stage of Chimney Rock, but as you go past the year about 1980, it is going to be a question of economic priority as to whether the Delaware should be brought in or ground water from the pine barrens. I would say that eventually Delaware water will be needed for New Jersey. As to what its order of priority is, we know that does not enter the picture in any volume before the year 1980 and it may not be before the year 2000 if explorations of the ground water reserve from the pine barrens and the cost of transmission to the New Jersey metropolitan area show the development to be less costly than the Delaware.

MR. VANDERBILT: Another question from Mr. Engelhard: "How much water will Somerset County get and what will they pay for it?" Second part: "Why is Somerset excluded as a county which will need water but included as a county to pay the principal of the cost?"

MR. McCARTHY: Well, that question is of the same nature as the previous one. We can develop such data but cannot have it at this hearing.

MR. STEPACOFF: Mr. McCarthy, another question in that line, if you please: You indicate that you have this data. Now, I would like to know particularly the source of the additional supply of water for Middlesex County that you contemplate in this project of the Number 1 Plan. Now, do you have the source available for us?

MR. McCARTHY: That would be Chimney Rock.

MR. STEPACOFF: Where will you get this water for

Middlesex to give us the additional water that you feel or you estimate we will need?

MR. McCARTHY: That will be supplied from the treatment while at Chimney Rock by transmission mains to Middlesex County.

MR. STEPACOFF: Well, of course, that would be when once the waters of Chimney Rock that is already in prospect have been captured from a particular source or stream - is that true?

MR. McCARTHY: Yes.

MR. STEPACOFF: What source or stream or river do you contemplate to tap for this water for Middlesex County?

MR. McCARTHY: The Raritan River.

MR. STEPACOFF: Is that the only source?

MR. McCARTHY: In this initial stage.

MR. STEPACOFF: You say, Mr. McCarthy, that the source for the additional supply for Middlesex will be furnished from the Raritan River; is that correct?

MR. McCARTHY: That is correct.

MR. STEPACOFF: Are we in Middlesex to be assured that there will be no water diverted or tapped from the Delaware and Raritan Canal?

MR. McCARTHY: No water will be taken from the Delaware and Raritan Canal. Eventually in the development of the ultimate Chimney Rock project--

MR. STEPACOFF: Now, do you propose to assure the residents of Middlesex, for example, that 130 million gallons daily will be assured as minimum flow into the Raritan River?

MR. McCARTHY: That is not in the recommendations of our July 15 Report. We have proposed not to touch the

river when the flow is at or below 130 million gallons per day. In other words, if the river falls to a minimum of 50 or 60 million gallons per day and as the flow decreases from 130 million gallons to 50 or 60 million gallons, there would be no pumping into Chimney Rock.

MR. STEPACOFF: Well, what is the purpose of that? Is that to assure the Raritan River a steady minimum flow of 130 million gallons per day?

MR. McCARTHY: No. To assure that would require a compensating reservoir somewhere within the Raritan Watershed. That we did not add to our project in our July 15 Report.

MR. STEPACOFF: Then am I correct in understanding, Mr. McCarthy, that there will be no assurance furnished the residents of Middlesex County, for example, that the Raritan River will have a steady flow or average of 130 million gallons per day?

MR. McCARTHY: No, not in our Report. They would get what they now get in nature. Under natural conditions, they will get exactly the same as if Chimney Rock were never built.

MR. STEPACOFF: There is a figure of 130 million mentioned in your Report. How did you establish that figure of 130 million?

MR. McCARTHY: That is when the flow goes above 130 million gallons per day and when the reservoir is not full, we start pumping, and we pump the excess flows above 130 million gallons.

MR. STEPACOFF: So there will not be any assurance that there will be 130 million gallons in the Raritan River

daily?

MR. McCARTHY: That's right. Our project did not recommend a low water benefit. It recommended leaving it in its natural state.

MR. STEPACOFF: Would you say the failure to have 130 million gallons per day for Middlesex County would or would not present a problem to the residents of Middlesex County so far as the Raritan River is concerned?

MR. McCARTHY: We think a constant flow of 130 million gallons per day would be a fine thing. We think it would be very desirable for the area, but we do not think it is water supply.

MR. STEPACOFF: Can you conceive of any effects upon our county if we don't have that 130 million gallons?

MR. McCARTHY: Exactly the same effect that you have today.

MR. STEPACOFF: And what is that?

MR. McCARTHY: Whatever they are.

MR. STEPACOFF: Well, what is it as you understand it. You made the report, sir.

MR. McCARTHY: The flow below 130 million gallons per day would be the same as it is under natural conditions. Whatever uses you make of it today under those conditions would be exactly the same in the future as it has been in the past.

MR. STEPACOFF: Well, in your Report you indicate that 47-1/2 million gallons per day is contracted for in this area of Middlesex, is that so?

MR. McCARTHY: Yes.

MR. STEPACOFF: So if the waters are diverted in the Raritan River at the present time, Middlesex still has the 47-1/2 million base, doesn't it?

MR. McCARTHY: That's right.

MR. STEPACOFF: And assuming that this water is being diverted today, you say with a complete diversion of the water from the Raritan River in excess, so that we do not have a guarantee of 130 million gallons per day, you say we will still have the same effects.

MR. McCARTHY: We just shut our pumps down when the river flow decreases to 130 million gallons per day. As far as the Raritan River is concerned, the Chimney Rock project has no effect upon it whatsoever, during low flow periods.

MR. STEPACOFF: Would we in Middlesex be assured that there will be no effect upon the Raritan River if you take more water from the Raritan that would not assure us a daily flow into the Raritan of 130 million gallons per day?

MR. McCARTHY: Since the Chimney Rock project has no "on river" reservoirs, there is no way of increasing the low water flow. It would take an on-river reservoir to do that. The best we can do is to not interfere with the river when it gets down to such critical flow

MR. STEPACOFF: Now, you indicated before, Mr. McCarthy, that we in Middlesex would not take any water from the Delaware and Raritan Canal under your projected plan; is that true?

MR. McCARTHY: Well, when the 200 million gallons per

day Chimney Rock project ultimately is developed, we have estimated we will take 20 million gallons per day from the Delaware and Raritan Canal. At that time, roughly ten per cent of the in-flow to the Chimney Rock reservoir would be from the Canal and the waters you would get from the Chimney Rock reservoir would have that mixture.

MR. STEPACOFF: Well, what would you do? Pump the water from the Delaware and Raritan Canal into Chimney Rock and then pump it back into Middlesex? Is that the plan?

MR. McCARTHY: Treat it and put it into the transmission mains as potable water for distribution to the entire Northeastern New Jersey Metropolitan Area, including Middlesex.

MR. STEPACOFF: Let me ask you this: Do you think there is any advantage to Middlesex if you are going to take water from the Canal and pump it into Chimney Rock, when today we get the water directly from the Canal without paying for anything additional and are getting a steady flow adequate to serve our purposes? Why should we pay additional funds for that?

MR. McCARTHY: You've got to treat it; you've got to pump it to distribution pressures.

MR. STEPACOFF: We aren't treating it now and we are getting along well with it. We have enough pressure and distributional sources. Can you see any reason why we in Middlesex should submit ourselves to a higher tax for water that we are getting adequately and plentifully now with proper systems?

MR. McCARTHY: I would think that the citizens of Middlesex County would want the protection and the reserve

of being able to participate in the use of a large, high elevation stored water supply.

MR. STEPACOFF: But, Mr. McCarthy, if you are going to take 20 million gallons from the Delaware and Raritan Canal and pump it into Chimney Rock and it may go to other counties, why should we in Middlesex be happy about that situation, when we are being deprived of 20 million gallons?

MR. McCARTHY: Well, you might not be happy about it but the water belongs to the State, not to Middlesex County alone.

MR. STEPACOFF: Well, then, if the rest of the State were taken care of and Middlesex were deprived of the use of the water, the best interests of the State, in your opinion, should prevail and Middlesex should suffer?

MR. McCARTHY: We think the interests of the State as a whole and of the Northeastern New Jersey Metropolitan Area as a whole should be of prime concern to the Legislature as a whole.

MR. STEPACOFF: Yes, that is true, but under your plan, as I understand your proposed project, you have sufficient means of getting 77 million more gallons in the northeastern part of the State if you adapt the present systems. Isn't that true?

MR. McCARTHY: Yes, and that will be utilized very shortly.

MR. STEPACOFF: Yes. Now, if that is going to be utilized with existing systems, why should we in Middlesex deprive ourselves of our main source of supply? What need

is there for Middlesex to pump it into Chimney Rock and keep the water there when existing systems up in the northern part of the State or the northeastern part of the State have sufficient means and systems and facilities to supply their present needs?

MR. McCARTHY: Well, Chimney Rock will not supply any area where existing needs are being met by existing supplies.

MR. STEPACOFF: Mr. McCarthy, isn't it true that aside from Chimney Rock, you people in your Report indicate that you can furnish an additional 77 million gallons per day in the existing systems of Pequannock, Wanaque and the North Jersey systems?

MR. McCARTHY: That's right.

MR. STEPACOFF: Without touching for the moment Chimney Rock, isn't that true?

MR. McCARTHY: Yes, sir.

MR. STEPACOFF: Now, if that can be done adequately in the northeastern part of the State, and Middlesex has sufficient supply in the Delaware and Raritan Canal, what earthly reason is there for Middlesex to submit to a plan whereby this water in the Delaware Canal is going to be diverted and taken away from it, and on top of it have superimposed upon it a tax, for which it gets no benefit, but on the other hand it is being lost?

MR. McCARTHY: I think the flaw in your statement is where you say, referring to Middlesex, "its water," in the Delaware and Raritan Canal. That water does not belong

exclusively to Middlesex County.

MR. STEPACOFF: I don't want to fence. We are getting this water under a Supreme Court decision originally from the Delaware River and we are entitled to 150 million gallons a day. The State of New Jersey isn't paying for that water; it is coming free, and Middlesex is getting 47-1/2 million gallons of that water and paying for that water and we are satisfied with that water. The point is, why should we have that water diverted?

MR. McCARTHY: Well, the storage reserve to carry you over periods when your minimum flows are not adequate is a need of the entire Northeastern New Jersey Metropolitan Area. Now, it may be that you can develop a case that Middlesex has no need, but you certainly have no storage supply in reserve now, you are dependent upon the minimum flows in the streams and in the Canal; thus as the uses step up you will reach the day when you will need that supply.

MR. STEPACOFF: Mr. McCarthy, I agree with you that in the foreseeable future there will be a greater need in Middlesex.

MR. McCARTHY: That's right.

MR. STEPACOFF: We agree on that. But according to your Report, you say that an additional 20 million gallons superimposed upon the 47-1/2 million that we are getting now can still be obtained from the Delaware Canal, the very same source we are getting water from today in Middlesex, so why should we develop another system?

MR. McCARTHY: It won't take long before you will be using whatever you can get from the Canal.

MR. STEPACOFF: All right. Now, an additional 50 million gallons should certainly be sufficient for the needs of Middlesex County for the next 35 years, according to your estimate of proposed needs for the various counties or regions.

MR. McCARTHY: Well, it seems to me it is up to the Legislature and the State to decide whether to give that all to Middlesex County or to make it available to the area as a whole. It is beyond the province of the engineers, I think. As a matter of fact, I think the general line of your questioning goes beyond what the engineers should answer but should be referred directly to the Legislature or to the Legislative Committee.

MR. STEPACOFF: Mr. McCarthy, I think my position has perhaps been misunderstood by you for this reason: I am not speaking just for Middlesex. I am a representative in the Assembly representing Middlesex County and I speak on behalf of our group in the State. Now I know that these particular counties have these same facts and figures to worry about. Every one is worried about this particular problem. I am taking Middlesex, of course, because primarily I am interested in knowing the facts and figures for Middlesex. Now, if you don't have these facts and figures, how is the Legislature going to decide what plan is feasible?

MR. McCARTHY: Well, it seems to me about 15 minutes ago, you asked for these figures and you asked for channels, and Senator Mark Anton advised us we could work them up and furnish them at the next hearing, and they will be

forthcoming at that time. Is this repetition necessary in holding up the normal procedure of this hearing?

MR. STEPACOFF: Mr. McCarthy, I am not holding up any normal procedure. This is the procedure that has been outlined by the Legislature for the benefit of the State.

MR. McCARTHY: You are repeating and asking for something that has actually been deferred over until the next session.

MR. STEPACOFF: No, no. What I am trying to bring out now is this: You are going to tell us how much more water Middlesex will need, and that will be at the next session. At the next session, I am going to ask the Chairman to request of you that we be told exactly where this water is coming from and how it is going to affect Middlesex County insofar as our present and future uses of it are concerned. Is that being fair?

MR. McCARTHY: Yes.

THE CHAIRMAN: Are there any other questions? Here is a question by Mr. Engelhard: "Recently over a four-day period, it is estimated that some 20 billion gallons of water flowed down the Raritan to the sea. Is it true that the maximum net gain to Chimney Rock due to 380 million gallons a day pumping would be four times 180 million or 720 million gallons as compared to possible billions of gallons which could be saved in a river development?"

MR. McCARTHY: Under the operation of the Chimney Rock development, you can only store as fast as you can pump into the reservoir; that is true. However, we have many years of

records on which to analyze the hydrology of the Raritan River. We can merely say as reputable consulting engineers that the dependable yields of all the projects we have studied are correctly stated in our report. There is no problem of filling the Chimney Rock reservoir with the stated pumping station capacity during the non-drought period. There is no problem during the entire period of record. Therefore, it is not important whether you fill that in four days or whether you can fill it in 100 days. As a matter of fact, your quality of water is better if you let a large part of the turbulent flood flows through.

THE CHAIRMAN: This question is by Paul Rittenberg, Commissioner of the Passaic Valley Water Commission: "Isn't it a fact that the expenditure of $22,000,000 will be spent to increase the dependable yield of existing systems but actually the systems are distributing at the present time more than their dependable yield?"

MR. McCARTHY: For short term periods these systems are distributing more than their dependable yields but they cannot keep it up over a long term. Again, that is a matter of applying the same factors of safety and reserves in your hydrologic studies, that the existing dependable yields of those systems are correctly stated in our report, and to expand those dependable yields by 77 million gallons per day recommended by us, you need to spend the money to develop the structures that we have recommended.

THE CHAIRMAN: Any other questions? If not, thank you, Mr. McCarthy.

MR. OSCAR WILENSKY: We were not prepared for written questions today. We assume we will have the right Monday to submit them.

THE CHAIRMAN: Mr. McCarthy will be here Monday and if you will submit your questions to this Committee, we will be glad to ask them.

MR. WILENSKY: Thank you.

THE CHAIRMAN: Our next speaker is William Orchard for the State Chamber of Commerce.

MR. WILLIAM H. BAUMER: With your pleasure, Senator, Mr. Orchard has asked that I speak as to the statement by the New Jersey State Chamber of Commerce and he will comment upon it subsequently.

I would like to say that my name is William H. Baumer. I represent the State Chamber of Commerce as Chairman of the Water Supply Committee. We have been meeting steadily. We have in our group some 25 water experts. We represent a cross section of industry, utilities, north and south Jersey, private water companies, municipal water companies, etc. Yesterday we approved the following statement, which was in turn approved by the State Chamber of Commerce Executive Committee. This statement contains three parts.

1. A long-range water supply program. This is our stand on water supply problems before the Legislature:

First, New Jersey must proceed promptly on a long-range water supply program so that the State can grow residentially, industrially, agriculturally and resort-wise. This should be done on a broad, comprehensive basis, planning

now and building for the anticipated potable, industrial, irrigational and recreational water needs of the entire state for the year 2000 and thereafter.

Any long-range plan must contemplate the use of more water from the Delaware watershed. Appropriate negotiations with adjoining States should be prosecuted vigorously to assure the maximum development of the Delaware watershed.

Our second point: Permissive self-expansion of local water system. First-stage expansion of the three water systems - Newark-Pequannock, Jersey City-Rockaway, and Passaic Valley - to supply an additional 77 million gallons per day at a cost of $22,140,000 is fully endorsed as an urgent need for New Jersey.

Additionally, expansion of the Raritan River water supply amounting to 50 million gallons a day by on-river storage, as proposed by the Elizabethtown Water Company at a cost of approximately $15,000,000, is endorsed.

These four water agencies should be permitted preferably to expand facilities on their own initiative as they have done in the past. However, to assure expansion standby financial provisions should be authorized by legislation, and if expansion is not accomplished in a reasonable time (say 3 years) the State should be authorized to take over the necessary construction.

Third: Acquisition of Reservoir Sites -- Immediate acquisition under legislative authorization and financing of reservoir sites at Round Valley, Chimney Rock, the balance of the Wharton Tract and "proposed reservoirs to offset salt

intrusion" near Atlantic City and Salem (plate 7, Preliminary Survey of New Jersey Water Resources Development, Legislative Commission on Water Supply, July 1955) are urged as a part of the water supply legislation. State control is not implied though the State should purchase these reservoir sites.

In subsequent development of any of the above reservoir sites, certain basic principles should apply as follows:

a. The Ramapo principle should be utilized, allowing pumping from a stream only when the flow exceeds a determined minimum. More flexibility, though, should be given so as to allow withdrawals during proscribed periods when excess storm waters would otherwise be lost.

b. Stream regulation should be assured by impounding dams on a feeder stream so that a minimum flow adequate to the present and probable future water needs of municipalities, utilities, industries and other users is maintained at all times. Only in this way can full-scale growth in any river valley be insured.

c. Municipalities must be fairly compensated for the tax ratables lost because of a reservoir project. Due regard must also be given to the financial and personal problems of residents of a reservoir site to include just compensation to property owners.

d. No diversion of water from such existing resources as the Delaware and Raritan Canal should be permitted in order to fill a reservoir. This "robbing Peter to pay Paul" method does not add to the total water supply of the State.

In sum, prompt action is essential; a required long-range plan must include Delaware watershed development; local water enterprises should be fostered as long as they expand rapidly; needed water reservoir sites should be acquired without delay, and safeguards to municipalities, property owners, industries and valley residents must be incorporated in any reservoir project.

That's the end of the State Chamber's statement. I should add that we have taken no stand on the State Water Supply Board nor upon the method of revenue bond financing or the counties benefited, because we haven't had time yet to study it.

MR. STEPACOFF: Do you have any of the engineers here, or can you answer any questions?

MR. BAUMER: Yes, I think so.

MR. STEPACOFF: Mr. Baumer, you indicate that a steady supply of water should be assured in the Raritan River. Do you feel that that is vital?

MR. BAUMER: We discussed the Raritan at great length. I would say that the sense of our group is that there should be somewhere around 250 to 300 million gallons a day assured in the Raritan at all times through the use of impounding dams. Only in this way can there be development of industry or other utilities and other needs of water in the Raritan Valley.

MR. STEPACOFF: Would you be in favor of Chimney Rock, Round Valley, or any other point or system proposed if the Raritan River does not have an assured flow supply of at least 130 million gallons per day?

MR. BAUMER: In our statement we say that we are only for the reservoir project if it assures a regulated stream flow and also if it assures that no water will be taken above a certain minimum.

MR. STEPACOFF: Well, Mr. McCarthy has indicated that his plan does not contemplate that the Raritan River will be guaranteed that flow. Would you be in favor of a plan that did not guarantee such a proposal?

MR. BAUMER: No, I am very definitely convinced and the Committee's stand is that there must be impounding dams in the Raritan in order to accomplish certain regulated stream flow.

THE CHAIRMAN: Thank you, Mr. Baumer. I will now call on William Orchard, also of the State Chamber.

MR. WILLIAM ORCHARD: Speaking to the statement, gentlemen, The State Chamber commends the State for taking a long-range view of this matter, urges the plan for the year 2000, and enunciates initially two fundamental principles - the principle of Home Rule, which we wrote into the 1947 Constitution as well as we could, and the principle of free enterprise.

If the water supply entities in the northern part of the State and the Elizabethtown Water Company are willing to go ahead with these developments on their own, the State Chamber's Committee believes they should be given that opportunity. Because time is at a premium, we feel there should be some time limit which should be set, by which time they should have taken definite action; otherwise the State

should take action.

If I may be permitted a moment-- Driving down here from Essex County today, I could not get through Somerville because the Raritan River had flowed over the road that would bring me down through Princeton. I went around through Flemington, Lambertville, and down that way, across the South Branch of the Raritan River. I am satisfied that had there been storage facilities on the South Branch of the Raritan River, our water supply shortage would no longer be a shortage because what we have been guilty of doing is letting flood waters go to sea unused. Mr. Kean of the Elizabethtown Water Company made the statement yesterday, and I think I quote him correctly, that during the heavy rainfall of ten days ago 30 million gallons flowed down the Raritan River in one 24-hour period. We have the water. We haven't the storage facilities. We recommend that the first step recommended by Mr. McCarthy's firm's engineering report; namely, the expansion of three water supplies in the Northern New Jersey area be permitted or be encouraged, but done by those agencies on their own, with the State standing by and being in a position to force action subsequently if action is not taken soon enough. We believe that a 50 million gallons per day reservoir on stream in the Raritan River, as proposed by the Elizabethtown Water Company, added to the 77, giving 127 million will give ample time to negotiate for sources of water, either on the Delaware or for the use of Chimney Rock or Round Valley, which we recommend the purchasing as insurance.

We feel that this is a carefull thought-out program, which we commend for your attention and thank you for the

opportunity of presenting it.

THE CHAIRMAN: Thank you, Mr. Orchard.

Is there anyone else from the State Chamber who cares to speak?

I will now call on Morgan Seiffert, Attorney for North Brunswick Township and a member of the Middlesex County Water Supply.

MR. MORGAN SEIFFERT: Mr. Chairman, members of the Legislature, ladies and gentlemen: I represent the Township of North Brunswick, a rapidly growing industrial community in central New Jersey and am also appearing as a member of the Advisory Water Committee of Middlesex County.

Some of the members of the Legislature may remember that it was my privilege to have served on the former Delaware and Raritan Canal Commission, a Commission created by this Legislature. In 1942 we submitted a report to the Legislature whereby the Legislature acted, and under Chapter 203 of the Laws of 1944, the Delaware and Raritan Canal, which is part of this project, as Mr. McCarthy says, became the property of the State - or rather became the property of the State before that time - but it was set aside for future water use and recreational facilities. It was also my honor to have been one of the draftsmen of the legislation which in 1934 forfeited the canal to the State of New Jersey on the abandonment of it by the Pennsylvania Railroad. So I have a keen interest and we in Middlesex County who promulgated and supported these movements for the preservation of the water which was provided by that facility, until now it becomes of

tremendous importance to the State of New Jersey, have studied the report of the Engineers very carefully and also the report of the Legislative Committee, and we believe that in general it is fundamentally and basically sound. It would appear to be a much more comprehensive and sound engineering plan than that of Round Valley in our opinion, because it provides a facility immediately at a reasonable cost to the State of New Jersey and provides a plan whereby the water supply can be augmented by the incorporation of Round Valley into the scheme at a later date.

We believe that the needs of New Jersey for water supply are paramount, and therefore we feel that if the members of the Legislature and your Committee find that from an engineering point of view these recommendations are sound, it would be very beneficial legislation for New Jersey. However, there are several phases of the plan which we would like to call to your attention now, early, so that irreparable harm may not be done to central New Jersey, including both Somerset County and Middlesex County and the surrounding areas.

Now, on Page 1-14 of the Engineers' Report, Middlesex is pointed out as being one of the fastest growing counties in the State of New Jersey, especially from an industrial point of view. At the present time, as has been alluded to by Assemblyman Stepacoff, this section of the State has a very desirable supply of water, both Somerset County and Middlesex County, through a facility which now exists; namely, the Delaware and Raritan Canal. Now, as Mr. McCarthy has explained, on page 3-8 of the Report, this plan of the Engineers contemplates the taking of 20 million gallons of water from the supply which

Central New Jersey is now getting, pumping it up to Chimney Rock, and making it available to the northeastern metropolitan counties in the more northern part of the State. Mr. McCarthy points out that, nevertheless, Chimney Rock would be a desirable future supply for the area for which I speak. However, I would like to point out to the Legislature the dangers in the proposals on this point as set forth in the Engineers' Report, and I trust that they will not become fundamentals of the legislation.

If we refer to Page III-10 of the Engineers' Report, we will find, in comparison of transmission lines for the transmission of the water, that the plan in discussing and comparing with the Round Valley plan suggests that the Chimney Rock aqueduct to Elizabeth supplying the northeastern counties would be 20 miles long, as opposed to 38 for the Round Valley project, and says that a 96" diameter pipe from the balancing water reservoir would be required to transmit 70 million gallons, and two additional pipes would be required to transmit 200 million gallons. In other words, as the Engineers have written in this report, quite contrary to Mr. McCarthy's statement here today - and I trust that what he states here today is in fact an amendment to this report - all of this water would go to northeastern New Jersey. We feel that the record should be made here and now that the needs of Central New Jersey are just as paramount as those of northeastern New Jersey, especially because we are the fastest growing area industrial-wise in the State.

Now, if we go back to Page III-10, in a comparison of the Round Valley and Chimney Rock proposals, the Report says,

in discussing the transmission lines: "The Round Valley scheme has the advantages of elevation and will displace fewer families. On the other hand, both of these advantages are largely offset by the much shorter distance between Chimney Rock and the area of water use." In other words, insofar as the Report is concerned, it becomes a document to guide future Legislatures or future boards which may be set up to administer the water system. It would appear that all this water is designed to go to the northeastern section of the State.

Now, in any event, gentlemen, it will probably take five years or so to build this facility. In the meantime the Delaware and Raritan Canal water is going to be used and needed by Somerset County, possibly the Elizabethtown Water Company, and Middlesex County. At the present time my municipality is preparing a petition to the Division of Water Supply to set aside five or seven million five hundred thousand gallons of water for our municipality because of the large settlement of industry now going on there or projected shortly in the future. We have one case where we understand a large Cities Service Corporation which has purchased a very large section of this municipality has hesitated and up to date refused to build because they have not been guaranteed an adequate water supply. It would be one of the largest research laboratories in the world. And so our municipality is willing to go to the State and pay a substantial standby charge in order to have a guaranteed future supply of water from the Canal system.

Now, we are not the only municipality. East Brunswick

Township is in the same situation and is contemplating also an application for the use of this water, and Somerset County is also thrown into the same situation. In other words, we feel that this program is basically sound, but it can get along very well indeed without taking this relatively small supply of water from the Delaware and Raritan Canal which is currently needed in Central New Jersey.

Now, we join in Mr. Baumer's suggestion as our second point that not necessarily 130 million gallons per day but possibly 200 million gallons per day should be the minimum dry weather flow in the Raritan because of the development of which I have spoken. We feel that rather than say in the development of this plan, "Oh, we're going to leave you just as you are," that a proper compensation plan should be part of this project and that it would improve the flow of the Raritan River. We feel that it is necessary for the health, welfare and sanitation conditions of our Valley that this minimum flow be maintained at all times, and I will not pursue that point further.

As the last point, I would like to call to your attention and especially to the attention of the Engineers for their final report, a suggestion that has been made over the years with respect to the Raritan River, and that is, that in addition to this compensating reservoir that Mr. Baumer referred to, representing the State Chamber of Commerce, you also consider a dam below New Brunswick in the Raritan River - a dam that would be at the level of high tide or approximately so. This has been suggested from time to time, but no one has

gone forward with the project by reason of the fact that there is pollution in the Raritan River at the present time, but the Middlesex County trunk sewer is about to go into construction and that will again make that water clean. We believe that if you incorporate, as part of this state-wide plan, a dam below New Brunswick at a relatively low cost in comparison to the cost of the whole project, there would be an emergency supply of either potable water or at least industrial water. From a rough calculation made last night, I believe there would be upwards of three million gallons of water in such a system over and above that which now exists in the river. It would be right in this area of maximum use in our county and it would provide a recreational facility in addition. We suggest that for your consideration in your final report.

Thank you very much, gentlemen.

MR. McCARTHY: We already have that site under consideration in our continuing studies.

MR. STEPACOFF: We are very happy to hear it. I am thinking particularly of a dam on Crab Island.

THE CHAIRMAN: Thank you, Mr. Seiffert.

The next person I will call on is Thomas F. Boylan, Superintendent of Water, New Brunswick, New Jersey.

MR. BOYLAN: The City of New Brunswick is situated at the extreme end of the Delaware and Raritan Canal. Therefore, that makes us deeply interested in this 20 million gallons, because if there is any shortage, we feel that we in New Brunswick are going to be the first ones to feel it. I might state further that I came here to read a prepared

statement but in view of some of the statements of Mr. McCarthy, I feel I will have to make these comments.

The City of New Brunswick has spent in the last six years millions of dollars to insure a potable water supply for our area. We spent this money with the belief that the water in the Delaware and Raritan Canal would be always made available to this area. There is certainly no assurance that if 20 million gallons can be taken, that 40 million cannot be taken, or would be taken if it could not be spared from our particular area. We are deeply interested in these 20 million gallons of water. We don't feel that it should be diverted from this stream, particularly in New Brunswick, because we have relied on having this stream to be permanent to us. We don't feel that we own it exclusively any more than anybody else in the State of New Jersey owns that water, but we have spent millions of dollars believing this water would be made available to us.

I will now read a prepared statement, signed by Commissioner Luke J. Horvath, Acting Mayor of the City of New Brunswick. It reads as follows:

The City of New Brunswick has long commended the leadership of Governor Robert B. Meyner and the members of the State Assembly in their endeavors to resolve the terrible water crisis facing many areas of our state. We sincerely trust that at long last the State Senate is prepared to follow in substance the wise counsel of the State Senator from Middlesex County, Bernard Vogel, that action on water is urgent.

We also have long believed that the development of a reservoir at Round Valley, wherein waters of the interstate

stream, the Delaware River, could be used for a part of this supply, was a wise course. Particularly with the City of New York now authorized by the U.S. Supreme Court to take 800 million gallons daily from the Delaware, even though required to maintain an even greater minimum flow in that river than heretofore, we are not properly safeguarding our rights nor utilizing our assets by not developing the use of the Delaware's water.

However, it is encouraging that a Commission of the Legislature and its engineers finds and recommends that a reservoir in the upper reaches of the Raritan Valley, at Chimney Rock, may even be more financially feasible, and that they urge that Chimney Rock be developed now and the Round Valley site be purchased now for future development.

Therefore, if the factors upon which the Chimney Rock proposal is based are sustained in your public hearing, we respectfully recommend that the Legislature proceed forthwith to authorize the Chimney Rock proposal and to simultaneously authorize the acquiring of the Round Valley site, for the aggregate 400 mgd supply of both will be needed to meet water requirements for northern and central New Jersey in the foreseeable future. And, moreover, New Jersey can then act specifically to protect its important interest in utilizing the Delaware River as a source of future supply.

But in this recommendation we wish the membership of the Legislature to know without any equivocation that the City of New Brunswick is uncompromisingly opposed to any suggestion that any of the water in the Delaware and Raritan Canal be employed or rather diverted to help fill and sustain the

reservoir at Chimney Rock. The Canal is a state-operated water supply that is financially more than self-sustained by payments for its water by New Brunswick and other customers. It became a water supply only by the foresight and horse-sense of one of our illustrious citizens. The misuse of the Canal's water by taking 20 mgd away from this operative supply route would not only be uneconomical and impractical but would be an injustice to New Brunswick, Middlesex County, and this area of central New Jersey. It would be -- even in its best light -- "robbing Peter to pay Paul." For if Chimney Rock is to be a source of supply, it should be so and not a mere substitute for an existing supply.

We, too, are concerned with the future flow in the Raritan River and advocate that provision be made for the maintenance day in and day out of an adequate minimum flow.

We sincerely trust and strongly advocate that the Legislature and the Governor use wisdom and justice in a prompt action to resolve this acute water crisis. In so proceeding, you will have the support of virtually all of the citizens of our City.

MR. McCARTHY: Mr. Chairman, could I correct a misunderstanding that I believe has developed in some of the recent statements?

THE CHAIRMAN: Is this in your testimony or in someone else's?

MR. McCARTHY: This is in reference to the report. We divided the State into four regions - the Northeastern Metropolitan, the Southwestern Metropolitan, the Coastal, and Northwestern. Now our division, as we talk of the North-

eastern Division includes Middlesex County. Now, I believe that it has been misunderstood, when we talk of the Northeastern Metropolitan Region - it has been misunderstood that we did not include Middlesex in that region. We have always thought of Middlesex as being an integral part of that Northeastern Region as far as a consumer of water supply for that region.

THE CHAIRMAN: I have a question for you, Mr. Seiffert, by Mr. Engelhard: "If you want to eliminate the 20 million from the Raritan Canal and increase the minimum flow in the Raritan, will there be sufficient water left to make Chimney Rock advisable in view of the Engineers' statement that this plan might make maximum possible use of the available Raritan water?"

MR. SEIFFERT: I believe that the answer to that question is this, that at least 180 million gallons would be available for the Chimney Rock reservoir under the Engineers' plan, and I suppose that with minor adjustments, if 200 millions was the minimum, it could be acquired from the Raritan River, especially if we had a dam for compensating flow, and I think Mr. McCarthy would agree with that. I don't think that the 20 million gallons that is contemplated be taken from the Canal is necessary for the success and soundness of the project.

MR. McCARTHY: The long-term flow of the Raritan River - the average flow is about 600 million gallons per day. The flow that can be ultimately developed for compensation and water supply is about 450 million gallons per day, so that if you ultimately develop compensation storage for 130 million and if you take the stage we recommended of 180 million for Chimney

Rock, that totals 310, you still have about 130 or 140 million gallons per day that can be developed by further on-river storage or by further regulation of Chimney Rock.

MR. SEIFFERT: May I submit one question to Mr. McCarthy, please?

THE CHAIRMAN: You will have to submit it in writing. We will have to stick to our procedure.

I will next call on Assemblyman William F. Hyland from Camden.

MR. WILLIAM F. HYLAND: Mr. Chairman, first of all I would like to say that it is very reassuring to a member of the Legislature to see so many interested people from all parts of the State here who are concerned with this problem. I mentioned to the Chairman a little earlier today that I thought it would be extremely helpful if somehow, even bearing in mind the limitation of time, if we are to act on these things in time for the November election, that a transcript of these proceedings somehow be made available to the members of the Legislature. And as I hear all these conflicting views and suggestions, I am more inclined than ever to think that would be a very necessary thing if any sort of intelligent decision is to be made of some of these profound problems.

I am here this morning with a group of representatives from my area of the State who are active in industry and other civic matters and who are concerned, as I am, over the lack of specific attention to the problems of South Jersey in this Preliminary Report, as well as the proposals that have been made for legislative action.

- I believe I am correct in saying on behalf of all of us that we are here not so much as the proponents or the opponents of these specific plans as we are here to urge that there are serious problems in South Jersey that deserve immediate attention. Specifically, I point to the comment on Page 11-3 of the Preliminary Survey, indicating "There is no question of shortages at the present time" in our area of the State, but some of the gentlemen who are with me today will point out instances where industrial growth has been discouraged or perhaps even made impossible because of the lack of existing water supply. And I mean not only distribution facilities but quantity of water as well.

And on Page IV-1 of the Report there is the comment that while there are localized water problems of minor magnitude in other parts of the State, the only critical condition at present that requires the attention of the State Government is the supply problem for the Northeastern Metropolitan Region. Now, first of all, in commenting on this remark, in South Jersey we don't concede that shortages which discourage or make industrial growth impossible are of minor magnitude. On this basis alone, we say there is a water problem in South Jersey requiring immediate State attention. Now certainly, if our problem is in fact one of minor magnitude, we say that only by giving it prompt, immediate and specific attention at this time will we prevent this problem from becoming as critical as the problem the northern part of the State is now concerned with. We say there is no point in waiting until the crisis is upon us before doing something about it.

As I said, I am here with several other gentlemen from my area of the State, and I would like to introduce at this time for the purpose of making a statement on behalf of the Camden County Chamber of Commerce Mr. John Henry Reiners, Jr., who is present.

THE CHAIRMAN: The chair will recognize Mr. Reiners.

MR. REINERS: Senator Summerill, members of the Legislature, ladies and gentlemen: My name is John Reiners, Jr., and I am President of the Camden County Chamber of Commerce.

First of all, I would like to point out that about 25 years ago, the Camden area consumed for its domestic and municipal needs 50 million gallons of water daily, whereas today it is consuming approximately 80 million gallons daily, of which about one-third is obtained from the Delaware River and two-thirds from underground sources.

While the problem of water shortage facing Southern New Jersey looms in the not too far distant horizon, candor compels us to admit that Southern New Jersey does not at this time face a water problem as acute as that which confronts Northern New Jersey. This is not to say, however, that it will not be long before it will be necessary to seek additional sources of water supply for Southern New Jersey if the potential of the area is to be fully developed.

To further indicate the problem, we learn from a survey conducted about two years ago that 50 of our industrial plants used 245 million gallons a day, of which about 60 per cent was obtained from the Delaware and about 40 per cent from underground sources. Three other plants used well over 600 million

gallons per day from the river. This water, fortunately, is merely used for cooling and other purposes that allow its return to the river. What the end of the industrial demands will be is now impossible to determine. That will depend on who, what, and how many industries locate their plants with us. We do know from the survey, however, that existing industries need an additional 20 per cent more water to take care of their future needs without any major expansions. It is readily conceivable that industrial consumption and municipal use might be doubled within the next 25 years.

In order to give you gentlemen a key to this problem, I thought it might be helpful if I quote statistical figures from the New Jersey Bell Telephone Company: In Camden County alone on January 1, 1945, we had 20,000 telephones in use. Ten years later, we had 131,000. In Burlington County to the north, on January 1, 1945, we had 10,000 telephones and on January 1, 1955, ten years thereafter, in Burlington County, there were 29,000 telephones. I am authorized to say by the officials of the New Jersey Bell Telephone Company that they regard the rate of growth in southern New Jersey to be greater than in any other place in the State, and I think these things are indicative of the urgency of the problem that we in New Jersey, particularly in the southern part of the State, must face.

In view of that situation, it is my duty to strongly recommend to this Committee that the development of the Wharton tract be spelled out in any Act to be submitted to

the Legislature or to the people by referendum in November, 1955, and that if a New Jersey Water Supply Board be created and established, its membership be composed of one person from Region No. 2 and one person from Region No. 3.

Thank you very much, gentlemen.

THE CHAIRMAN: Assemblyman Stepacoff has a question.

MR. REINERS: I will be glad to submit to a question.

MR. STEPACOFF: In your problem in South Jersey, if we did explore the use of the Wharton Tract, as you suggest, do you know what counties could be benefited by it? Could we adequately take care of those counties?

MR. REINERS: I think you would adequately take care of the counties in the so-called-- well, it would be in the southwestern metropolitan region which I call Area 2, and also in the coastal region, which would be Area 3.

MR. STEPACOFF: Do you have any idea that you could tell us as to how much water these counties could receive from the Wharton Tract if properly developed?

MR. REINERS: I'm sorry, I could not, Assemblyman.

MR. STEPACOFF: Do you think that could be made available to us, some figures on that?

MR. REINERS: I think we could get it and I could submit it through Assemblyman Hyland.

MR. STEPACOFF: Will you do that, please?

MR. REINERS: I will be very happy to.

THE CHAIRMAN: Mr. Reiners, as I understand, the Wharton estate-- part of it has been acquired and part of it is under option. Do you have any idea of the status of the

option at this time?

MR. REINERS: My understanding, Senator Summerill, is that the option for the balance of the Wharton Tract is available to the State for the rest of this year. We would like to receive public assurances that this option will be exercised so that the balance is acquired and also so that there will be immediate plans promulgated for the development of the Wharton Tract as an available supply of water.

THE CHAIRMAN: Do you know whether it would take additional money in this referendum or is the money set up?

MR. REINERS: I think the money is available and it is under option, but we don't have public assurances that the option will be exercised and the money spent. I don't think the money is available for the extensive development of it and the use of it which is necessary. However, I am informed that there are available funds to preliminarily start the survey and the study as to how the tract would be used. Am I correct on that, Assemblyman Hyland?

MR. STEPACOFF: Do you understand that they could use the proceeds of this bond issue of $76,050,000 to explore the Wharton Tract? Do you understand that?

ASSEMBLYMAN HYLAND: No, I do not.

MR. STEPACOFF: That is the assurance you want?

ASSEMBLYMAN HYLAND: That's right.

Senator, our next witness is Mr. Raymond Wood, the Executive Director of the South Jersey Manufacturers' Association.

THE CHAIRMAN: The chair will recognize Mr. Wood.

MR. G. RAYMOND WOOD: Mr. Chairman, ladies and gentlemen: My name is G. Raymond Wood and I am the Executive Director of the South Jersey Manufacturers' Association, with offices at 117 North Sixth Street, Camden, New Jersey.

The South Jersey Manufacturers' Association is a non-profit New Jersey Corporation made up of approximately 100 of the major industries located in the lower seven counties of the State.

It is my intent through this statement to convey to you the various reasons why this Association strongly recommends that the utmost consideration be given to the future water supply of the South Jersey Area.

A review of many of the more recently located industries in South Jersey reveals that in most every case one of the dominating reasons why these firms located in South Jersey was due to the quality and quantity of water. And these new plants, again in most all cases, have been designed and constructed in a manner to allow for expansion that in most cases more than doubles their existing physical facilities. All this projected design is in line with anticipated growth of their business and the community.

It is extremely shocking to learn that many companies which have located in the Delaware Valley within the past six years have already expressed concern over their ability to carry out their original expansion plans due to the long-range and somewhat fearful water supply conditions that could very easily develop in the South Jersey Area in a very short time.

These firms are all cognizant of the shortage of water in many North Jersey Areas, and it is feared that the future may produce the same conditions in South Jersey, with all of the industrial and community growth of the Delaware Valley, unless some definite precautionary steps are taken.

I have made reference up to this point of the newer industries in our area, but they represent only a small portion of the potential problem as compared to the older and long-established firms. Many of these companies are large users of water; chemical plants, oil refineries, food processing - to name just a few.

A recent survey by our Association revealed that the same concern over assurances of adequate long-range water supplies prevails among the majority of manufacturing firms in South Jersey.

Some companies are prone to delay plant expansion where projected water requirements are concerned. This condition would immediately be relieved upon evidence that the State was taking positive steps to assure adequate water supply in South Jersey.

New companies are looking toward locating in South Jersey, and many of them have also looked at locations in North Jersey. In most every instance they are impressed by the existing water conditions in South Jersey, and invariably inquire as to long-range prospects.

Obviously any assurances that can be given toward guaranteeing long-range future water supply would enhance the prospects of still more industries locating in South Jersey.

Considering the problems of newly located industry, the problems of long-established industry and the inquiries of prospective industry locating in South Jersey, along with the tremendous momentum that is under way regarding population increases and community development, it is the desire of this Association to join with many other groups from the South Jersey Area in support of positive action that will assure and accomplish a long-range adequate water supply for the entire Southern New Jersey Area.

ASSEMBLYMAN HYLAND: Our next witness is a man representing a company which takes our delectable Camden water and makes it even more delectable and ships it all over the world in the form of Campbell's Soup products - Mr. George Strawbridge, Director of Public Relations of the Campbell's Soup Company.

MR. GEORGE STRAWBRIDGE: Ladies and gentlemen, my name is George Strawbridge and I am associated with Campbell Soup Company. Yes, it is true we make soup, but I can assure you of one thing - it does take an awful lot of water to make soup.

My primary purpose in appearing before you is to clearly point out that South Jersey faces the likelihood of a water shortage in the not too distant future.

Campbell Soup Company, employing about 6500 people annually, is the largest industrial user of water in Camden County and probably in South Jersey. Annually we are now using nearly 2 billion gallons of water, and the City of Camden has deferred on our request for an additional 5 million gallons daily.

Several years ago, and this is true, we seriously considered establishing a certain commercial activity in our area. As a result of the water situation, it was decided to drop our plans in this connection. Incidentally, this activity would have employed from 250 to 300 men and women. It is needless to say that any further expansion by our company in the Camden area will of necessity hinge on a more adequate supply of water, not distribution.

We would also like to point out that because of the uncertain rainfall during the growing season experienced over the past several years, we find more and more farmers and growers turning to irrigation. While an accurate check is not possible, it is our understanding that in all probability over 10 thousand acres of truck crops are under irrigation this year. This fact alone increases greatly our demand of underground water supplies, and after this year who can predict what this will be.

It is fully realized that the water problem in Region No. 1 is critical. We do, however, want to point out that similar conditions are rapidly developing in South Jersey with the drawing of millions of gallons of water every day from the underground sources in South Jersey. The water table in this area has receded at the rate of approximately one foot per year during the past ten years. Additional water for these areas, necessitated by the expansion of industry, increased population and extension of irrigation projects by farmers, will of necessity have to be drawn from other places.

Knowing the water problems of South Jersey as we do, we urge that Region No. 3 be included in any act to be

submitted to the people of this State at the General Election to be held in November, 1955.

This is a State problem, in our opinion, not a piecemeal problem.

Thank you very much.

ASSEMBLYMAN HYLAND: Senator Summerill, our final witness is Mr. Norman Heine, the Solicitor of the City of Camden.

MR. HEINE: Senator Summerill and members of the Legislative Committee: The Engineers' Preliminary Report states:

> "The Southwestern Metropolitan Region, which includes Burlington, Camden, Gloucester, Mercer and Salem Counties, is an urban and industrial area along the Lower Delaware River. It is linked economically to the heavily developed region across the river including Wilmington, Chester, Philadelphia and Morrisville. Although not as thickly settled as the Northeastern Region, this portion of New Jersey is expected to experience the highest rate of growth of the four New Jersey regions, in terms of both population and industry. This Region, near the richest eastern markets, is particularly attractive to industry because of much suitable land which is served by rail, water and highway transportation. At present, Camden and Mercer Counties are the most heavily industrialized counties of this Region."

The Engineers in dealing with this area, which relies principally on an adequate supply of ground water, recognize several principal objectives and recommend plans for their accomplishment without delay, such as a comprehensive and continuing hydrologic study of all important ground water provinces and their individual aquifers, detailed studies and detailed tests, quantitative studies of those factors relating to salt water contamination and industrial pollution, and further urge that provision be made to obtain

and hold in reserve for future use some of the more favorable ground water reservoir areas.

The Legislative Commission in its report states that it feels that this region will benefit from a comprehensive ground water study of the kind proposed by the Engineers, and it is expected that the Engineers will render a final report later this year treating these subjects in some detail.

We concur in these statements and recommendations. If anything, the need for developing further water supplies in this area is understated by the Engineers and the Commission.

We of the City of Camden are happy to say that we stand as an exception to the statement of the Engineers which holds that "Most ground-water problems in New Jersey result from thelocal demand exceeding the capacity of the local water-supply installations, or because of pollution or contamination of the supply, rather than because of any widespread inadequacy of the ground-water resource itself." The City of Camden has already completed a substantial portion of its total project seeking to develop adequate water storage facilities within the city, and improvements to its water distributio n system.

Notwithstanding that the Engineers state that "While attention has been focused on the North Jersey problem, as the most urgent at the moment, there is already plainly apparent a need for prompt attention to the supplies of Atlantic City and Camden." it appears that the proposed legislation, Assembly Bill No. 595 and Senate 372, seem to

concern themselves only with providing water supply for North Jersey. South Jersey, apparently, is relegated to a poor second place with vague promises of expectations in the future.

South Jersey is interested in the problems of North Jersey, and we similarly expect that North Jersey should be interested in caring for South Jersey's problems that are presently with us, as well as those that are imminent in the immediate future.

We of South Jersey do not have sufficient information at this time to know whether or not the items provided for in paragraphs 21 (a) and 21 (b) of Senate Bill 372, dealing with the revenues from operation of the public water supply system and revenues from special taxes and charges upon the property within the Region receiving special benefit, are sufficient or will be sufficient to meet the financial demands of this proposed system. If not, the Act provides in the next section, 21 (c), that the State shall assess, levy and collect an annual tax upon all of the property within the State. This plainly indicates that we of South Jersey are more than just casually interested in this broad issue. It seems to me to be eminently fair that in accepting this type of financial responsibility, we have a right to receive more than just a vague promise or expectation that our water problems will be dealt with adequately and realistically in the future.

We therefore urge that A 595 be amended, or suitable companion legislation be enacted simultaneously therewith, which will definitely commit the State to provide adequate funds to make the studies recommended by the Engineers and concurred in by the Legislative Commission. We have no way

of knowing what these annual appropriations would or should amount to. We leave that to the Legislature. We are told, however, that the annual sums could easily be met by the annual general appropriations bill of the State.

We feel that the amended legislation should contain firm language authorizing and appropriating the capital funds required for the development of South Jersey's water supply that would be shown to be needed by the studies and surveys, and leave it to the Water Supply Board, or to any other agency of the State to be created, to deal with the situation and determine when capital funds shall be raised to construct the required project.

As the proposed legislation now stands, all that South Jersey has is the direct obligation to help pay the bonds needed to construct the North Jersey water supply and a soft word and a vague promise as to what will be done for South Jersey in the future. We do not question the sincerity of the present members of the Legislature or impugn the integrity of their expressed intention. This is not enough, however. We should receive something firm and binding.

THE CHAIRMAN: Assemblyman Stepacoff would like to ask you a question.

MR. STEPACOFF: Mr. Heine, would you say that your area which you contemplate and talk about now is a critical area that would warrant any special benefits as compared with the northeastern area?

MR. HEINE: The area at the present time requires studies and surveys. They cannot be made, as I understand it,

and I am not an engineer, in one year or even two years or three years. It requires a continuing study. It doesn't require a substantial amount of money, but these tests of the underground supply must be read and gauged periodically over a long period of time to determine the amount of water supply.

MR. STEPACOFF: But regardless of the study, do you feel that this is an area which requires a special benefit within the reasonable future?

MR. HEINE: No. But until we can determine the need and the extent of the water demands and the amount of available water supply, we should not be subjected to any special benefit tax.

MR. STEPACOFF: Well, what is your suggestion, then? That we hold this thing up, or what?

MR. HEINE: No. We want assurances that the studies and surveys will be made and continued.

MR. STEPACOFF: In other words, your thought is that the present thought or study given to your particular area is not comprehensive enough?

MR. HEINE: Is not binding enough. No one has bound themselves that they will continue these studies or make these surveys.

MR. STEPACOFF: Well, apparently you are taking issue with the extent of the studies you want because you say at the present time, where the report indicates there is no special need for your area, you feel there is, and so do your colleagues; is that true?

MR. HEINE: The report states that there is a need.

The report further states that a study and survey should be made. We urge that. We concur in those recommendations and suggestions. All we want now are assurances from the State that the study and survey will be made, that the funds will be available and appropriated for that purpose, and that when the studies are completed and it is determined what project should be undertaken, then will be time enough to finance the project.

MR. STEPACOFF: Let me ask you this: As the report now stands, as the survey now indicates, are you folks in favor of the report as it is now constituted?

MR. HEINE: The report, so far as it deals with our area, merely recommends in general language, that these studies and surveys be made, as I have indicated in my prepared statement. More is not conveyed in general language. We understand that more detailed information will be supplied in the forthcoming report, which I understand is expected in December of this year. Now, no one could take issue with the general language of the Preliminary Report, and the extent of the final report we don't know at this time, but we assume that the detailed report or the report in December will supplement this Preliminary Report and indicate the general detailed nature of the preliminary recommendations made now.

MR. STEPACOFF: Well, as you know, the final report is due some time in December, isn't that true?

MR. REINERS: That's right.

MR. STEPACOFF: Now, would you then recommend at the posture of affairs in your area that we vote on the bond issue in November?

MR. HEINE: Absolutely not.

THE CHAIRMAN: Just a minute. In your reference, are you referring to the Engineers' Report or to Assembly Bill No. 595. Have you studied that - that is the bill that sets up the board - to see whether broad enough powers to cover this work in South Jersey are included in there or not?

MR. HEINE: As I understand, Senator Summerill, A 595 does list the powers of the Water Supply Board and the Water Policy and Supply Council to make these studies from available funds, but if the Legislature doesn't appropriate the funds, they can't make the study.

THE CHAIRMAN: Well then, how would you cure that? Would you increase the bond issue that the people are going to vote on, to take care of that, as a capital investment? What is your idea on that?

MR. HEINE: I don't think that will be necessary. I think the funds, as I have indicated, will be sufficient and can be produced in the annual appropriations bill - the funds for making this annual study, without going into the millions of dollars. We run into very modest sums. As a matter of fact, I am led to believe although I have no assurance, that the Water Policy and Supply Council in its present budget in preparing for the forthcoming year has made a recommendation or has asked for some funds to start the study. They at this time feel they can handle it in their departmental budget.

THE CHAIRMAN: Will you check A 595 and see if you think the powers are broad enough to cover that? I would be pleased to hear from you later, as Chairman of this Committee, as to any recommendations you might think are necessary there.

Now, thank you, Assemblyman Hyland, for bringing your delegation here.

The next speaker I am going to call on is Mr. Black, a member of the Monmouth Society of Professional Engineers.

MR. ERIC BLACK: Mr. Chairman, ladies and gentlemen: A previous speaker has mentioned a problem that is confronting the shore counties, especially Monmouth and Ocean counties, which our Society belongs to, and that problem is that they are losing the main water supply by salt water intrusion. Now in our counties there is practically no surface water supply. We have in our County a little Tinton Falls reservoir which is evaporating and a few more ponds of that sort, and so on, so that our supply is almost entirely dependent upon ground water. Now, these ground waters are, first of all, the Raritan sands, which cannot be used anymore. They are already used to the limit and we cannot use them any more for future development. Now, the other sands that we are getting water from are the Englishtown sands. They crop out along the border of Middlesex and Monmouth County and they extend all the way down to Camden, an extension of about 80 miles, and the outcrop is about one mile or a mile and a half to two miles wide. In Monmouth and Ocean County we have about a 30 mile stretch of those sands, about a mile or a mile and a half wide, available. A very rough estimation would indicate that the most we could get out of those sands would be something like 50 mgd.

Now, some other rough calculations indicate that these two counties, increasing at about the rate of 20,000 a year, will use up this available water in something like six to seven years' time. These are very rough figures.

Now, if this water is used up, and this supply is being overpumped, in six to seven years' time, then we have the very real danger of sea water pressure and flow being larger than the underground water pressure and flow, and the sea water coming in, and our whole water supply being polluted and made absolutely unuseable and, so far as I know, there is no possibility of reclaiming, once we have lost this supply.

Now, I can cite as a warning that in Parvin, Middlesex County, and in South Amboy, overpumping of these sands has caused salt water intrusion and has obliged these regions to abandon that priceless supply. Luckily, Middlesex County had the foresight, or someone had the foresight to condition the Delaware and Raritan Canal for a water supply, and that is what saved the situation, but in our counties, in Monmouth and Ocean, we have no such canal. If our water should salt up, there won't be anything we can do. So our problem is a serious one and it is one that has to be taken care of right away. If this water is to be saved, things have to be done now and not in the future.

Now, there are three ways, according to my studies, that this water supply can be saved. First of all, and this is the least desirable way, would be to stop all development; prevent new buildings from being built and new industries from coming in, and that of course would cause economic damage through stagnation.

The next possible solution is what we call the "re-charging." In recharging, you build a low level dam and flood a certain area with the necessary amount of fresh water. Then you sink wells into the strata that you want to save and you

supply enough fresh water to this strata to compensate for the excess that is being pumped out. In this way, you maintain the flow, you maintain the pressure, and you prevent salt water intrusion.

The third solution is a surface water supply. That, of course, is the most preferable solution. If we have a surface water supply, we can prevent and forbid any more wells in existing ground water.

Now, Monmouth County has the possibility of supplying these two saving factors. We have areas that can be dammed up with low level dams at tide water and that can be supplied with sufficient fresh water to recharge the sands. The only trouble here is that we don't have sufficient data about the sands, especially the Englishtown sands. We need, for instance, studies so that we can know whether such recharging is feasible. So the first necessity is to appropriate enough so that the Water Policy Commission, or whatever department is in charge of this, can make the necessary borings and make the necessary studies and indicate just what can be done in the way of recharging to save this supply.

We also have a splendid supply of fresh water which has never been mentioned and which is yet, in my opinion or in our opinion very easily developable -- at a cheap rate, too; that is, we have rivers and brooks that come out of Highlands swamps. These swamps are not populated, hence they are not polluted. These rivers flow through very sparsely populated areas so that they get very little pollution. From there they flow eastward into the bays and inlets, and there they

really only cause difficulties by swelling up those inlets, preventing traffic and so on, and of course causing an unsanitary situation. Now, these rivers could be easily and cheaply dammed up, and I say cheaply, because this project can be combined with another very necessary project. The two can complement each other, and in this way the cost of both can be reduced. That project is the finishing of the inland waterway from the Manasquan River to the Swimming River, thereby making a waterway from Florida all the way to the Great Lakes through the St. Lawrence Canal. This stretch of the waterway is laid out now by the Planning Boards just along the very stretch where this dam should be built, hence the waterway itself, the same walls of the waterway and so on could be the dam for this water supply. At the same time, that stretch of waterway, being elevated and requiring locks and so on, requires a water supply for its maintenance. This water supply would be there to enable the inland waterway to be built on that stretch.

Now again, very approximate figures show that these rivers, using only two-thirds of their average flow, would give us a supply of about 110 mgd. Now, Monmouth and Ocean Counties would only need a small part of this for its future development and there would be water left over for such counties as Middlesex, for instance, which needs urgently another 40 million gallons for the next years, and Middlesex County could easily get those 40 million gallons from this supply. So could Union County, which has experienced severe shortages, and our present water supply could be saved.

Now, I can cite some other instances of salt water intrusion. In the long past I have worked in New York City for the Board of Water Supply, and Brooklyn had a big well field in the Ridgewood sector and millions of gallons a day were pumped out of that well field. Well, too much was pumped out, the well field salted up, and it had to be entirely abandoned. There was no way of saving it.

Now, this water supply or this recharging of our sands would also help South Jersey, the South Jersey Coast, especially Atlantic City. In Atlantic City, when the wells were first installed, their water was at an elevation of something like 14 to 15 feet above sea level. Now they have to go 75 feet below sea level and even deeper, to pump that same water out of those sands, and it is just a matter of time when the pressure in those sands will decrease to such an extent that the salt water will enter.

So, as I say, we don't know sufficiently or haven't got sufficient information to work out the recharging or the saving of these sands, and it is urgently necessary that borings be made and studies and ways and means worked out to save these sands.

Thank you, gentlemen.

THE CHAIRMAN: Thank you, Mr. Black.

The next speaker will be Mr. Daniel J. O'Hara, President of the Board of Water Commissioners of Elizabeth, New Jersey.

MR. O'Hara: Mr. Chairman: I am privileged to speak in behalf of the Board of Water Commissioners of the City of Elizabeth, and I have a brief statement of their position in regard to this legislation:

We desire to commend the Governor and the members of the Legislature for their willingess to undertake the solution of the water problem of this State which is in an acute stage at the present time; that is, the providing of storage facilities so badly needed for the benefit of 71 per cent of the population of this State, as well as the major industries of our State.

Briefly, and on Page 1-14 of the Engineers' Report, it is stated:

> "Union County experienced a tremendous influx of new industry in recent years as Hudson and Essex Counties became increasingly congested. Its large available industrial sites and desirable residential areas, which are interlaced with many railroads and highways, and the adjacent waterways, make Union very attractive to manufacturers who wish to locate in the enormous New York market area. Population has increased steadily, but as industry moves in, residential development will be pushed further into the suburbs. Even now, average population density for the county is high."

The records of the New Jersey Labor Department indicate that in one year, 1954, 41 industries entered Union County, and its industrial expansion is growing very rapidly.

Specifically, in behalf of Elizabeth, it has long been our desire to acquire and to be permitted to pay for a proportionate interest in a permanent water supply.

As to the provisions of bill S 372, so far as we have been able to determine after hours of consideration and study of the matter, Round Valley appears to us to be the more economical location for the reservoir. The details of the cost

and the comparison we leave to those more competent to discuss that phase of the situation. Should the Legislature, upon full consideration of the entire matter, decide upon Chimney Rock as the site, we shall accept your judgment in this regard.

However, we desire to point out that the matter of financing, as outlined in Senate Bill 372, presents a problem whereby it is possible that a disproportionate burden would fall upon a few counties if the remaining counties in the area should be excluded for lack of benefit. And that is a problem with which we are vitally concerned. We were prefer to see the method of financing as set forth in the provisions of the Shershin-Hand bill, S-214, which, as we understand it, would give the municipalities and participating interests and purchasers of the water an opportunity to pay for and secure a proportionate interest in a permanent supply.

Thank you, gentlemen, for the opportunity to be heard.

THE CHAIRMAN: Will you answer a question, Mr. O'Hara?

MR. STEPACOFF: Mr. O'Hara, you say that the burden under S-372 would perhaps be shared inequitably among the municipalities as compared to the counties; is that so?

MR. O'HARA: We are concerned with that phase of the matter. We feel some responsibility in that regard.

MR. STEPACOFF: Can you help us by telling us why, in your opinion, inequities are not affected by the present set up.

MR. O'HARA: The basis of my reasoning in that regard is this: Now, there has been some indication that

some of the localities and communities who are recommended to expand their facilities desire to undertake that expansion themselves and absorb the cost themselves. In that regard, the provisions of the bill, as I understand it, indicate that the payment of the principal sum should be apportioned by the counties benefited. If the argument were advanced by the other counties that there is no benefit by reason of expansion by themselves of their own facilities, then the problem would be to determine in what manner and to what extent should the costs be assessed.

MR. STEPACOFF: Mr. O'Hara, let me go over some of the features of that particular item. This bill 372 provides that in the financing of this general setup if, for example, there is an existing water supply system, the Board would come to you and set forth certain plans and specifications and tell you what you should do in order to enlarge your system, and they would give you 20 days within which to submit a plan of procedure for you to follow. If you do not conform to that and you are not able to finance the setup, the State could then go ahead and make the improvement itself and take over that particular project itself. Now, if that is the provision of the bill, would you say that that was an unfair burden to you?

MR. O'HARA: Well, I think it would remain to be analyzed to what extent and in what manner this special assessment would be made upon the counties and the areas benefitting.

MR. STEPACOFF: There is no particular provision in the bill on the assessment of any county in that type of situation. In other words, if the private system does not feel able to go ahead with the financing and set forth a plan of procedure as determined in the bill, the State itself then takes over and proceeds. You don't have any assessment there. The only thing that happens in that situation is that the State pays, and perhaps, if land is taken over, pays for the land, but when a private company has a system in existence and the State wants to go ahead with it and the private company cannot do it, then the State proceeds itself and controls it. Is that acceptable?

MR. O'HARA: How is the cost of it assessed by the State then?

MR. STEPACOFF: The cost would then be assessed in this manner: Under the provisions of the bill, the private company must or has a right to demand that the State sell to it that facility after the State has paid for it and built it. The only provision in the bill as it reads now is that the State request a reasonable sum for compensation. Now, would you say that is a fair method of dealing with a situation of that type?

MR. O'HARA: May I suggest a question? Assuming that one of the agencies to whom there has been recommended an expansion of facilities, desires to undertake that expansion itself, and it removes itself from benefit on the construction of the new reservoir - that is what is in my mind - and then ultimately, after the construction of the reservoir has been

completed, to what extent and how would the apportionment be narrowed down to the counties?

MR. STEPACOFF: Mr. O'Hara, that confounds the problem a little bit, because we are talking about two things at the same time. We are talking first about the inter-relation of Chimney Rock with this proposed improvement in the system. What I am trying to find out from you is this: If the State goes ahead and makes that improvement in this project which it contemplates because the private company cannot do so, do you feel it would be a fair thing on the part of the State to be able to go ahead, reach into this private system, take it over, build up the project as the State wants, and then give the private company only a right to buy back from the State. Do you think that's a wise procedure?

MR. O'HARA: I think it sounds reasonable, depending on the State's needs and the necessity for the use by the State.

MR. STEPACOFF: Well, in this problem, you see, the State then takes over because it has greater funds and backing than the original company. Wouldn't that be permitting the State to take private property without rhyme or reason, without due process, in your opinion?

MR. O'HARA: Well, the overall prospective, it seems to me, is the necessity for development of the resources of the State for the best interests of the State. I have no interest in any private situation. Ours is purely a municipal arrangement.

MR. STEPACOFF: I understand.

MR. O'HARA: What I am concerned about is our ability to purchase and pay for, our willingness to pay for, a

proportionate interest, and if it can be clearly defined, that would meet our situation.

MR. STEPACOFF: But you see, Mr. O'Hara, we are not concerned about any private interest or public interest or company interest, but we are concerned about this whole problem. Now, as to the provision in the bill where the State can come in and take over a particular private enterprise and build up a project of its own, and then the State can re-sell back to this private company if it so desires, I ask you, do you think that is a good procedure or do you think the regular established method of eminent domain should prevail, whereby if the State feels that it wants something that it condemn the propery. that it pay the private company if it so feels it wishes to do, and then own the property?

MR. O'HARA: I agree with you that the Constitutional method is the one that should be followed.

MR. STEPACOFF: And if this particular procedure as outlined in 595 is the procedure, you would then take issue with it?

MR. O'HARA: Yes, if it means taking away from some vested interest without compensation, certainly it is something that should be opposed.

MR. STEPACOFF: Would you subscribe to a plan, whereby after the State built a new project, the State would have to agree to sell back to a private company? Would you subscribe to a theory of that sort?

MR. O'HARA: Are you drawing a parallel between what I am talking about - the municipality's right to buy

and pay for a proportionate interest.

MR. STEPACOFF: No. That, I have no reference to at the moment. What I am worried about is your reaction to this present plan as constituted in A-595, whereby the State can proceed with its project if the individual company cannot, and then, after the State has built the project, the State must then sell back to the private concern.

MR. O'HARA: Well, I am not familiar with A-595 in that regard. But attempting to answer your question, if it means seizing some property belonging to someone else, in which there is a vested interest involved, then certainly there would have to be compensation for it, and eminent domain would seem to be the proper procedure.

MR. STEPACOFF: Then you would be in opposition to the present plan as proposed, I take it? Is that it?

MR. O'HARA: If it is not contrary to my understanding as I just expressed it.

THE CHAIRMAN: I believe we have one other witness for the New Jersey Taxpayers Association of the proponents. He will be here at two o'clock. So we will adjourn for lunch and will be back at two o'clock.

(R E C E S S)

PUBLIC HEARING

on

SENATE AND ASSEMBLY BILLS ON WATER SUPPLY

Held:

Assembly Chamber
State House
Trenton, New Jersey
August 19, 1955
(Afternoon Session)

Before:

SENATE AND ASSEMBLY COMMITTEES
on
REVISION AND AMENDMENT OF LAWS

Members of Committees Present:

Senator John M. Summerill, Jr., Chairman
Senator Thomas J. Hillery

Assemblyman David I. Stepacoff
Assemblyman William R. Vanderbilt
Assemblyman Benjamin Franklin, III

AFTERNOON SESSION AUGUST 19, 1955

I N D E X

PROPONENTS

OPPONENTS

(AFTER LUNCH)

THE CHAIRMAN: The first speaker that I am going to call on this afternoon is a proponent and he is John M. Fasoli of the American Cyanamid Company. Mr. Fasoli.

MR. JOHN M. FASOLI: I am John M. Fasoli. I live in Bridgewater Township, and am Resident Counsel, with offices at Bound Brook, New Jersey, of the Organic Chemicals Division of American Cyanamid Company in behalf of which I present this statement.

American Cyanamid Company and its predecessor in title, since 1915, have operated a large plant for the manufacture of chemicals and allied products on the north bank of the Raritan River in Bridegwater Township, New Jersey. The plant is located less than one mile south of the confluence of the Raritan and Millstone Rivers. The present manufacturing plant covers 121 acres of a 604 acre riparian land tract on the Raritan River. At normal full capacity, it employs 4,000 people. It has a monthly payroll of well over a million dollars. The capital sum invested in this plant is in the many millions of dollars. The products manufactured in this plant have important civilian uses, and a large number of them have essential uses, directly or indirectly, in our national defense. The plant manufactures the largest percentage of the nation's supply of sulfa drugs for both human therapy and veterinary medicine. The plant is the nation's largest producer of aniline oil which is used in manufacturing explosives, chemicals for processing of rubber products, pharamaceuticals, pigments, dyes and military dye markers; it is the nation's largest producer of anthraquinone, used in the manufacture of dues for uniforms and colored smokes for military use. The plant manufactures several hundred different dyes, some of which are used in

military uniforms, synthetic plastics, smoke grenades, shark repellant packets, dye markers and foods; organic and inorganic pigments many of which are used in camouflage colors, military paints, synthetic plastic products, paper and printing inks; rubber chemicals used in processing natural and synthetic rubber; textile resins used in producing fire-resistant, water repellant and shrink-resistant textiles; pharamaceuticals, one of which is used in the preferred treatment of tuberculosis, another in treating Parkinson's disease, another in treating an important disease from military considerations. Other manufacturers in the chemical process industries of the nation are dependent on this plant for many of their raw materials and basic ingredients. Its staff of highly trained chemists, physicists, mathematicians, and chemical, electrical and mechanical engineers is part of the nation's reserve of skilled scientific manpower for military emergencies.

The continued operation and expansion of this plant depend entirely upon the Raritan River as a source of industrial water supply. This plant withdraws from the Raritan River an average on week days of 18.3 m.g.d. of water for industrial use which at times reaches a peak usage of 21.2 m.g.d. Potable water is purchased locally.

This statement was written written without reference to the bill which is the subject of this hearing because the bill had not yet been printed and was not then available for study by the public, and is based upon the preliminary survey of New Jersey Water Resources Development made by the engineering firm of Tippetts-Abbott-McCarthy-Stratton. The report indicates that all of the flow of the Raritan River in excess of 130 m.g.d. could be withdrawn to supply the proposed Chimney Rock Reservoir. This statement is directed particularly to that proposal.

American Cyanamid Company is keenly aware of the acute need in northern New Jersey for increased water supplies. It does not object to the utilization of the Chimney Rock site, any other suitable site, or the waters of the Raritan River for that purpose. However, the legal riparian rights of American Cyanamid Company and others in the Raritan River below the proposed Chimney Rock intake should not be invaded and sacrificed to accomplish this laudable objective, nor is it necessary to do so.

The Chimney Rock project would have prior right to all water in excess of 130 m.g.d. The diversion of all of the river flow in excess of 130 m.g.d. would be seriously objectionable.

1. It would prevent the intermittent flushing of the river following protracted low flow conditions which is a necessary and natural periodic operation.

2. Flood waters flush the river's bed effectively, scouring stagnant pools which have accumulated during drought periods. Complete or excessive withdrawal of flood waters degrade the quality of the water and lengthen the stagnant and pooling periods.

3. Substantial reduction of the available river flow would extend the period of low flows and detrimentally affect the disposal of sanitary sewage of neighboring municipalities and industrial waste. Dilution water is necessary to complete the treatment process. Excessive diversion, as proposed, would affect the sanitary condition of the river.

4. It would prohibit the establishment of new wet industries requiring substantial volumes of water and prevent development and expansion of our industry and other existing industries in this area. The philosophy behind such planning is arbitrary and

prejudicial to the best interests of the community and to the economy of New Jersey as a whole.

The Company's riparian rights have large pecuniary value. The proposed diversion would deprive the company of its riparian rights or would substantially impair their usefulness and value.

Such deprivation or impairment of its riparian rights with accompanying huge financial loss can be avoided without impeding in any way the construction or operation of the Chimney Rock public water supply. Compensating reservoirs can and should be constructed in the Raritan River Valley to compensate for the diversion of Raritan River water to the proposed Chimney Rock Reservoir so as to maintain reasonable river flow without undue impairment of the Company's riparian needs.

The provision for riparian flows has become universal practice in the construction and operation of large reservoir projects. Water supply and stream improvement go hand in hand. In the recent Delaware River Diversion case in which the State of New Jersey was the complainant and the State of New York and the City of New York were the defendants, the Supreme Court of the United States permitted the City of New York to divert from the Delaware River watershed large quantities of water for the supply of New York City. However, the Supreme Court required the City of New York to compensate for its diversion by releasing certain stipulated quantities of water sufficient to maintain certain required river flows at Montague, New Jersey and at Trenton, New Jersey. The Supreme Court will appoint a River Master to supervise and ensure the making of the required releases and the maintenance of the required river flows. Entirely aside from the legal rights of riparian owners, the State of New Jersey

nnot, in good conscience, refuse to give to its citizens and to its ndustries, in principle, what it demanded and received from the City f New York under similar conditions of stream diversion and regula- ion.

American Cyanamid Company is confident that the Legislative Commission or the Legislature will, as part of its recommended water upply program, make reasonable provision for the rights of Raritan iver riparian owners and avoid legal measures to enforce their ights.

The foregoing concerns the private interests of American yanamid Company. The public interest and the interests of its mployees are equally important. The diversion of the river flow in xcess of 130 m.g.d., without compensating releases of water, will itally damage Somerset County and the important industrial bread asket of the Raritan Valley. Wet process industries will not locate n the County. Employment will be adversely affected. Existing ndustries will be stifled. To avoid these adverse effects, reason- ble provision for compensation water must be included as an integral art of any contemplated water supply program.

Thank you.

THE CHAIRMAN: Mr. Fasoli, I have a question here. Would not a river development be a better protection of the proper availability of the Raritan waters than the Chimney Rock Reservoir?

MR. FASOLI: Senator, I didn't hear the first part of the uestion because I was responding to your request.

THE CHAIRMAN: Would not a river development better protect he proper availability of the Raritan waters than the Chimney Rock eservoir?

MR. FASOLI: I can't answer that question. First of all, we don't have complete data of the final report, and we don't have the technical facts available in order to conclude it. However, if that question is of particular importance to your Committee, we shall be glad to supply you with that information.

THE CHAIRMAN: That is asked by an individual, not by the Committee. I have another question. Would not the use of Delaware waters make more water available to the industries in the Raritan Valley?

MR. FASOLI: Similarly, I can't answer that. That involves a significant amount of detailed engineering data which we could provide and we will develop in the course of study of this legislation and the final report.

THE CHAIRMAN: Thank you. The next person I will call on is Charles Brietkze who was employed by the New Jersey Water Policy Commission and is now retired.

MR. CHARLES BRIETKZE: Mr. Chairman and Members of the Committee: I haven't any prepared report to make but I have been very deeply concerned with the differences of opinion that have arisen over the present questions of water supply. That is the result of having been for over 40 years connected with the problems in New Jersey, of which during the years 1926 to 1932 inclusive I was with the State Water Policy Commission and we studied all these problems at first hand.

I went all over the Delaware River Water Shed, New York and Pennsylvania as well as New Jersey, and we studied the needs of all the water supplies in the State of New Jersey and so it is a case of being here today because I want to help in this trouble over water.

is a case of the railroad crossing signs - "Stop, Look and Listen."

Now, in regard to the water situation, it is very bad, it almost tragic. We are at the beginning of a period, it appears, of series of dry years which are going to aggravate the situation over that it was this summer and you take New Jersey, being situated where it is, while it is one of the small states in area in the Union, in population activity it is seventh and eighth standing. It is located right in between New York and Philidelphia and in comparison with those areas we have only about less than half the density of population we can expect at some time in the future. We have nine of the twelve trunk line payrolls that come into the Port of New York across New Jersey and when it comes to the possibilities for growth of industries, they're unlimited, and that is helped along by the fact that our water supply is soft and helps promote the chemical industry.

So, it is a case where for the good of the State of New Jersey I feel that all portions, all elements of the State should pull together to the common end of helping along the common good and that can be done if proper safeguards are taken on the one hand to guard against the fear that is in the hearts of a great many of our people of taxation, ratables being removed and property being confiscated and rivers being dried up.

There isn't need for any of that. In fact, as I understand the present laws, that is being taken care of. In any development of our water supply, even if they have to go into areas like the northwestern part of the State, there is no reason for anybody to get excited because, if anything, under arrangements such as we negotiated in the Delaware River Compact, there will always be a dry weather flow; it will always be filled up by what is known as a reserve flow. They will only store practically what you may call flood waters. Those

be the ones that will be diverted so I feel that everybody in s State should cooperate in getting the necessary supply.

We have reached a different stage than what it has been the years past where water supply and flood control was something e to come up. The result is, it is put off and then when the estion comes up again that area would have been taken up by some- dy additional moving into it and the cost of development would be ohibitive.

So, it is a cinch at this time to make plans not only for e intermediate development but for the whole future. I feel that ese provisions - for instance they talk of the Walpack Bend - 0 million gallons per day - it is absolutely inadequate. The time coming when we will be nearer -- our requirements in New Jersey ll be nearer a billion gallons a day than they will be what a great ny people think they will be. So we must go ahead in making ovisions for water to take care of the future. I will come to that der a different statement.

Now, in regard to an intermediate supply, there is a fference of opinion on that. The report when the Commission invited last April to make a proposition in regard to investigation of ter supply, I replied at the time that I could not go into it but would be glad to collaborate and at that time they sent along an tline of what they wanted to have done. The first thing that was it and which impressed me was a review of reports and studies eviously made by agencies helping existing and suggested water pply products.

Now, we have had a number of studies in the days gone by d I haven't heard a word all the time I have had a chance -- well only source of information has been the newspapers. Those reports,

course, could not go into engineering details but I feel we should not just concentrate on one supply but the report should cover others and we should be careful also to leave water for future industrial development and not use it up for potable supply when we have the Delaware River Area for that.

Now, in regard to a long term range in the Delaware River Area, back there in 1926 or 1927 we made an investigation not only of the main stream of the Delaware River but the possibilities of higher up, and we were prepared to go ahead and enter into a bi-state compact with New York if the tri-state compact had been adopted and has not fallen through. Well the bi-state compact with New York would have made it possible to bring in some high level potable waters needed in this metropolitan area. The present report, I understand, does provide some high level developments which are still possible and it may be that those developments would supplement Chimney Rock so as to provide water from both the high and lower levels; but the main question that I want to bring up was that of financing and of construction.

I believe that the sonner we get back to where we were in 1932 the better off we will be. We have now a strong department of Conservation and Economic Development that is capable of looking after all the sources of water in this State. And if we follow the system of having local agencies construct, maintain and operate the water works, it would keep the State out of the water business which would not be for the good of the State.

And with that end, I just want to outline briefly a matter which I will be glad to talk over with your Committee and give you details on. I can't do much in the way of presenting

details here on the floor because you would have to have maps and diagrams but back in 1930 I was a member of the Commission on Flood Control and the question of financing the improvement came up. Previous recommendations had fallen through because of an inadequate system of financing. We had in the State perhaps a $100,000 indebtedness. So I made a majority report with which I went along except with one thing - they wanted to carry on the investigation further. I made a minority report which shortly after was concurred in by the Commission as a whole, in which I stated a number of such improvements as now proposed. I speak of these different improvements - channel improvement, bridges, industrial development, work with various county and municipal commissions, and the development of county and regional park systems, storage of flood waters, river sanitation and other improvements: "A number of such improvements are now contemplated and others will soon be projected. If these are not to go forward blindly and later to add a tremendous and unnecessary expense, the early solution of the flood problem is urgent and necessary. If as a result of the several plans which are now before the Legislature a regional board, agency or overlying municipality should be set up to deal with the problems which are common to the eight counties of Bergen, Essex, Hudson, Middlesex, Morris, Passaic, Somerset and Union, all of the matters discussed in the foregoing report, including the preparation and adoption of the final plans, construction and financing, will automatically come within the perview of such board or agency." And in 1944 there was a special commission, of which Dr. Erdman was chairman, to make recommendations in regard to construction of certain matters of State Government. I discussed this situation with Dr. Erdman and I just want to read this much which summarizes the thing: "The

derlying thought is to merge all State appointed or financed missions dealing with regional ~~problems with other similar~~ local agencies into two self-sustaining overlying municipalities, one in the north metropolitan area and the other in South Jersey. Such regional agency or overlying municipality could be set up on an elective basis and thus be empowered as governmental units to finance regional projects such as construction of works for water supplies, trunk sewers, disposal plants, meadow reformation, port development, rapid transit, regional park systems and other problems common to the district and beyond the scope of individual municipalities. County and municipal governments would continue to function as heretofore. The overlying municipality would in nowise be a super government, it would simply be the setting up of an agency in the district for the cooperative purposes, subject to the same laws, acting only upon mandate of the voters or by agreement with a group of municipalities, and further safeguarded by debt limitations of say three or four per cent. Such an arrangement permitting the voters directly interested to pass upon a given project would afford a prompt and sure method of financing and proceeding with the construction of works in a manner prescribed by law. It would avoid the difficulties and uncertainties of the up-to-the-present haphazard and unsuccessful method of having the State finance and construct such works."

There is one more paragraph I want to read: "A practical illustration of the difficulties of having the State finance such regional works can be seen in the efforts over the past decade and still being made to create a State Water Policy Authority to supersede and take over the functions of the State Water Policy Commission

d in addition thereto to give the proposed authority power to finance, construct, take over and operate such works. The opposition to the past and present bills has been due not to the development of any additional major water supply but to the distrust and apprehension many people feel toward the proposed creation of an all-powerful, ruthless, self-perpetuating authority, exercising on the one hand judicial power of allocation and at the same time perhaps competing with the efforts as to the source of supply or as to the business of supplying water."

That in brief is the thought that I want you to have. I think the State should keep out of the water business and allow them to be carried on by some local agency.

THE CHAIRMAN: Next I would like to call on Irving J. Feist, Chairman of the New Jersey Taxpayers Association's Water Supply Committee. Is Mr. Feist here?

MR. CARLTON W. TILLINGHAST: Mr. Chairman, with your permission I will speak for Mr. Feist.

THE CHAIRMAN: All right. Will you give your name please.

MR. TILLINGHAST: My name is Carlton W. Tillinghast, Executive Director of the New Jersey Taxpayers Association. I am speaking on behalf of Mr. Irving J. Feist who was to appear here in his capacity as Chairman of the Committee on Water Supply. The Association's statement is as follows - I will give you a short preamble and then the main contents of our statement as contained in seven points or principles:

When the 1954 Legislature began its consideration of water supply bond issue proposals the New Jersey Taxpayers Association promptly initiated a study of the subject. This study eventually

compassed considerable technical data, a large part of which had never before been assembled. It was apparent very early, however, that the 1954 water bills were being considered without benefit of a comprehensive, up-to-date and objective study of statewide water needs and potentialities.

After reviewing the voluminous research reports prepared by our staff and considering the extensive statements and illustrative materials presented in person by an impressive list of experts, our Association's Committee on Water Supply summarized its work in a series of memoranda. These culminated in a statement entitled: "Questions of Fact Vital to a Sound Solution of the Water Supply Problem on Which Information Apparently is Deficient or Conflicting."

When the Legislative Commission on Water Supply began its work, these findings and supporting data, including an up-to-date listing of hundreds of bibliographical references and summaries thereof on New Jersey water supply from 1894 to date, were submitted to the Commission and at its request made available to the Commission's engineers.

A second product of our Association's study was the conclusion, which is best expressed as an objective, that before any major legislation was passed, there should be a competent engineering study of the statewide water problem adequate to meet these three criteria; namely, that it be:

(first) comprehensive, treating the needs and resources of all areas

(second) up-to-date, based on current engineering data

(third) objective

An officially sponsored engineering study under auspices of the Commission is now underway. The New Jersey Taxpayers Association, through its Committee on Water Supply, has reviewed carefully the preliminary engineering report and the Commission report based thereon. The Association is satisfied that the foregoing criteria are being met with respect to the short-range and intermediate phases outlined therein. We must await the final engineering report to ascertain the adequacy of proposals dealing with the long-range problem and to test the report for overall comprehensiveness.

After painstaking study of the engineering report and the Commission's proposals, our Association finds no logical basis upon which to take issue with the major findings and recommendations. In particular, the Association has considered the proposals against the known background of population and economic growth which New Jersey is experiencing. This involves not only a net increase of over 100,000 persons per year in the State's population plus notable industrial growth, but also the rapid development of wholly new communities. Meantime, as metropolitanism spreads outward over territory that only yesterday was farm land, it becomes increasingly difficult to design service areas on the basis of municipal and sometimes even county boundaries. This is particularly true with respect to water, which everyone must have but which nature has distributed so unevenly.

On the basis of such intensive, independent study as I have now outlined the Association respectfully offers the following conclusions for the consideration of the Legislature. In so doing

notes that the legislative bills to execute the reports under discussion have not been available for a sufficient time to permit the systematic study they deserve. Our statement therefore pertains to the legislative bills only to the extent that they accord with the general program advocated in the reports.

1. There is imperative need for the development of an integrated water supply program which will achieve (1) conservation in water use, (2) improvement in distribution facilities and expansion of existing public and private water systems, (3) acquisition of resource sites for future water supply development, (4) development of a large new reservoir facility to meet intermediate needs of the next two decades, and (5) development of a coordinated and integrated long-range plan of water development adequate for the needs of the entire State for the next 50 years.

2. While it is highly desirable that utility services be provided wherever possible by private taxpaying business, and while it is also highly desirable that local self-determination over municipal water systems be preserved wherever possible, the complex and growing water problem may not be one that can be solved adequately or permanently on a local or regional basis without some state intervention. This is because the need for water is universal while the natural sources of water vary greatly geographically. Therefore, the proper function of the State henceforth should be that of planner and coordinator, and developer of major water supply facilities of wide geographical significance. The State should avoid engaging directly in distributive and retail phases of water supply. At the same time existing public and private water supply systems should be permitted to continue their present operations and to expand their facilities when

ch expansion is in conformity with the overall water supply planning of the State.

3. The agency to accomplish these purposes should be within the regular framework of the executive branch of the State and fully subject to appropriation and statutory control by the Legislature. No matter how broad its powers, this agency should under no circumstances be removed from normal executive and legislative controls nor be given the independent status that is usually associated with so-called "authorities".

4. With respect to Northern New Jersey, the general program recommended in the engineering report of the Legislative Commission on Water Supply should be effectuated, both as to short-run expansion of existing water supply systems and intermediate development of a Chimney Rock reservoir facility. Round Valley should be purchased by the State as a future water storage site provided the long-range engineering studies now in process indicate its feasibility as part of a future integrated development of the Delaware River for water supply purposes.

5. With respect to Southern New Jersey, the Wharton Tract and other water resources in the southern section of the State should be developed as required. Although the engineers confirm that water supply in this area should be developed from underground sources, an engineering basis is still needed for determining the specific type and extent of future developments and the location of sites which should be acquired in the near future to accommodate long-range development plans.

6. General taxation should not be used to support utility services, such as water supply, for which the availability, need,

nefit and cost vary so widely.

The present financing proposal, under which it is planned to allocate direct water costs - that is operation and interest - to users by means of water consumption charges, and indirect water costs (capital costs including early-year deficits) to benefited areas through a special assessment property tax, is sound. While state bond funds would be used to finance the proposed development, the proposed financing system would insure that general taxation would not be invoked to pay for water use or for water resource improvements the benefits of which are limited to particular areas. This same sefl-financing plan should be consistently followed with respect to future water supply developments in Southern New Jersey and other sections where and when necessary water supply development is undertaken by the State. Under no circumstances should the financing plan be altered to place state credit behind the bonds of a state water agency which is not subject to normal executive and legislative controls. To do so would be to give such an autonomous agency access to the taxing power of the State -- a power that should be given to none but elected representatives of the people.

7. Because of the increasing importance of intrastate stream waters to economic development and sanitation, a principle should be established that streat-flow diversion or interruption for potable water development should not be permitted to affect adversely present and potential stream utilization for industrial water supply or for imperative public uses such as sanitation. This means not only that minimum flows should be protected, but that reasonable provision should be made in future water supply developments for the release of compensating water to supplement low stream flows.

That, Mr. Chairman, concludes our statement. It is developed after extensive research within our staff, study of the reports by both the staff and our Water Supply Committee during all the time that was available to them for study, and approval by the Executive Committee of our organization.

THE CHAIRMAN: Has a copy of your statement been handed to the Secretary?

MR. TILLINGHAST: A copy has been handed to the Secretary along with other supporting data.

THE CHAIRMAN: That concludes the proponents of the proposed legislation and we will now go into the opponents. The first one I am going to call on is Mr. James Dobson, a Member of the Bridgewater Township Committee.

MR. JAMES DOBSON: Thank you, Mr. Chairman. I represent Bridgewater Township within whose territorial limits the proposed Chimney Rock Reservoir will be built. I would like to read to you a resolution adopted by our Committee on August 17, 1955:

Be it resolved by the Township Committee of the Township of Bridgewater in the County of Somerset as follows:

Whereas, the State of New Jersey through its various departments and agencies is considering the acquisition and use of that part of the Township of Bridgewater known as Washington Valley as a reservoir known as "Chimney Rock"; and

Whereas, the said State of New Jersey is basing its decision upon a preliminary report of engineers insufficient in detail and not upon a final report of said engineers due the 15th day of December of this year; and

Whereas, there has been no consideration given to the local

blems of: (1) reimbursement for loss of tax ratables; (2) construc-
on of periphery roads and traversing causeway; (3) use of water for
ocal purposes; (4) recreation facilities and use, and (5) the problems
f those residents and land owners to be located on the fringe area
f this proposed project, such as public utilities, i.e. light, tele-
phone, potable water, driveways, etc.;

Now, therefore, be it resolved that until such time as the aforementioned final report of engineers is prepared and considered, and until such time that the aforementioned local problems are solved along with other such problems as yet undetermined, the Township Committee of the Township of Bridgewater is unalterably opposed to any final action on the part of the State of New Jersey; and

Be it further resolved that a copy of this resolution be forwarded to the legislature of the State of New Jersey at its hearing on the 19th day of August, 1955.

THE CHAIRMAN: Mr. Dobson, will you file a copy of that with the Secretary. The next person I will call on is Paterson Bond, a member of the League for the Preservation of Washington Valley.

MR. PATERSON BOND: My name is Paterson Bond. I reside in Martinsville, New Jersey and I am a member of the League for the Preservation of Washington Valley. By occupation I am co-manager of Orvis Brothers & Company, members of the New York Stock Exchange, Plainfield Office. I will present information concerning the economic and sociological implications of the contemplated reservoir on the immediately affected area and on the surrounding Somerset County.

I want to depart for a moment from my prepared text to say that when I prepared this text I did not realize that there would not be a great number of Members of the League for the Preservation of Washington Valley to address this body. I can understand that you have people here from all over the State and people who have wide interests and people who have given a good deal of study to this matter. I can tell you that probably the amount of interest in the State's water situation in the Washington Valley has increased ten thousand fold since the bombshell was dropped by the presentation of the preliminary report. I feel very humble to represent all my neighbors in speaking on the human side of this thing. I have neighbors who have spent all day and all night fighting - as the press once reported -- "fighting for their homes with their slide rules and their T squares". I wish that every man on our committee had an opportunity to stand here and tell you what it means to overnight have a preliminary report look as though it is about to go through in such a hustle that there was worry through the Valley for fear we would not have the opportunity to stand here.

I appreciate, Senator Summerill, the excellent manner in which you have been conducting these proceedings and I know that my neighbors have felt better, they are not here to listen, in knowing that you are willing to listen to all that we have to present.

The bill which is presently before the Legislature was presented by the Legislative Commission following the recommendations of the engineering firm of Tippetts-Abbett-McCarthy-Stratton. So far we are able to learn, the decision is made to accept the recommendations contained in this preliminary engineering report on a straight stated money differential of approximately $40,000,000. between the

of a reservoir and transmission lines, pumping stations, filtration equipment at the previously proposed Round Valley site and that of Chimney Rock. It is the thesis here that the Legislature has a responsibility to examine these two proposals and any alternative proposals, such as the on-stream series of dams for the development of the Raritan River with a view to the effects on the people and on the economy both state and local. It is not expected that the legislators are in a position to evaluate the engineering estimates of cost, but the legislators cannot abdicate their responsibility as representatives of the people of the State by ignoring the broader aspects of each of these proposals.

It has been sufficiently discussed that the number of displaced and dislocated families in the Chimney Rock area greatly exceeds the number of families to be dislocated by a Round Valley Reservoir. The engineering firm in its preliminary report sets this figure at 350. Using the same topographical map which the engineering firm used, the League has established that the number of families whose property lies within the taking line of 300 feet, is 446. That may not sound like an awful large disparity, gentlemen. It isn't the number of people like there are in the City of Newark, but if those people who will be left hanging high and dry are like my neighbors they are pretty important people. Actually the people affected in the Valley, according to every other engineering firm is 997 people. They point out to me that that's families and I was about to make the projection that it is a fertile Valley and we are a vigorous people, and the average is probably four to a family, making it a little short of 4,000 people. This figure does not take into account the number of families and of businesses which

ld be affected by being left on the perimeter of this storage in. -- Well, that is included in that latter figure of 4,000.

We submit that the inclusion of the reservations of the egislative Commission would narrow the previously mentioned 40 illion dollar gap very considerably. It is one purpose of this eposition to call to the Legislature's attention the fact that xpensive dislocation will occur in the larger industrial area of iddlesex and Somerset Counties which duuring the longer term of he water proposal more than offset the immediate savings.

Dr. Saunders is here and is registered at this meeting nd I expect that he will later tell you something of the effects of this proposal on a growing educational system. And in connection with this I would like to say that the people of Martinsville are reasonable people. They are civic minded people. To give you an example of what I mean, I served on the Board of Education up until last February, and we had a very difficult problem. The educational district which embraces this part of the Valley is the Bridgewater-Raritan Board of Education. It takes in the Borough of Raritan and the total area of 49 square miles. It is rapidly growing in three-quarters of its area. It was necessary to build schools. The people in the corner of that district were the people of Martinsville. The Board of Education was able to go to the people of Martinsville and say: "In order to get a good quality of education for your children, we would like to put into effect a kindergarten through fourth grade school in Martinsville, even though we have previously acquired an eleven acre site on which to locate a new school. Your fifth through eighth grade students would then be sent down to Finderne." This is a trip in a bus of three and one-half to four miles. The people of Martinsville came out and voted that school program in. They are a civic-minded people and if they feel that the right proposal has been

for the benefit of the State, the people of Martinsville can be depended upon to support it. That is not the feeling at the present time.

Included in the studies that Dr. Saunders will present to you will be some direct information as to the transportation problems and costs to the Districts and to the State of this Chimney Rock Reservoir with or without one, two or three causeways. No causeways are provided by the bill in its present form.

In order that the Legislature may have a picture as to what is to be effected, I want to give you a brief description. Washington Valley is a broad, shallow valley between two ridges of mountains or hills. An industrial area to the south of the first ridge, lying along the lines of the Central Railroad of New Jersey, has grown up during the years and it includes plants of the Johns-Mansville Corporation, American Cynamid Company whose statement you just heard, the Bakelite Division of Union Carbide and Carbon Company, the Diehl Division of Singer Manufacturing Company, Ruberoid Company, Research Corporation, Ortho Pharmaceutical Division of Johnson & Johnson, Sherwin Williams, Art Color Printing and many smaller industrial installations. Among these plants lie the Boroughs of Bound Brook, Manville, Middlesex and Dunellen; to the west, Somerville; and to the east, Plainfield.

The available residential areas adjacent to these plants south of the ridge, have largely been occupied by housing developments of the project type. The nearest practical area left for the employees of these industries in the low and moderate income group is Washington Valley. If this Valley is taken out by the reservoir, approximately 2,000 to 2,500 available home sites within a ten to fifteen minute

omobile trip of these plants, will be removed forever, in addition the 446 homes which would be inundated. We are now talking in terms a future 7,500 to 9,000 people.

I have had a lot of good living in Martinsville and I have been impressed over the years with the number of people who come to serve us or come to visit us from Plainfield, Bound Brook, and it is the ambition of many working people one day to get up into the Valley and live a good rural life.

We have a man in our Town who has a supervisory position with a large firm, American Cyanamid Company, which just made a presentation. That man worked for 20 to 25 years to put aside enough money for a downpayment on his house, and he traded hours with another worker in the American Cyanamid Company, and together they built brick by brick, and nail by nail their homes in that Valley. And in front of that man's house - and everybody from Martinsville who is here knows this - there is a great big rock and on it is printed in white paint "The Hard Way" . Condemnation proceedings are not going to repay that man for his dreams and his dream castle. These are the humanities, these are the things you have to think about. There are many other people that I could talk about in the same way - engineers, research men, who wanted to provide a good living for their families, devoted nights to the finishing of the interior of their homes. These are labors of love and this place was the place of their selection.

Without close study, it would appear that the ridges which would bound the storage basin and which are largely unpopulated, might provide these home sites, but when it is considered that the terrain is exceedingly rugged and that the cost of drilling wells runs as

as $3,500 compared to a few hundred in the Valley, the practical difficulties for the person of low and moderate income have proved so great as to eliminate effectively the building of homes below the real luxury class of $30,000 to $60,000 on these ridges.

Because of the fact that central New Jersey houses the majority of the industrial research done in our nation, Washington Valley is tenanted by a very large number of engineers and other research and technical personnel of these large industries. This type of personnel is under continuous pressure of blandishments of corporations in other sections of our country because there is a critical scarcity of such personnel. Any doubts as to the existence of this pressure can be dispelled by one Sunday's reading of the display ads for engineers, chemists, physicists and other technical personnel running to seven or eight pages in the Financial Section of the New York Times, for example. One of the first considerations of a large corporation in locating a new plant, is to study the housing sites available and the educational facilities for families of employees near the projected plant site. Evidence of the desirability of this valley for this purpose is presented by the fact that the Johns-Manville Corporation, when they built their Research Center at Manville, acquired 120 acres of Washington Valley for home sites for their engineering, technical and research personnel. This project was started six or seven years ago, and although occupancy of this area was restricted to this type of personnel of this one company on a three to one ratio to similar personnel of other companies, the growth of this development has already used up approximately half of the available home sites. This development is known as Spring Run and is operated by the home owners who take

individual properties under an option agreement with Johns-Manville.

Washington Valley forwards the aim of the Office of Defense Mobilization in the Federal government which seeks to encourage moving industrial plants out of the congested urban areas to the less populated areas of the country with adjacent rural or suburban home sites available.

It is the contention of the League for Washington Valley that a portion of these industrial employees who have now located in Washington Valley will be dislocated completely out of the area by accepting job offers from other companies as far away as the west coast. It is a further belief that real financial loss will be sustained by the remaining people who try to re-locate in the more expensive hill sections.

In the Bridgewater Township area of the Valley, the very fact of the location of so many large industries in the Township has lowered the tax cost to the home owner employee of these corporations. No nearby Township to which these people might be removed provides similar tax shelter.

To the municipalities of Bridgewater and Warren and to the County of Somerset, the loss of present ratables in the Valley is a matter of concern. To the municipalities the combined tax bill of Valley residents in Warren and Bridgewater amounts to approximately $150,000 a year. The proposal to recompense these municipalities for the loss of these ratables in the 45 year period would thus be approximately six and three-quarter million dollars. This six and three-quarter million and the obligation to continue to pay at the rate of $150,000 a year forever would take a large chunk out of the

mated $40,000,000 engineering saving at Chimney Rock against
nd Valley.

However, the really large loss to the municipalities
es in the loss of the potential ratables. The area is growing
t an increasingly rapid rate. Individual homes are being built
rapidly. It is difficult to estimate how soon the valley would be
fully developed if it were not taken over for a storage basin, but
if we assume that this can occur in 15 years and disregard the
increase in year to year ratables until that time, the loss of tax
income after 15 years, including the present tax ratables, would be
$900,000 per year and during the life of water plan would be a
total loss of tax income running into the 27 million dollar figure.
This is computing the potential home sites in the basin floor to the
taking line of 300 feet only.

Obviously the perimeter could be expected to grow to some
extent also. Against these projections it may be that there would be
some growth in the immediate surrounding hilly areas, but this would
be extremely doubtful, especially if the storage basin proved not
to be full for long periods in the summer. Additionally, there would
be loss to the business and residential property values on the
immediate perimeter area. There has been some discussion concerning
possible recreational values to be obtained from the reservoir. If,
however, this should be regulated similar to Wanaque reservoir,
boating, and swimming would be prohibited and fishing possibilities
extremely limited. The figures and projections estimated in the
foregoing are based on the assumption that the reservations of the
Legislative Commission are not added to the bill. We feel quite sure
that should these reservations be added, the figures above would have

e adjusted so substantially as to completely eliminate the ineering saving of Round Valley over Chimney Rock, even though ilar projections might show some increase in the future ratables Round Valley if no reservoir were to be located there.

The Borough of Bound Brook is the largest immediate affected ommercial area. The commercial area between Martinsville and Warren is extremely small. We have a post office, two general stores, a bakery, a barber shop - it is not a big bustling community but it is not a community of hillbillies either. We expect the Mayor of Bound Brook will make his own representations in this regard. League members have made an informal survey of stores in Bound Brook and find that they estimate that 15% to 20% of their business comes from the Valley. Without a causeway, obviously all of this would be lost. With a causeway, some loss of the displaced families' business would be experienced, but here again, the concern of the merchants in Bound Brook is largely with the loss of potential future business from the Washington Valley area To judge from the direction of growth of the commercial area of Bound Brook which has constantly been in the direction toward the southerly ridge of hills that bound the valley, it is obvious that it is to this area that the merchants look for the business of the future As an estimate, at full development of the Valley this could run to 40% of Bound Brook's total commerce. Other commercial areas such as Dunellen, Middlesex Boro, Somerville and Plainfield would be affected to a somewhat lesser extent as a percent of present business. But in the case of Dunellen the future business from north of the reservoir with no causeway at the end of the Valley, would be nil.

We realize the concern of the Legislators of the effect of this water program on state-wide public opinion. We would like to point out the adverse effects of the disregard of human rights and of the lack of a consideration of all the people, including those in the immediately affected and surrounding areas.

Adverse reactions would also certainly result from the appearance of undue haste on the part of the Legislature should they adopt a bill based on a preliminary report when the final report will be available in only three months and the ink on the preliminary report is scarcely dry.

Good public relations are being risked by a chance of serious mistakes in estimates. This is likely if reliance should be placed on only one firm's estimate of the engineering costs. To check these figures with another firm with the same specifications on both Chimney Rock and Round Valley should not duplicate or approximate the fee for the present survey. Such a check may prove the 102 million dollar estimate unrealistic and indicate another location would be more economical.

None of the economic projections and sociological factors in this statement were considered by the engineering firm. The project engineer of that firm stated this publicly at a meeting in Somerville. His firm, he said, does not deal in futures. But the Legislature is dealing in the future of the people of this great state. Its economy and its people are as important as the water they will need in the future. Sometimes failure to consider future development proves to be a much more costly gamble than to make projections based on present trends. In this respect, an over investment in impounding of river waters may prove unwise by reason of present intensive experimentation toward economic conversion of sea water to fresh. This might make costly antiques of storage basins for polluted water in communities previously growing vigorously, especially for a seaside state. This may seem far-fetched but who would have thought 10 years ago that commercial atomic power would be nearly available today.

Therefore, we ask the Legislature to consider and to deliberate on these human and economic factors present and future along with the alleged difference in cost.

Let us expand existing water systems as recommended to cover our water needs for the next five or ten years but when we start to provide for the next forty-five years, let us be sure that we are doing the right thing in the right place. For the first step in a forty-five year plan, would six months from the receipt of a preliminary report be an undue amount of deliberation to expect from a busy Legislature? There is unanimity of opinion that long term planning on water is imperative, but does it need to be hasty? Do Legislators have to consider only engineering estimates of physical or material costs? These are questions in the minds of thoughtful people all over our State.

By shelving the 1925 Chimney Rock plan the Legislature gave an implicit pledge to the people of Somerset County that they could in good faith move up into Washington Valley to live. This pledge should be upheld today by this Legislature.

I would like to present Reverend Fowler, with your permission, Senator. His church is in the middle of Martinsville and he has a statement to make.

THE CHAIRMAN: I will recognize Reverend Fowler.

MR. BOND: Thank you very much, sir.

REV. KENNETH A. FOWLER: Mr. Chairman and Members of the Committee: I should like first to quote the preliminary report of Tippets-Abbett-McCarthy-Stratton for I feel that there is one point in particular in which I take issue.

In Section III-9 of the engineering report under the topic "Reservoir sites", it is stated: "There are no important public buildings in the proposed flooded areas."

I am the clergyman of one of the three churches which will be actually affected by this project. At the moment, at least one of these churches, the one located in Springdale, New Jersey, will be completely inundated by this proposed water basin.

I am concerned about the future of the Church of Jesus Christ in this Chimney Rock section, particularly the church which I serve, located in Martinsville, New Jersey. I want to be realistic, not emotional. In protestantism, the church is not the building, it is the people. If action is taken whereby this project is promoted, fifty to seventy-five percent of our congregation will be forced to re-locate. The congregation of the church which I serve recently completed a building valued in the area of $70,000.00. Their total physical assets are in the neighborhood of $100,000.00.

My attitude is one of sympathy towards the needs of water on the part of residents of this State as well as those who live in the Chimney Rock area desiring to retain their land and real estate. Certainly all concerned want the best possible solution. This will be obtained only after all possibilities have been fully explored.

In lieu of the fact that in Protestantism the church is the people, if a sizeable percentage of our congregation is removed our physical assets are then of little value. What I am trying to say is: If our congregation - a sizeable percentage is forced to re-locate because of the project under way at the moment, our church in reality is being affected by such action.

My question: If real estate located in the affected area, which is used by a connectional society of persons for the purpose of hearing the Word of God, receiving the Sacraments and is used for carrying forward the work which Christ has committed to his Church is restrained to the extent whereby it could no longer adequately serve those remaining or be able financially to carry on effectively because of the removal of a large number of its membership and constituency, would there be any kind of an adjustment or consideration on the part of the State even though the church - I speak now of the physical buildings - would not actually be in the flooded area but only a short distance away?

THE CHAIRMAN: Thank you, Reverend Fowler. The next person I will call on is Dr. Leet who is a Geologist.

DR. L. DON LEET: My name is L. Don Leet. I am a Geologist with Harvard University. I am speaking on the technical aspects of this problem on behalf of the League for the Defense of Washington Valley.

The overall problem as it has been presented to me and as we have all heard about it, is to have water and how much it will cost to get it. I have heard rumors - I have no doubt they are idle - that there are political influences at work, but I think the basic problem is to find water.

A very careful study has been made of the preliminary report, and it is recognized that it is a preliminary report, and repeatedly the point has been urged that final action should not be taken on a preliminary report. To the point of the findings of this preliminary report, relative to the long range program, the production of 200 m.g.d. from the Chimney Rock reservoir proposed, I would like

point out that three independent groups of engineers analyzing tain figures have come to the conclusion that the water will not there. The proposal is to put a dam across two points, pump ater into the reservoir, store it, and then pump it to be iltered, and then pump it again to be used.

The availability of water depends upon the flow of the Raritan River. There have been some numbers bandied about in that connection. The report has used the figure of 130 m.g.d. as one below which there will be no pumping, that is if the flow of the river is less than that there will be no pumping. This figure has been challenged and I think appropriately so. It is a figure which represents what might be called a general average for ordinary streams under normal circumstances in most communities. It's the type of figure you would take in a preliminary report. It does not, as I understand this report, represent a specific detailed analysis of the needs for Raritan Valley. And two of the speakers this morning mentioned figures in the range of 220 to 250 m.g.d. as the requirement for the down river portion of this Valley below the Chimney Rock proposal. But, taking the figures of the preliminary report, as given, and doing no pumping at less than 130 m.g.d. flow, it turns out that there are a number of years between 1930 and 1954, a period of 24 years, - a number of years in which the day by day flow is such that you can't get enough water with the pumping capacity allowed to keep this reservoir in condition to supply 200 m.g.d. It's a matter of arithmetic and it is a matter, as a matter of fact, of actual daily flow compared with the general average flow.

It turns out that for seven of the years over that

rval there would not be adequate water to supply 200 m.g.d. is is pretty fundamental. If you consider the cost of water in rms of millions of gallons, so many dollars per million, you nt the millions delivered if you are going to pay for them. ou are going to pay for them whether you get them or not.

The point I am raising here is that as it now stands, in the preliminary report, you are not going to get them. Between 1930 and 1954 there would have been times when you could not have delivered enough water from the system to fill a birdbath. There would be other times when you could deliver to full capacity. And ordinary engineering requirements specify that for such a system you allow 25% of reservoir capacity for what is called reserve. The reserve is to take care of that odd year which occurs no oftener than once every 20 years when drought conditions are so abnormal that you have to draw on reserve. On the scheme as represented by the preliminary report, the reserve in this system of Chimney Rock as proposed would be dangerously depleted approximately one-third of the time. This is not delivering to you the stuff for which you are being asked to pay.

MR. McCARTHY: Mr. Chairman, may I have the opportunity of speaking on that matter?

THE CHAIRMAN: Suppose you leave that go until we get into rebuttal which will probably be Monday and you can speak on that then.

MR. McCARTHY: All right.

THE CHAIRMAN: I will next call on James I. Bowers.

MR. JAMES I. BOWERS: Mr. Chairman, my name is James I. Bowers. I am an Attorney in Somerville, New Jersey. I represent the League for the Preservation of Washington Valley and also the North Jersey Quarry Company.

We are here today to oppose the Senate Bill, S-372, and the Assembly Bill, A-595.

I think it is evident from what has been said here this morning on the part of the so-called proponents of the bill - there were some 16 people who spoke under the heading of proponent and I don't think that any of them really proposed the bill or stood up by the bill or advocated it. Most of them raised some question with respect to the contents of the bill. Consequently I don't think they can be placed properly in the category of proponents of the bill.

Mr. Bond, who spoke for the League for the Preservation of Washington Valley, covered the situation so thoroughly and so effectively that I think it is needless for me to dwell upon the sociological or economical situation as he described it in his very well prepared address.

There are many things, however, as I study this preliminary report and as I pointed out at the Somerville meeting on August 4th - we met there for a long while, some four hours - where questions were leveled at the representatives of the firm of Tippetts-Abbett-McCarthy-Stratton; we never could get any information and I think it was very evident and very plain that this study or report made by the engineers in every sense of the word was a preliminary report and much was said about waiting for the final product which I think is due here on or about December 15th, 1955.

There are a lot of things - and I don't say this critically - which are not included in that report; things which concern us, concern the people in the Valley and the people of Somerset County, the Quarry and other industries. I am concerned chiefly about one thing that Mr. Bond brought up, namely, the land surrounding the immediate area which is going to be taken for the reservoir. I think the reservoir takes in some 3,000 acres and I am talking about the lands forming the perimeter of the lands taken for the reservoir. In time, if that dam were raised or more water is needed, certainly some 3600 acres of additional land, according to studies made by engineers, would be needed to provide a proper perimeter to a reservoir of that size.

I speak of that as a layman because I heard the thing discussed among engineering circles and I think there was a report made here some years ago by one of the State agencies wherein they advocated that if Chimney Rock was taken then some 6600 acres be considered.

In considering the report there are a number of items here which I have jotted down and I will follow a manuscript on this phase of it. These items are not discussed in the Tippetts-Abbett-McCarthy-Stratton report:

There is no indication in detail of the relative elements of water quality in any of the several projects.

The operating and maintenance costs of on-river reservoirs vs. pumped storage have not been broken down and compared in detail.

For example, maintenance of on-river structures in early years will be substantially reduced by reason of their progressive

struction as compared with maintenance on a pumped storage scheme re maintenance will be at maximum at a time when some major on-river structures will be new.

It is not indicated whether the 20 m.g.d. which the Elizabethtown Water Company is authorized to divert would be added to or subtracted from the 130 mgd minimum flwo which they propose to maintain in the river downstream from Bound Brook

The location of the water treatment plant for Chimney Rock is not indicated. This will affect the cost of booster pumping.

The report does not recommend the terms under which water will be sold to the various systems. There are two possible effects: one is that water will only be sold during extremely dry years and the rest of the time the facilities will stand idle or; two, water will be sold at such a low rate that the competitive position of existing water works which sell at wholesale will be jeopardized.

The report indicates the construction of transmission mains to one point in the distribution system only. There is some doubt as to whether the arterial feeders could be built in the last analysis for the prices allowed.

In estimating the additional water which can be obtained by further development of existing supplies for the purpose of meeting the immediate crisis, the yield of the DeForest Lake Reservoir is omitted because of future demands in New York State where the reservoir is located. The inclusion of this yield in the quantities available in the early years would tend to relieve the situation and permit of some delay in the decision regarding ultimate development.

A compensating reservoir is not included in the plan for Chimney Rock. If such a reservoir were added to this project, it

uld be constructed in a very short period and could be used to et the demand for water in the 1960-65 period. This reservoir ould be adapted to either on-river or pumped storage water supply rojects.

And I understand, according to what I have heard from engineers, which is the best information that I can get, that a compensating reservoir would cost somewhere in the neighborhood of four million dollars. I don't know how near right I am on that. It may be checked with the engineers. Am I correct, Mr. McCarthy?

(No reply)

The way in which roads will be relocated in Washington Valley is not defined. If not already included, the cost of a causeway should be added to the estimate. It has been stated that the cost of this causeway would be one and a half million dollars.

The estimates given do not include reimbursement to the Townships of Warren and Bridgewater for loss of tax revenue. Since this item is covered in the proposed legislation, the capitalized value of tax losses should be added to the total cost of the undertaking.

Now for some ten or twelve days I have given this very serious study and I have called upon Metcalf and Eddy, Engineers of Boston, to assist me with the technical end because as a Lawyer and layman I do not understand very much about engineering; but I would like, for the benefit of the people I represent, to have the views expressed by Metcalf and Eddy spread on the record so that they may have the full and careful consideration of your Committee.

The report of Tippetts-Abbett-McCarthy-Stratton dated July 1955 is preliminary in character and clearly indicates that its

clusions are tentative and subject to final determination in full report to be submitted by December 15th of the current year. review of this preliminary report, together with collateral information obtainable in the limited time between the issue of the report and the legislative hearing, develops certain questions as to the breadth of consideration given to alternatives other than the Round Valley and Chimney Rock projects.

It is noted in the report that the project for the construction of a series of dams and reservoirs on the Raritan River would involve capital costs of the same general order of magnitude as those for Chimney Rock. The on-river project is dismissed from further consideration in the preliminary report for reasons of water quality and operating cost related to a multiple reservoir system, although no supporting figures or other data are given.

As a rule, the development of a stream in its own valley is preferable to pumped storage, other things being equal. It is therefore believed to be prudent to fully explore the possibilities of on-river multiple reservoir development before committing the State to an undertaking such as Chimney Rock or Round Valley. Preliminary figures and examination of topographic maps indicate that sufficient storage can be provided in the valley of the Raritan River above its junction with the Millstone River to assure a dependable yield similar to that attributed to the pumped storage plans and to permit an appropriate release of water to maintain minimum flow in the river.

The report mentions 130 m.g.d. as a suitable allowance for minimum flow release. This figure, equivalent to about 0.25 cu. ft. per second per square mile of watershed area, is within the

nge commonly provided for in various river projects. Whether it is ght for any given stream will depend on a number of factors such as he characteristics of natural flow, the extent of existing pollution nd the degree of treatment likely to be provided in future waste treatment plants. The rate of minimum release is of sufficient significance in estimating safe yield to justify a careful study of this element before any project is definitely adopted.

It is believed that any extra costs relating to the management of multiple reservoirs as compared to that of a single large basin will be minor. On the other hand, savings in power cost resulting from the reduced aggregate pumping head of the on-river plan will be substantial. In the pumped storage scheme, filtration and subsequent booster pumping must be predicated on extreme low water in the reservoir which is many feet below the elevation of full reservoir. Further head may be lost in the pumped storage plan unless a suitable filter plant site can be found at the optimum elevation.

A further important advantage in a multiple dam project may be found in saving in interest charges in the early years by the construction of the series of dams according to a time schedule commensurate with the growing demand for water. The resulting deferment of parts of the ultimate investment will effect substantial advantage in cost to the present generation.

The foregoing considerations are pointed out to emphasize the importance of complete study of the on-river project for adequate comparison with other plans. There would appear to be ample time for such a study. If the demand proves to be pressing, it would be feasible to construct promptly one or more reservoirs on the river.

e such reservoirs will be necessary for compensation in the Chimney ck scheme and therefore could become a part of either ultimate plan.

Unless legislation is so worded as to control it, there is rave danger that in some years the amount of so-called "deficit peration" will far exceed the estimates. The proposed new supplies are designed to supplement the "dependable yield" of existing sources in the driest years. In wet or even average years, some of these sources may be wholly adequate without dependence on water from the new developments. In such years the revenue from sale of the new water will fall below estimates based on dependable yield, and this could result in general assessments on a State-wide basis. In this connection there will presumably be prepared a tabulation, year by year, for the life of the bonds, showing annual costs including bond interest, amortization and estimated operating cost, annual revenue including that estimated to be derived from sale of water and from assessments on property in the service area, and the remainder to be secured on a State-wide basis.

That concludes the views as expressed by Metcalf and Eddy, and in closing just let me say this, gentlemen: In the circumstances and in view of what has developed here today, I do not see how Members of the Legislature, the Assembly and Senate, can be called upon at this time to vote on bills of this sort becuase they are based purely on preliminary reports and maybe on preliminary studies.

I think there is plenty of water to carry us along for a while. Look at what happened last night, and I am told by a reliable party that right outside now the Delaware will rise shortly to about 20 feet above normal flow line, and in view of the fact that

e can normally expect some rain between now and December, I think this must be held in abeyance until we can give it further study and consideration because that seems to be the feeling of all those who have expressed their opinions about these pieces of legislation today.

I wish we could go to the Delaware. There is plenty of water there. I think the State ought to study that question more thoroughly. There is plenty of water in the Delaware and let's go to the Delaware for water, or on the other hand go to the on-river projects or take Round Valley. And I say this in conclusion that I think we should allow the North Jersey Water Supply Commission to develop Round Valley and that would not cost the taxpayers any extra money.

THE CHAIRMAN: Mr. Smith, we have five minutes left if you want to go along on that.

MR. SMITH: No, that isn't sufficient, I will need at least a half hour.

THE CHAIRMAN: All right, we will call you on Monday. Mr. Englehard, do you want to talk today? We have about five minutes left here.

MR. CHARLES W. ENGELHARD: All right, Mr. Chairman, I will be glad to read my statement.

Mr. Chairman, Members of the Committee, Ladies and Gentlemen: I am grateful for the courtesy which you are extending to me today to appear as a witness on this vital question of water supply.

You have taken time out from your busy schedule to be here and you have considered on many occasions this important question.

The necessity for sound, equitable legislation for the immediate establishment of an adequate water supply system for the State of New Jersey, now and for the future, is not subject to question. Our Governor, you and your colleagues have been long familiar with the matter which we are to discuss and are equally anxious to find the best possible solution.

I come before you today not to obstruct the final solution of this great problem but to point to certain flaws which I feel exist in the proposed legislation presently under consideration.

In view of the keen and proper interest of the people of New Jersey I come to you also to request more adequate opportunity for interested parties to examine the problem through cross-examination of the proponents of this plan either before this committee if the rules can be suspended or through such other adequate arrangements as might be possible to achieve this purpose.

Only in this manner can the people of New Jersey be convinced that all aspects of this vital problem are taken into consideration.

Among the questions pertaining to Bill 372 which should be answered are the following:

1. Why should Chimney Rock be specifically included in the proposed legislation until the following questions have been fully answered?

a. How can the long term water needs of New Jersey be fully met without use of Delaware River water?

b. Should not private enterprise and public water companies supported by State loans, if necessary, be given the opportunity to erect the short-term water needs in accordance with plans already prepared for this purpose?

c. Can the real cost of the final project be fairly or adequately assessed based on a preliminary report prepared rapidly before the recommendations for the final solution are known?

d. Should not new comparisons between Round Valley and Chimney Rock be made taking into account substantial additional costs of the various additional features which were not included in the preliminary report?

e. Should not the possibility of comparisons of cost between the projects of Round Valley and Chimney Rock in terms of better and more water for North Jersey be examined?

f. In assessing the future full cost, should not comparative figures between Round Valley and Chimney Rock be studied with regard to:

1. The greater storage capacity of Round Valley.
2. The eventual possibility of supplying 300,000,000 gallons per day out of Round Valley.
3. The possibility of meeting increasing water needs of the area between Round Valley and Chimney Rock as well as substantially increasing needs of Somerset and Middlesex Counties.
4. Through substantial use of Delaware River water in Round Valley you have Raritan water for use in its own area.

I come now to consideration of the various phases of the proposed legislation in Assembly Bill No. 595.

I feel that provisions of this Bill are inadequate and unsatisfactory and that they establish specific procedures which are certainly undesirable and perhaps unconstitutional in some instances.

I raise the following specific objections?

1. The bill grants power to a board either to assess or not to assess seven specific counties with taxes to repay the bond issue principal and possibly the interest thereon by mere alteration of rate charges without reference to any other authority. Is this constitutional?

2. In this proposal we are arbitrarily selecting seven counties out of the State for special taxation, based solely upon rateables, thereby completely disregarding the principle of relative benefits.

3. Somerset County is specifically excluded as a county requiring water but specifically included as a county to pay for the principal of the project. I object to the exclusion and the inclusion in this manner.

4. This bill provides for perpetual benefits to municipalities to compensate for lost rateables, thus establishing a highly dangerous principal. This constitutes a perpetual mortgage on the State and establishes a precedent which will inevitably be extended to other projects not envisaged in this legislation.

5. I oppose the procedures set forth in the section on condemnation as unworkable from a practical standpoint.

6. I consider that the administrational procedures and authorities are unnecessarily confusing and in many instances misleading.

In conclusion I would like to thank you for your courtesy in hearing me. As a businessman it would seem to me that the water to solve our problem is available. Let us therefore look optimistically to the future and plan for the growth in our State which we all hope for.

Delaware River Water must be the essential element of our final plan. Let us not by our haste take any course which predetermines us from this objective. Surely with combined goodwill and intelligence, sound legislation can be promptly prepared which will -

1. Solve our immediate problem by immediate measures.

2. Provide the authority and the funds to solve our future problems. Final commitments on this matter should come when further study assures us we have the best solution.

3. Provide for the purchase of the Round Valley site.

4. Arrange equitable distribution of the cost in direct relation to the benefit.

By so doing you will have and be entitled to the thanks of the millions who now and in future will benefit from a carefully constructed and far-reaching plan.

Thank you, Mr. Chairman.

THE CHAIRMAN: Has a copy of that statement been filed with the Secretary?

MR. ENGELHARD: Yes, sir.

THE CHAIRMAN: Before we adjourn I have an announcement from the State Police, Route 206, one mile south of Somerville, is flooded with four inches of water. The alternate route is through Flemington by way of Route 69.

MEMBER OF AUDIENCE: Four inches or four feet?

THE CHAIRMAN: Well, maybe it is four feet. We will now adjourn until 10 o'clock Monday morning.

(Hearing adjourned)

PUBLIC HEARING

on

SENATE AND ASSEMBLY BILLS ON WATER SUPPLY

Held:

Assembly Chamber
State House
Trenton, New Jersey
August 22, 1955
(Morning Session)

Before:

SENATE AND ASSEMBLY COMMITTEES
on
REVISION AND AMENDMENT OF LAWS

Members of Committees Present:

Senator John M. Summerill, Jr., Chairman
Senator Thomas J. Hillery

Assemblyman David I. Stepacoff
Assemblyman William R. Vanderbilt
Assemblyman Benjamin Franklin, III

I N D E X

* * * *

SENATOR JOHN M. SUMMERILL, JR. (CHAIRMAN): The meeting will come to order. I might say, due to the flood, we are handicapped here a little today because we have no electricity in the State House and therefore no public speaking system. We are going to ask the witnesses or speakers, so-called, to come forward to this chair and face the stenographer and speak as loudly as they possibly can so we can all hear, and I am going to call on first Carleton M. Saunders, Superintendent of Schools of Bridgewater Township. Will you come forward, Mr. Saunders.

MR. CARLETON M. SAUNDERS: Mr. Chairman and members of the Committee: On Friday we heard several reports involving some very large numbers, millions of dollars, millions of gallons of water - yea, billions of gallons of water. This morning I should like to talk briefly about some small numbers, the children of Martinsville District.

My name is Carleton M. Saunders. I am superintendent of schools in Bridgewater Township and represent the Bridgewater Township Board of Education at this hearing. I have under my direction eight elementary schools, including the seven-room Martinsville School which houses grades one through four, and the Adamsville School which cares for pupils of grades five through eight. Bound Brook High School receives Martinsville tuition pupils of grades nine through twelve.

Should the Chimney Rock Reservoir become a reality and the water be at the 280 foot level, of the September 1955 Bound Brook High School enrollment of 63 pupils, 28 would be under water, 33 would be above water, and 2 would be in question. Should the 300-

contour be the taking line, still more children would be affected. Only 10 of the 33 pupils above water would be able to reach their school without great travel distances (15.5 miles from Martinsville via Pluckemin) without a causeway. Of the Adamsville pupils 42 would be under water, 62 above water and 4 in question. Only 9 of the 62 pupils above water could reach their school without great travel distances unless a causeway were built.

With only 89 pupils with a causeway (or 83 pupils without a causeway) remaining in the Martinsville School there would be only 3 classes, viz. Kindergarten, a combination of grades one and two, and a combination class of grades three and four. A full-time principal whom we now have would be a luxury we could not afford and four classrooms would become vacant. The quality of education would definitely deteriorate. What guarantee, if any, would parents of these Martinsville children have against this inevitable deterioration?

Furthermore, the board of education owns an eleven acre site on Newman's Lane, Martinsville which it had planned to use for expanding Martinsville school facilities. This site will be under water if the proposed reservoir is built and an additional site in the Township will have to be purchased to care for Martinsville children who may move to other sections. Suitable school sites of eleven acres are difficult, if not impossible, to find and no doubt will cost considerably more than the Newman Lane site.

The school system has a bonded indebtedness of approximately $1,500,000. Unless some provision is made to reimburse the school district for the loss of Martinsville rateables an additional financial burden will be placed upon the taxpayers of the Bridgewater Township

hool District. Additional millions of dollars of debt will be incurred within a few years by the erection of a high school building which is now in the planning stages. If this reservoir project should be authorized, the Board of Education of Bridgewater Township asks that it be equitably compensated for this permanent loss. Thank you, gentlemen.

THE CHAIRMAN: Thank you, Mr. Saunders. The next speaker I am going to call on is Benjamin J. Spitz, Counsel, Passaic Valley Water Commission.

MR. BENJAMIN J. SPITZ: Mr. Chairman and members of the Committee: I am going to start by giving you an outline of what the Passaic Valley Water Commission consists of. Our Commission feels that you know of the Newark Water Supply and the Jersey City Water Supply, but that you are not very familiar with the Passaic Valley Water Commission.

The Passaic Valley Water Commission, organized pursuant to Revised Statutes Title 40:62-108 to 151, inclusive, is the operating agency of the water works system owned by the Cities of Paterson, Passaic and Clifton.

This water works system contains very valuable franchises and water rights, both in the Wanaque Reservoir and the Passaic River, the latter being a vested right conveyed by the State of New Jersey to the predecessor water company, from which the cities purchased the water works system in 1930 at a cost of $13,532,000.

Subsequent to acquiring these properties, the Commission purchased a 37 and 3/4 percent interest in the Wanaque Reservoir Project at a cost of $11,000,000. The Commission has operated,

aintained, improved and expanded the system, so that today its book value is approximately $33,000,000, and its present-day value is over $60,000,000.

As a result, the property today consists of diversion rights of 75 million gallons per day in the Passaic River, 41 million gallons per day from the Wanaque Reservoir, a complete and modern pumping station and purification plant, some 300 parcels of real estate, three large balancing reservoirs, some 400 miles of transmission and distribution mains, approximately 3,000 fire hydrants, and over 40,000 meters and consumers' services.

The Passaic Valley Water Commission distributes water at retail to the consumers of Paterson, Passaic, Clifton and Prospect Park, and sells water at wholesale rates to 10 municipalities in Passaic, Bergen, Essex and Hudson Counties, and the Hackensack Water Company, a private utility, which operates and distributes water extensively in Bergen and Hudson Counties. The population served by this Commission approximates 400,000 people.

In addition to the above, this Commission supplies water directly to many large industrial and defense plants located in Bergen and Essex Counties, for example, Wright Aeronautical Corporation in Wood-Ridge, Heyden Chemical Corporation in Garfield, Fair Lawn Industries Inc., Fair Lawn Finishing Company, Allan B. Du Mont Laboratories, Inc., and the Marcal Pulp and Paper Company, Inc., in East Paterson, and Hoffmann-La Roche, Inc. in Nutley.

The Commission supplies as much as 108 million gallons of water in one day and a sustained average of 92 million gallons daily for a week, 85 million gallons daily for a month and 75

illion gallons daily for a year, so that the average goes from 75 million to 108 million gallons a day.

During the 25 years which the Commission has operated these works, it has faithfully served all of its consumers, both retail and wholesale, both domestic and industrial, with an ample supply of good potable water and maintained one of the lowest water rates in the State of New Jersey. It has never found it necessary to impose restrictions on the use of water, but on the contrary has been called upon on several occasions to furnish water to other systems in the Northeastern Metropolitan District and has always been in the position to fulfill these requests.

The Commission has plans for the future expansion of its supply to meet the increasing demand for water, and is prepared to do so, as and when, that demand on its system develops. This program can be better accomplished under the existing laws, pursuant to which this system has been devised and under which it is now operating.

I want to divert now to sections of the bill, the bond bill.

ASSEMBLYMAN STEPACOFF: Senate 372?

MR. SPITZ: 372, on page 2, line 12. By this bill the Legislature says and finds as a fact on the top line, line 12 on page 2, after 50 years in the future, such needs are beyond the financial capacity or proper responsibility of existing public and private water supply systems. They state that and find that as a fact. Legally we can't state things as a fact which are not facts. About three years ago when we felt that we should acquire more water, we didn't say that it was beyond our financial capacity and ask the State to do it, and no one is asking the State to do it now.

that time, we joined with other municipalities and through the North Jersey District Water Supply Commission made application for an additional supply for Wanaque from the Ramapo River. This Commission put up $5,000,000 and our partners in the project put up their share. We had hearings and we had a fight to get more water for storage. The State always says we have enough water, but not enough storage and when the municipalities want to spend their own money for more water storage, it isn't easy to get. We finally got this permission from the State and we built the Ramapo Dam. Now Ramapo water has been overflowing the dam and going out into the ocean while we were having trouble filling the Wanaque, but the State was adamant and refused to allow us to take water because it was August. It happened to be the month of August and even though the water is going into the ocean, it was the month of August and we couldn't take it. It was going over the dam into the ocean, but it is August; we couldn't take it.

I am sure Mr. Wilensky when he speaks for the North Jersey District Water Supply Commission will tell you the details about the State limitation of the North Jersey and the Ramapo projects. But I read with interest because of the flood conditions Saturday that to keep down the water, the North Jersey District Water Supply Commission was directed to pump water from the Ramapo, and, imagine, this was in the month of August when we are told, "Thou must not touch." Now, I ask you gentlemen, does not that refute the finding as stated on page 2 of the bill, which says that the financial capacity or proper responsibility of existing public water supply systems can't do this job?

But further, before this bill was even drawn, there was

another application made to the Water Policy and Supply Council for permission to develop the Round Valley Water Supply Project. And, by the way, this is the quickest way to get more water because the proper procedure and hearings have already started. Now, this is another project that the municipalities are willing to pay for. They have the financial and proper responsibility to build their water plant when they want it and when they need it. Before this bill was even drawn, there was an application, as I said, before the Water Policy and Supply Council for permission to develop water at Round Valley, but not as a State project. They wanted to do it and pay for it themselves. They certainly have the financial capacity to build it and, if not, under the Shershin-Anton Bill, they can build it and pay for it themselves without taxing the rest of the State and without costing the State one penny. But, gentlemen, what has happened to that petition that is now before the Council? A hearing was held. One day of testimony was taken. Then it was adjourned, not for a day, not for a week, but for a month. Then another day's testimony was taken and the hearing was again adjourned, not for a day, not for a week, but for a month, and now the next hearing will be in September and I presume the same thing will happen. Why if we need water so quickly and it is critical, can't we have a hearing in reasonable time and get more water? The answer I cannot give you.

Now, going back to my prepared statement, I want to continue. While the bonds for the acquisition and improvement of this system are issued by the Cities of Paterson, Passaic and Clifton, this Commission assumes this obligation both as to the

yment of principal and interest, and through the economical and careful management of the Commission, it has been able to pay all of the interest and principal payments as they became due out of operating revenues. In this manner the indebtedness of the Cities in the water works system has been reduced by the Commission by approximately $11,000,000, despite the fact that within the last three years its overall retail rates have been decreased 4%. Why should anyone want to interfere with our system when we can do that?

In view of its tremendous capital investment, its obligations to bondholders and its commitments to and contracts with municipal, domestic and industrial consumers, it is very essential that its property of every nature and description and its franchises be most carefully guarded and protected at all times.

Senate Bill No. 372 and Assembly Bill No. 595 threaten not only the existence of the Passaic Valley Water Commission but every other publicly and privately owned water supply in the State of New Jersey and places in jeopardy the valuable holdings which the Cities of Paterson, Passaic and Clifton had the foresight to acquire a quarter of a century ago.

In general, we oppose the passage of these bills for the following reasons:

The proposed legislation violates all precepts of Home Rule. It would place the control of all existing water supply systems, developed heretofore by municipal and private ownership, in the State. It would be establishing a serious precedent, in that

New Jersey would be the first State in the Union to actively enter the water business and such a procedure is considered unsound by all authorities on water works operation.

The method of financing, as outlined in the proposed bills, is virtually taxation without representation. Under the proposal, approximately 36% of the State's population could impose a tax on the remaining 64% and yet the minority would in no wise share in the payment of these taxes. Even though the Passaic Valley Water Commission has sufficient water supply for the communities within Passaic County, under the proposed program all properties in Passaic County would be taxed, although the owners thereof would receive no benefit from the State's program. This raises the question: "Why should Passaic County, even though it receives no benefits, be taxed and yet 15 other counties, which also receive no benefits, are not taxed?" In other words, why should a taxpayer in Monmouth County who receives no benefit not pay taxes and a taxpayer in Passaic which also receives no benefit be forced to pay taxes.

If I may divert on the special benefits question, referring to bill 595, on page 20, Section 19, I read the following: "The amounts paid or payable by the State for the interest and principal on bonds issued by the State pursuant to the New Jersey Water Supply Bond Act shall be a special charge to and upon the political subdivisions, to the extent herein provided, within such district as receives a special benefit greater in kind or degree than that received by the State as a whole from any project or projects undertaken pursuant to this act." So far, all right. Then it

ntinues: "The Legislature hereby finds and determines that such pecial benefit will inure to the counties of Bergen, Essex, Hudson, Middlesex, Passaic, Somerset and Union from the expenditures from the proceeds of the bonds issued pursuant to the New Jersey Water Supply Bond Act, and such counties are hereby constituted a special benefit water district under the name and title of Northeastern Metropolitan Water District." Now if you will refer back to page 2 of the same bill, you will find that Somerset County is not a critical county and is not in the Northeastern Metropolitan Water District. On page 2, they create districts; they put Somerset in District No. IV. Here, in the same bill, they call Somerset a critical county that receives benefits and put them in the Northeastern Metropolitan Water District. What inconsistency! But the point I want to raise is the legal one. How can the Legislature find and determine that Passaic County or Essex County or Hudson County will receive special benefit? How do they know now in 1955 what benefits, if any, Passaic County will receive in 1961, six years from now, when the scheme is completed? How can they reasonably, logically determine at this time that Passaic County is going to be a benefit county? Do you think any court would uphold this bill and say that the Legislature can now determine special benefits for something that may or may not happen six years from now? Just because a municipality happens to be in Passaic County or Essex County or Hudson County, the property owners, both real and personal, must pay taxes, even though that municipality doesn't need the water. It doesn't need the water because the Passaic Valley Water Commission can supply entirely all of

Passaic County now and for many, many years to come. A particular property owner or taxpayer may be using wells or may have his own supply. He would be in the same position as a taxpayer in Monmouth County. Just because he lives in Passaic County, Essex County or Hudson County or these other particular counties, he is penalized.

The Court has in the Van Cleve Case -- that is the case of Van Cleve versus Passaic Valley Sewage Commission -- held this kind of legislation unconstitutional. And although the sponsors of this bill have tried not to come within said case, I think they have utterly failed. The idea of designating at this time certain counties as specially benefited areas, constituting a special benefit water district, is clearly an illusory and unrealistic classification.

It has already been noted that Passaic County can receive no water from the Chimney Rock Project and any increase in the water supply by the development of the Point View Project will benefit consumers outside of Passaic County. Gentlemen, in this posture of affairs, Passaic County could only be a benefited area under the doctrine of hocus-pocus or some such doctine.

Continuing on my prepared statement, under the proposed program the State would, in addition to the Chimney Rock Project, construct the Point View Reservoir. That is commonly known as Pancake Hallow. Point View cannot be developed without using the pumping and purification facilities owned by this Commission. Any attempt by the State to develop this project would be taking control

the waters of the Passaic River at Little Falls and would actually confiscate the vested rights in the River which are owned by the cities of Paterson, Passaic and Clifton. Under the proposed legislation, the Passaic Valley Water Commission would be charged for the water it took from the Reservoir and in addition the people of Passaic County would be subjected to an additional property tax to cover the financing of this project, the Chimney Rock development, and the expansion of the City of Jersey City and City of Newark water systems.

Now, turning to page 7 of 595, 10 (a) provides that this duly created authority shall have the power to acquire -- and they can only acquire by condemnation, unless they do it be contract -- for public use, upon payment of just compensation, the surplus water in any public or private system and the unused watershed rights of any such system when needed to prevent regional shortages. Is that condemnation, not of a reservoir, but of water rights and franchises? In other words, gentlemen, they can take over our surplus water and pay us what they think is fair. We have over the years operated our system to provide for emergencies and for the future. Now, they say if we keep a surplus for protection of our cities and our municipal customers and industrial customers, they have a right to that surplus water. What kind of a dictatorship is worse than that? They then say they can acquire the unused watershed rights of the Passaic Valley, of Newark, of Jersey City. Passaic Valley has used as much as 108 million gallons per day and as low as 75 million gallons per day. What is surplus? What are

the unused watershed rights? They don't spell them out.

This dictatorial, one-man authority -- and I would show you that it is a one-man authority -- can determine and say we have no appeal from this decision - that is final. We have purchased water rights that are valued at $300,000. We have, because of this, brought industry to North Jersey by assuring them that we have good water and cheap rates. Their investigation brought them to North Jersey and we are striving to continue to bring new industries to North Jersey and to the State. Now, the State wants to change all that and take our surplus water so that we cannot guarantee water at cheap rates to induce industry to come.

Now on page 8, the next page, of 395, line 34 --

ASSEMBLYMAN STEPACOFF: You mean 595.

MR. SPITZ: Yes. -- the bill states, the three words, "The State of New Jersey shall own all reservoirs, works and facilities financed by the State, and the division shall control the disposition of the additional dependable yield of a water supply system attributable to such project, and shall be entitled to the use, at reasonable compensation to be fixed by the board, of all facilities of the system," such as the transmission, distribution system, filtration plants, etc. Now, going back again, you will note that they will own their own reservoirs which they built, which is all right. But they shall control the disposition of our additional dependable yield of water supply, without compensation. But they go on to say they will use our facilities and pay us a reasonable compensation for that, but not pay us for our water, which we don't want them to use anyway.

Now, under this section, they will construct a reservoir. Gentlemen, you must visualize this, because this reservoir is not on a river. This Point View Reservoir they talk about is inland, so that they will have to take our own water for which we have paid hundreds of thousands of dollars for franchise rights, and sell it, without paying us any compensation. That is confiscation. I don't know what Jersey City or Newark will do, but I assure you gentlemen that we will fight this graft all the way to the United States Supreme Court.

Let me explain Point View Reservoir again. This authority will take over our water, use our filter plant, use our water system to pump our water, our water, into their reservoir. Then, when needed, they will use our system to pump the water back to the filtration plant to be treated with our facilities, and then they will use our distribution system to distribute the water. That is the fact. When this is done, they go on to say, the Passaic Valley will receive special benefits and will be given the privilege of paying special taxes, regular taxes, State taxes, for the cost of Point View.

Now, continuing on with the prepared statement, under the proposed water system at Chimney Rock, our system would not obtain any waters therefrom. In fact, the development of the State system at Chimney Rock, would undoubtedly be the source of supply for communities which are now served by Passaic Valley Water Commissipn or North Jersey District Water Supply Commission would be deprived of large revenues and, consequently, Passaic County would not receive special benefits. Furthermore, if Point View were

structed by the State, any additional water resulting from such development would not inure to the benefit of Passaic County but would be used exclusively by communities outside the county.

The bills would put the State in the water supply business and into competition with existing owners of water supply works. The powers conveyed to the proposed New Jersey Water Supply Board are so broad and dictatorial that it would develop a water dictatorship in the State of New Jersey and would eventually lead to the State taking over the existing publicly and privately owned water supplies.

I would like to go into the question of condemnation as set forth in the bills. An analysis of both bills reveals a well-devised plan to absorb all existing water supply systems. The enacting parts of the bills deviate completely from the laudable purpose expressed in the initial findings. These findings express the desire to implement and integrate water supplies in order to meet present and future needs of the people of the State without, however, absorbing any existing public or private water supply systems. However, the enacting parts of the bills expressly provide for the taking over and acquiring such systems by condemnation, and I want to refer to those sections that give them permission to do that.

In 595, on page 4, line 19, at the top of the page, under the question of costs - "and all other expenses as may be necessary or incident to the financing" and acquisition. Now the only way, as I say, you can acquire is by contract or condemnation, so they have the right to acquire a water supply system.

On page 5, line 54, about 7 lines from the top, they interpret the meaning of the phrase "water supply system." They

y that a water supply system means and refers to the real property and the plants, structures, machinery and equipment and other property, real, personal and mixed, acquired, constructed or operated, or to be acquired. Now, using the word "real property" ordinarily would leave us out, but look at the top of that same page, page 5, where it gives the definition of "real property." Real property includes water, riparian and other rights. And that is all we own - water franchises and riparian rights, because without that our system wouldn't be useable.

If you will turn for a minute to Senate Number 372, page 5, line 4, you will find, "Such system shall be acquired" -- again acquired can only be done by contract or condemnation -- "constructed, operated and maintained by the board on behalf of the State and shall include a reservoir in the vicinity of the place known as Chimney Rock in the county of Somerset and other reservoirs, works and facilities to increase the dependable yield of existing water supply systems. The board shall not undertake such an increase in the dependable yield of an existing system unless it shall first give the system notice and an opportunity to be heard." That is all we get, gentlemen. They say they are going to take over the dependable yield of our system. They send us a notice; we come down and we are heard. What they do is up to them. We can't control it. They can take it.

Turning now back to Bill 595, page 11, Section 17, "Whenever the power of condemnation is exercised by the Division of Water Policy and Supply pursuant to this act, the provisions of chapter 1 of Title 20 (the Eminent Domain Act) of the Revised Statutes, as

ended and supplemented, shall be applicable and such power shall include the condemnation of public as well as privately owned property." That was put in there for a purpose.

May I ask you to go back to page 6, again please. I went over this before when I discussed Point View. But on line 3, Section 8, again they say such system shall be acquired and shall include a reservoir in the vicinity of the place known as Chimney Rock, and other reservoirs, works and facilities to increase the dependable yield of existing water supply systems.

Now, page 7, Section 11 -- As I discussed before, and I won't reiterate but just pass over it, the word "real property" also means franchise rights and they have the right to acquire real property. Then Section 11 gives them the right to "acquire, construct, operate and finance dams, reservoirs, works and facilities to increase the dependable yield of any existing public water supply system not owned by the State."

Just one more reference. There are others here, but they are too numerous. I would like you to look at just one more. That is on page 8, line 32: "During such time as any such project shall be part of the New Jersey Water Supply System, except as may otherwise be provided by contract as above authorized, the State of New Jersey shall own all reservoirs, works and facilities financed by the State, and the division shall control the disposition of the additional dependable yield of a water supply system attributable to such project, and shall be entitled to the use, at reasonable compensation to be fixed by the board, of all facilities of the system

nd any and all appurtenance thereto, necessary, useful or convenient or the collection, storage, treatment, transmission, distribution, ale or exchange of the additional water provided by such project." I mentioned this when I spoke of Point View, as to how they were going to get the water from Point View to their customers by using the facilities of the Passaic Valley Water Commission.

Our water rights and franchises are all involved in these acquiring clauses of both these bills and there are many inconsistencies on the subject of condemnation.

Now, the long and valued experience of the State Water Policy and Supply Council, gentlemen, in the vital matter of water supply is eliminated by Section 15 (b). This indeed is an aggrievable blow to the existing water supply systems. Instead, we have by these bills supplanted a tried and experienced public body with a new and inexperienced one. The right of review by the State Water Policy and Supply Council of any plan, project or work, is now completely eliminated.

Another innovation - Section 16 gives the same powers and authority of said Division to one person, the Commissioner of Conservation and Economic Development. This great grant of power in such a vital matter to one individual is both unwise and dangerous. The manifold problems of any water supply system, existing or new, are too numerous and complicated for any one person. It resembles too closely a dictatorship.

I want to discuss taxes for a minute. Then I am through. The Board under this bill will have power to tax and again to tax. The bill directs that whatever monies -- that is from the sale of

ter, and that can't be much because it is admitted that the present water supply systems are sufficient most of the days of the year. This new proposed system can secure funds from the sale of water only certain days of the year. Now then, after paying salaries and everything else mentioned on page 4 (e) of the bond bill -- I'd like to enumerate them. All these operating expenses must first be paid. "'Operating expenses' means, in addition to the usual meanings thereof, all costs and expenses of operating, maintaining, managing, repairing and reconstructing a water supply system and each and every part thereof including, without limiting the generality of the foregoing, administrative expenses, premiums on insurance, including use and occupancy insurance and casualty insurance, costs of collection of any revenues, legal and engineering expenses, payments to pension, retirement, health and hospitalization funds, expenses, liabilities and compensation of fiduciaries, and any other expenses required to be paid for or with respect to proper operation or maintenance of such water supply system." Now then, after paying these salaries for labor, engineers, lawyers, etc., I ask you how much money net will be applied from the sale of water? Not much, I assure you. So then come the taxes, first, so-called special benefit taxes from Bergen, Essex, Hudson, Middlesex, Passaic, Somerset and Union, and I predict they will pay the lion's share of this scheme. Second, what is left will be taxes throughout the State, directly by this authority, not exceeding two mills on the dollar on taxable property in Bergen, Essex, Hudson, Middlesex, Passaic, Somerset and Union, and in other

unties of the State. Third, if they need more, and they will, the State through the Comptroller, because they are on the bond, will direct the Counties of Bergen, Essex, Hudson, Middlesex, Passaic, Somerset and Union to again tax, together with other Counties of the State, and send the tax money of the State to the State because the State issued those bonds. You can check the method of taxation and the fact that there are three, not two taxes, by reading pages 11 through 13 of the Bond Bill.

Now, isn't that a bright future in these days of high taxes, gentlemen? All this for what the municipalities that need water can build reservoirs and pay for themselves and the State will not have to tax or pay for anything. I suppose Mr. Wilensky has more knowledge of this and will undoubtedly explain it in detail. The method used in these bills dealing with taxation is plainly an anomaly in our law since no water from either Chimney Rock or Point View will be consumed in Passaic County. The intricate method for taxing Passaic County is wholly untenable, unconscionable, and unconstitutional.

Now I want to read the conclusion of my prepared statement. Recognizing the necessity of a new major water supply development for the Northeastern Metropolitan District of New Jersey and perhaps the expansion of existing supplies, and further recognizing that to oppose a plan without offering a more feasible alternative, is not being either constructive or helpful, we respectfully recommend the following proposals:

1. That Senate Bill No. 372 and Assembly Bill No. 595 be withdrawn from further consideration on the grounds that the plan proposed is unrealistic in that it cannot be integrated with all

the existing supplies in the Northeastern section of the State because of its State ownership aspects; that it would be uneconomical in operation because the control and management would be further removed from the ultimate consumer, and for the further reasons as heretofore set forth in this statement.

2. The enactment of Senate Bill No. 241, known as the Shershin-Anton-Hand Bill, would establish a Municipal Water Supply Loan Fund from which the State could loan monies to those municipalities desiring to purchase an interest in a new major water supply, which would be jointly owned by the participating municipalities. It would also provide funds to expand existing municipally-owned facilities. This bill would provide the financial assistance which may be necessary to accomplish the purposes set forth in Senate Bill No. 372 and Assembly Bill No. 595 without the State imposing any new and additional taxes.

The adoption of the aforesaid proposals would clear the way for the 8 municipalities, who already have applied for a grant to the Water Policy and Supply Council for the development of the Round Valley Water Supply Project, to proceed, in accordance with the existing statutes, with that program. Several hearings have been held on this application, which was filed by the North Jersey District Water Supply Commission in behalf of these municipalities.

This method of developing water supply has been successful in the past. This is the way Wanaque Dam, the biggest dam in the State, was constructed, because of the foresight of Mayor Raymond of Newark who saw into the future. He gathered around him municipalities who invested money to build this great, big project. The

municipalities put up the money. They built the project. It is operating successfully and is a great asset to Northeastern New Jersey and to the State. Why can't we do it the same way now? There is no reason why it should not be successful in the future and it would be unnecessary for the State to embark upon an unprecedented adventure, entering into the water business. Thank you.

SENATOR SUMMERILL: Just a minute, Mr. Spitz. Do you think it is possible for the municipalities to do this job without State help, at least along the financial line?

MR. SPITZ: I do, yes, sir. I forgot to mention this: Eight municipalities have put up $25,000 already for plans and a survey of this Round Valley Project. They are having hearings before the State Water Policy now once a month. That is all they get. They want to get it in a hurry - to build it themselves, these eight municipalities. I will tell you what municipalities they are, if you would like to have it. They are Newark, Elizabeth, Hillside, Glen Ridge, Bloomfield, Kearney, Cedar Grove and Bayonne.

SENATOR SUMMERILL: Isn't it a fact, Mr. Spitz, that from about the last thirty years on, these municipalities have just sat still and done nothing toward this proposition and when the people got so short of water in the last few years that they demanded action and the Governor and the Legislature have become aware of this, they started to get activity? Haven't they fallen down for the last thirty years?

MR. SPITZ: Well, I know that North Jersey hasn't fallen down because we have just built a tremendous addition to our plant, the Ramapo Project. That was only three years ago. And before this

bill was put in, Senator, they asked for this and they put up this money long before this bill was in, before the State thought of going into the water business.

SENATOR SUMMERILL: There hasn't been any expansion of those projects in this Northeastern District in the last twenty-five years, at least, of any amount, has there?

MR. SPITZ: Three years ago the Passaic Valley Water Supply put up five million and others put in similar and larger amounts and we constructed the Ramapo Project. That was only three years ago.

SENATOR SUMMERILL: But that isn't near sufficient to cover the whole situation there. As I recall in 1931, Governor Moore called a special session of this Legislature to consider those things and you were on notice then, and since 1931 down to three or four years ago, there had been nothing done in the whole Northeastern District.

MR. SPITZ: Except what I told you.

SENATOR SUMMERILL: Except that.

MR. SPITZ: And the Passaic Valley Water Commission has sufficient water I know since that time and still has sufficient water to take care of Passaic County and our customers for twenty-five years more, Senator, and whether or not they did it before, I don't think is a proper argument as to why they should not be allowed to do it now. They did it before the Legislature introduced these bills. They did it over a year ago. They started to raise money to get plans and surveys for this new project.

SENATOR SUMMERILL: You do feel that the municipalities could take care of this situation now that they are aware of it. And do you think they could finance it without State help?

MR. SPITZ: I certainly do. I think most of them can. Some of them may need a little help. I can't speak for other municipalities. They have put in their money and shown their good faith by starting.

SENATOR SUMMERILL: The so-called Shershin and other bills provide for State financing.

MR. SPITZ: Just the one bill, the Shershin Bill.

SENATOR SUMMERILL: All the other bills that were introduced provide for large bond issues.

MR. SPITZ: Elizabeth and Newark certainly can finance.

SENATOR SUMMERILL: Can or can't?

MR. SPITZ: Newark and Elizabeth can. They are two of the eight. Maybe one or two of the little ones can't and maybe one or two of the municipalities will help them out, and maybe it would be better for the State to have a small bond issue and loan them money and have the municipalities own them rather than have the State go into the business. They will get interest on their money, which is as it should be, and the municipalities will own it.

SENATOR SUMMERILL: Any other questions?

ASSEMBLYMAN STEPACOFF: Mr. Spitz, is it your contention then that Passaic would receive no special benefit from this legislation?

MR. SPITZ: Absolutely.

ASSEMBLYMAN STEPACOFF: You say it is totally unnecessary

far as your county is concerned?

MR. SPITZ: Absolutely unnecessary. We have enough to supply Passaic County now and for many, many years in the future.

ASSEMBLYMAN STEPACOFF: Now, according to this report, I understand that the existing system of the Passaic Valley Water Commission has a dependable yield of 35 million gallons per day?

MR. SPITZ: Yes, sir.

ASSEMBLYMAN STEPACOFF: Now, you said at the outset of your testimony that you had plans for increasing your supply?

MR. SPITZ: If and when we find it necessary, yes, sir.

ASSEMBLYMAN STEPACOFF: Well, do you have plans in the making or is it in the future?

MR. SPITZ: No, we have it in mind. We don't think it is necessary to start it now, but we have one.

ASSEMBLYMAN STEPACOFF: I see. Now, to what point would you increase your supply from your 35 million gallons per day?

MR. SPITZ: That is a dependable yield, sir. If you will bear with me a minute, I'd like to explain what dependable yield is, as I understand it.

ASSEMBLYMAN STEPACOFF: I believe we understand what it is. But the question I have directed to you is this: How far do you intend to expand your system, to what gallonage per day?

MR. SPITZ: We now have the right to take 75 million gallons from the River, in addition to the 41 million gallons we take from the Wanaque Dam.

ASSEMBLYMAN STEPACOFF: In other words, all your needs could be

...iced from the Ramapo?

MR. SPITZ: From the Passaic River and the Wanaque River.

ASSEMBLYMAN STEPACOFF: You don't have to look to the Raritan ...ter? You have adequate supplies?

MR. SPITZ: Plenty.

ASSEMBLYMAN STEPACOFF: The only question is to augment ...your facilities?

MR. SPITZ: That's right, sir.

ASSEMBLYMAN STEPACOFF: During the course of your testimony, I was intrigued with your statement there are two methods of the State obtaining systems, by condemnation or contract. Is that correct?

MR. SPITZ: Yes.

ASSEMBLYMAN STEPACOFF: Have you given any thought to the statement on page 8 of Assembly 595?

MR. SPITZ: 595?

ASSEMBLYMAN STEPACOFF: Yes, line 27. "In the event that such contract is not executed as herein authorized, the owner of the supply system shall have the right to purchase the project at any time in the future, upon such reasonable terms and conditions as the division, with the approval of the board, shall establish at the time of the purchase." Wouldn't that be a wonderful thing for Passaic or any other city if they could get a deal like that?

MR. SPITZ: No.

ASSEMBLYMAN STEPACOFF: Why not?

MR. SPITZ: In the first place, we have millions of dollars worth of property and rights and we certainly wouldn't want, and you as a business man wouldn't want, to come before a Board and have

...em say upon what terms and conditions you can have it. I think ...hat the State wants to be in the water business and I think some ...f the legislators have said so, and the way for the State to be in ...he water business is to gradually absorb all of the public and private water companies in the State; and with this provision that we have a right to buy it upon such terms and conditions that they want us to buy it, I wouldn't feel very safe.

ASSEMBLYMAN STEPACOFF: Under this setup, the State would not be taking this project by eminent domain, would it?

MR. SPITZ: Yes they would, because, Assemblyman, this reservoir they are building doesn't mean a thing. They can't use it. It is of no use to them.

ASSEMBLYMAN STEPACOFF: We are talking about different things. This particular provision applies to any project which the State might feel is necessary to increase the supply. So they go to your company, for example, the Passaic Valley Water Commission, and they say, under the terms of the bill we will give you twenty days' notice that we want you to put up this type of a project, and if you can't come in inside of the time notice and give a plan of procedure, the State has a right if they can't make a contract with you for the purchase of the installation they intend to make, to immediately build the project without any eminent domain or without a contract. Follow me there?

MR. SPITZ: I do, sir.

ASSEMBLYMAN STEPACOFF: All right. Why wouldn't it be a wonderful thing for a town like Passaic to permit the State to build the project and then compel the State to sell it to the city? Wouldn't that be grand for the City?

MR. SPITZ: No.

ASSEMBLYMAN STEPACOFF: Why not?

MR. SPITZ: The bills provide for a method of expanding the Passaic Valley Water Commission. It says it will do it by constructing Point View.

ASSEMBLYMAN STEPACOFF: Mr. Spitz, the point I am directing you to is this: I am not talking about the Passaic Valley Water Commission; I am talking about any water project. It says whenever the Division shall propose a project and if you haven't got the financial means or the proper plan of procedure within the twenty days they give you, the State proceeds to do it. Then, the State has got to sell it back to you at a reasonable price. You can hold off the State and use your other existing supplies. You can knock that project down and pick it up for a song, couldn't you?

MR. SPITZ: I don't know whether you could or not.

ASSEMBLYMAN STEPACOFF: Isn't it quite obvious?

MR. SPITZ: I don't know.

ASSEMBLYMAN STEPACOFF: Don't you feel that would be one of the bad features of this particular bill?

MR. SPITZ: Except this, all this time we are being taxed, and I don't like the idea of being taxed and taxed for something we don't want and don't need. If we want to build it, we can do it.

SENATOR SUMMERILL: The next person I am going to call on is Mr. McCarthy of Tippetts-Abbett-McCarthy-Stratton. Mr. McCarthy is leaving for Europe tomorrow so I am going to give him a chance to answer some questions before the other water companies speak, and likewise put some things into the record in answer to other

itnesses. Mr. McCarthy.

MR. GERALD T. MC CARTHY: Mr. Chairman, I would like to be permitted to answer at this time a statement made last Friday afternoon, August 19, by Dr. Leet, a professional geologist, who, by his own admission knows nothing about hydrology. As I understand, one of his statements was that for the Chimney Rock Project in seven years, between 1930 and the present, a yield of 200 million gallons per day could not be delivered with the pumping capacity proposed. The second statement was that 25 percent reserve would be depleted one year out of three.

Now I would like to give you the facts. We analyzed the continuous record from 1922 through 1952, a period of three months over thirty-one years. Of that period, from 1922 to 1945, 96% of the drainage area was covered by the records. From 1945 to 1952, 100% of the drainage area was covered. Now, during those 31 years, the reservoir would have stayed above a point of 70% capacity in all but parts of 10 years. Those years are: 1923, 1930, 1931, 1932, 1936, 1939, 1941, 1944, 1946 and 1949. During those particular years, a total of 41 months or 11% of the total period of investigation, there would have been draw down below the 70% of capacity point. Now, bear in mind that during the other 89%, the reservoir would never get drawn down farther than 15 feet from the top of the pool. During those 41 months, bearing in mind that the total capacity of the reservoir is 32.4 billion gallons, the amount used could have been, without repeating these same years, for 1923, 18.9 billion gallons. And then for each of the other 9 years given, it would have been: 19.5 billion, 18.7 billion, 19.5 billion,

5 billion, 16.9 billion, 16.4 billion, 11.2 billion, 11.0 billion nd 25.0 billion. That last figure of 25 billion in 1949 was the ritical one. That uses substantially 75% of the capacity of the eservoir and leaves 25% in reserve.

Now, further, the Chimney Rock Project could be operated for 200 million-gallons-per-day supply 95% of the time and 180 million gallons the remaining 5% of the time dependent on the reservoir rule curve methods of operation. That would have raised the full pool at approximately 2 feet. Now, we took in our estimates a reserve of 20 feet from full pool to land-taking line. In final design, you could even step the capacity of the project from the Raritan alone up by 20 million gallons a day 95% of the time with a two-foot rise of the pool. Another foot or a total of three feet would produce 200 million gallons from the Raritan alone, without tapping the Delaware and Raritan Canal for the same project.

Now, these data fully substantiate the statements made in our report and I must say again for the record that I object to having a professional geologist from a reputable educational institution talking about something that apparently he knows nothing about.

Now I notice a series of questions to be addressed to me by the North Jersey District Water Supply Commission, which I should be glad to answer in the course of their presentation. I note that the questions very strangely omitted the $64 question which I phrased here and I think should be asked and answered: How can the differenc between the North Jersey District Water Supply Commission and the Tippetts-Abbett-McCarthy-Stratton cost estimates on the Round Valley

oject be explained? If I might be permitted to answer that estion first, our total cost estimate for the 200-million-gallon-er-day Round Valley Project was $143,630,000. I note from this presentation by the North Jersey District Water Supply Commission that their cost estimate for that project is $84,678,915. Now, comparing the figures item by item, there is a difference of about $2,900,000 between our estimate of the first stage project of 70 million gallons per day and the North Jersey estimate. They estimated $57,100,000; we estimated $59,900,000. Those estimates are, item by item, quite closely comparable, and they contemplate taking water from the Raritan, storing it in Round Valley, filtering it and transmitting it to the Northeastern New Jersey Metropolitan area.

Now, in expanding that project from a 70 million gallons scheme to a 200 million gallons scheme, we find many items of our estimate are quite closely the same as those of the North Jersey District Water Supply Commission estimate. For example, taking first this $2,900,000 difference in first stage, we find that we have only $300,000, roughly, additional estimated for real estate, second stage, beyond their estimate. We find that there is no substantial difference in reservoir construction cost. We find that for the pumping station and force main from Frenchtown on the Delaware to Round Valley, we have about $2,000,000 more, and we find for head works, including treatment plant and booster pumping station, about $2,700,000. Those estimates are all quite comparable.

But then when you come to the problem of transmitting the water from Round Valley in the second stage from the reservoir

the Northeast Jersey Metropolitan Area, we have an estimated additional cost of $46,900,000 where the North Jersey estimate shows an additional cost of $5,800,000. Now of that -- and we note that it is to be for the balancing reservoir and transmission main -- our incremental cost of balancing reservoir is $3,900,000, so that would leave, to convey 130 million gallons per day from Round Valley to wherever you could use it, in the North Jersey estimate $1,900,000 for transmission compared to our estimate of $43,000,000.

You transmit water just about on a cost per million gallons. The 70 million gallon project requires one large transmission main. When you increase that to 200 million gallons per day, you need three. You need two more, and you save very little per main on the construction of the next two because you have built the first. You have got to get in and do it. You have got to expand it all over again.

Now we were told at one session by a representative of the North Jersey District Water Supply Commission that the reason for this difference was that North Jersey estimated a tremendous industrial and population increase in the Bound Brook-Somerville area where this water could be consumed. Well, even to transmit Round Valley water to Bound Brook, the additional would cost $18,000,000 and our $43,000,000 estimate has $25,000,000 to transmit it from Bound Brook on into the various points of need in the Metropolitan Area.

Now we estimated Round Valley and Chimney Rock on comparable bases. The transmission main estimates come from the same unit

ices, the same type of construction. Each one is hand-tailored to its own particular scheme, but the transmission mains, this main point of difference, are common from Bound Brook on in. Now, if it were true that in the Bound Brook area the water demand in the future increased to the point that it could use all of the increased supply from either Round Valley or Chimney Rock, then you would have to make the same adjustments downward in each estimate. We made such an estimate after we learned of that assumption and we found that if that were true, your cost of the 200 million gallon per day Round Valley Project would be $115,730,000 and of the Chimney Rock Project, $71,150,000. The two projects would then be comparable. Your difference of something over $40,000,000 remains.

Now, approaching this problem as professional engineers without any axe to grind for or against anybody, we have a responsibility to the State of New Jersey of doing an honest job to give you the best recommendations possible for a dependable water supply for the entire State at the lowest cost, stage by stage. If we had not been confident that our recommendations for the first stage development are the soundest ones, we would not have made them. No pressure of time could have forced us to do that. We satisfied ourselves before our July 15th report. Since then we have continued on our studies toward the December 15th report. Many of the things that we were satisfied with at that time, but had not documented in detail in the July 15th report, are substantially ready for documentation today. And, step by step, those will be supplied to the Legislative Committee on Water Supply by memoranda and available for release to interested parties.

One other point on the Round Valley estimate, we note that the North Jersey District Water Supply Commission has not included the cost of a compensating reservoir on some New Jersey tributary of the Delaware. That must be built in order to take 130 million gallons per day from the Delaware River. We had estimated that at a minimum cost of $2,000,000. That would have to be built on the Musconetcong, the Paulins Kill, the Flat Brook or one of the other Delaware tributaries of New Jersey.

Now, further, we note this item, probable increase in cost of Chimney Rock Project, according to the North Jersey District Water Commission, for a compensating reservoir. They had estimated $4,000,000. Well, a compensating reservoir to keep the flow in the Raritan from falling below 130 million gallons per day will cost between four and one-half and five million dollars, depending on the site. That is a desirable feature for conservation. We don't feel that it is a part of a first-stage water supply project, but if it is desirable for Chimney Rock, it is equally desirable for the Round Valley scheme.

The other point in this comparative estimate is a causeway. North Jersey has an estimated $1,500,000 for a causeway across Chimney Rock Reservoir. We have made an estimate for such a structure. It would be 3,420 feet in length. It would have a two-lane, thirty-foot wide highway on the top of the fill. Our estimated cost for this causeway and its southerly approach is something under a million dollars. We estimated $900,000; it might cost a million. It would eliminate about $300,000 of highway relocation we had included in our report estimates. So that if it is decided by the government

as this project is carried ahead that a causeway should be built, the additional cost of the project will be about $700,000.

Do I take it, Mr. Chairman, that these questions will be asked of me by the North Jersey District Water Supply Commission or should I read them and then comment on them?

SENATOR SUMMERILL: I would suggest that you read them now and comment on them if you care to.

MR. MC CARTHY: All right. The first question: Is the capacity of the Round Valley Reservoir site at least 50% greater than the proposed Chimney Rock Reservoir site? The capacity of the Round Valley site is 50 billion gallons, as shown in the report. The capacity at Chimney Rock is 32.4 billion gallons. Both have been carried through the same hydrologic studies to produce the required regulated flow and both serve the same function. The farther down a river you go, the less storage it takes to regulate the flow. The 32.4 billion gallons in Chimney Rock produces, with the 25% reserve, the regulated flow as stated in our report. The North Jersey District Water Supply Commission had made similar studies for Round Valley. The detailed flow routings were not available to us, but as a matter of procedure we would have made our own estimates anyway. We made the same detailed mass hydrograph analysis for Round Valley as we did for Chimney Rock and we verified the need for 50 million gallons in Round Valley.

Will the development of Chimney Rock from sources in the Raritan River at or near Bound Brook limit the ability of the Elizabethtown Water Company to expand its present yield obtained from the Raritan? The development of Chimney Rock, taking 180, or

possibly in any final design 200 million gallons regulated flow from the Raritan, takes about 30% of the long-term yield of the Raritan. The long-term yield of the stream is about 750 million gallons per day. Over drought periods and the ensuing high water periods, there is a shorter term yield of 600 million gallons per day. Now, as we see the Raritan problem, either leaving a base flow of 130 million gallons per day and below there untouched or regulating that by storage to provide a constant flow, and then adding 180 million gallons in the two stages of Chimney Rock, you utilize 310 million gallons per day from the Raritan.

Now we feel that there is from 140 to about 170 million gallons per day of additional development that could be made on the Raritan. The relationship of storage to regulated flow breaks rather sharply at around 450 to 470 million gallons per day. Now on our continuing studies on the Raritan, we are planning for stages beyond 1980 the development of on-river sites of the type such as the Elizabethtown Water Company has been considering for the regulation of this additional 140 to 170 million gallons per day of water supply. This could be developed by a public authority or it could be developed by a private company with the proper approval.

The third question: Does the Chimney Rock proposal offer any economic or feasible plan for its expansion beyond 200 million gallons per day, which includes 20 million gallons from the Delaware and Raritan Canal? Well, I think I just answered that, that the Chimney Rock is a Raritan project and that the Raritan can be developed for about 140 to 170 million gallons per day additional.

Fourth: Does the Round Valley site assume important local

significance if the indications pointed to a large industrial and urban expansion in Somerset County? If that expansion is in the western part of the county and if it is great enough to absorb a demand of the size that Round Valley is best suited for, I would say that Round Valley would assume important local significance.

Fifth: Do you consider that if the Legislature or other agencies of the State determine to eliminate Chimney Rock as a reservoir site, the Round Valley Reservoir would supply water at a reasonable cost? If that were the only alternative you could go to, it would certainly be worthwhile. There is no question about the need for the water. If Chimney Rock weren't available, Round Valley would be considered. However, I think before Round Valley would be developed, that a number of the on-river reservoirs would be developed because we think they are next in line in economic priority to Chimney Rock.

What is the average depth of the Chimney Rock proposed reservoir as compared to the Round Valley Reservoir? Approximately what percentage of difference is there between the two in that regard? The maximum depth of Chimney Rock is 160 feet, of Round Valley, 150 feet. The average depths would be around two-thirds of the maximum depths, around 107 and 100. They are both good reservoirs for storage characteristics. They both have good depth characteristics. That is one handicap of the largest of the potential sites on the Raritan for on-river development. Their depth-storage characteristics are poor.

Seven: If one causeway is to replace eight roads which presently cross this seven-mile long reservoir site, (a) what would be the approximate length of the causeway? 3400 feet. (b) What would be the approximate width and number of lanes? We think

two-lane highway, with a 30-foot top width is all that could possibly be justified. It would stand out as the one straight and properly graded raceway in the entire hill area there.

What would be the approximate cost of such a causeway? Slightly under one million dollars.

Where was this preliminary information as to cost obtained? From our own estimates.

Would not two or more causeways be more equitable and fair to the people of Somerset County and the State? We feel that at the most one causeway across the center of the reservoir would suitably accommodate the traffic in addition to the relocation of roads around the end. The other potential causeway sites are fairly close to the extremities of the reservoir. There would be little gained by cutting straight across instead of diverting around. In one case on the eastern side - that is in Warren - we feel that the road could be relocated on a fill in that area that in effect is a causeway, but it would cut across the upper end of the reservoir.

Eight: Were the Legislative Committee engineers aware at the time of the preparation of their preliminary report of the application filed on January 21, 1955, and of the hearings in progress before the Water Policy and Supply Council for the development of Round Valley on behalf of eight municipalities who desired the opportunity to make the first-stage development of the Round Valley Project at their own cost and expense? Yes, we understood this application had been filed.

Nine: Did the Legislative Committee engineers obtain their information with respect to the enlargement of the existing

systems of the City of Newark, the City of Jersey City and the Passaic Valley Water Commission from those agencies as plans which they had prepared for the expansion of their respective systems? Were not the estimates as to costs obtained from them? Well, taking them one by one, for the City of Newark, we checked their fairly recent study for the expansion of their system, prepared by a reputable firm of consulting engineers, and found we were very closely in agreement with them. With the City of Jersey City, we prepared our own estimates for the expansion. For the Passaic Valley Water Commission, we reviewed the report of their consulting engineers and in our judgment we increased the yield of the stream, and in so doing, we revised and made our own cost estimates for the structures and increased the cost to take care of the increased yield.

Ten: What consideration was given to additional waters from the Ramapo River? I'd like Mr. Lieberman, our Project Engineer on this work, to point out our thoughts on the Ramapo.

MR. LIEBERMAN: Well, we feel that the Ramapo River is a question for the Water Policy Council to decide. We understand that no further diversions will be permitted and we don't feel that we are in a position to usurp their authority, and we have not given consideration for further use of that water at the present time.

MR. MC CARTHY: Eleven: Referring to the cost per million gallons referred to on 5-10 of the engineering report, what amount per million gallons over and above principal and interest charges was calculated in arriving at these prices? What water supply

stems, if any, did the engineers consult in arriving at this operating cost per million gallons? Will you take that over, Mr. Lieberman?

MR. LIEBERMAN: Well, to answer the second part first, we relied entirely upon our own resources which included a number of consultants in this field outside of our own staff to obtain operating figures that we feel were entirely proper and applicable to these projects. In doing so, we obtained these figures for the 70 million gallon Round Valley scheme: We had operating costs per million gallons which included personnel, power and maintenance, and no other charges, of $23 per million gallons. For the Chimney Rock scheme on the 70 million gallons, the cost came to $23.50. For Round Valley 200 million gallon scheme, the cost per million gallons for personnel, power and maintenance is $16.50 per million gallons. At Chimney Rock, its $15.75 per million gallons.

MR. MC CARTHY: Well, is it now a fact that the Chimney Rock or Round Valley Development represents an adjunct to present existing systems which would be fully integrated with the present principal systems in Northeastern Metropolitan New Jersey? Well, that is the intention of the Chimney Rock Project to serve as a wholesaler to the area, and I would believe that that was also the intention for the Round Valley Project.

Thirteen: Is it not true that in all metropolitan areas in the United States where water demands are contiguous that metropolitan or district boards have made such developments rather than a state board which would be involved with many other regions or areas? Is there any state that has engaged directly in the

er business to the extent proposed in this report? The general velopment has been by metropolitan district boards or authorities, rivate company development and some larger regional development. I think each problem is an individual one. I don't believe any state has gotten so far behind on advanced water provisions and planning as the State of New Jersey. I think the demand here is more critical in terms of population and population density and in terms of reserve that are normally kept in large integrated water supply systems than anywhere else in the nation. There is no state engaged directly in the water business to the extent proposed in our report. However, I think the trend will be there in a number of areas where water is getting to be a more critical problem and Jersey may well lead the way in this trend. I think clearly the problem in the metropolitan area has grown beyond what any one district organization can properly handle as evidenced by the history of the last twenty years.

That concludes the questions on this prepared list.

THE CHAIRMAN: Mr. McCarthy, do you know of any state which has loaned any district board or other board substantial sums of money to go ahead with a water project?

MR. MC CARTHY: I can't recall offhand, but again I have not made any extensive research into that and I would not --

THE CHAIRMAN: I have a question here by Fred Blackburn of Martinsville. The Chimney Rock plan proposed by the Legislative Commission has no flood control provision. What is your opinion of a long-range water program with no collateral flood control benefits? Do you care to answer that?

MR. MC CARTHY: Flood control and water supply normally

erate on opposite ends of any reservoir operation schedule. In ater supply you like to keep your reservoir full awaiting any drought. For flood control, you keep it empty awaiting any flood. Now occasionally you get some incidental flood control benefit from a non-river water supply project. However, you can also get from a non-river dam increased floods. If your reservoir is full and the flood sluices down over the reservoir down over the valley, it will travel faster than it would in the open river and quite frequently the storage as the water mounts on the spillway in the reservoir is less than the natural storage in the valley as it rises on its inclined slope. Therefore, full reservoirs can increase floods rather than decrease them.

THE CHAIRMAN: Here is another question: In view of the flood conditions which have done millions of dollars worth of damage and taken many lives in the past few days, would it not from an engineering point of view be possible and worthwhile to coordinate the problem of flood control with the requirement of solving New Jersey's water problem?

MR. MC CARTHY: I think the only place where you have any substantial possibility within New Jersey is on the Raritan River. We found in our studies of the Raritan that for complete regulation of the Raritan you need about 68 to 70 billion gallons of storage. That is about 7.3 billion gallons for a first compensating reservoir, 32.4 for Chimney Rock type of development, and beyond that you need about 25 to 30 billion gallons to develop that additional 140 million gallons per day. To get that 25 billion gallons on the main stream and its tributaries, and to

ill provide reserve above that in reservoirs for flood control et aside and definitely for that purpose would get into some very difficult real estate and relocation problems. It's even a very difficult problem, looking ahead, to develop the 25 to 30 billion gallons for further full development of the Raritan. Every site you take involves relocations and acquisition of home sites. That goes up 50, 100, 200, 300 sites in each one of them.

THE CHAIRMAN: Now Mr. Seiffert the other day spoke of the possibility of damming the Raritan below New Brunswick as a guarantee for water for industry in that area. Do you see any advantages in that or not?

MR. MC CARTHY: The question was the feasibility of a low-head dam on the Raritan below New Brunswick to improve the pollution and industrial water supply conditions immediately above. We are studying such a project as part of our continuing investigations and it certainly is highly desirable. Whether the benefits will be commensurate with the costs, we are not yet prepared to say.

THE CHAIRMAN: I have no further questions.

MR. STEPACOFF: Along the same line, Mr. McCarthy, at our last session you were supposed to have ascertained for us the additional waters that you intend to have for Middlesex. Can you give me that figure?

MR. MC CARTHY: Yes. We have developed those figures for all of the seven counties and our men have been taking them off over the weekend, and had an enjoyable weekend developing them, I believe. Mr. Lieberman has them to present.

MR. LIEBERMAN: I believe you are particularly interested

Middlesex County at the moment.

MR. STEPACOFF: No, I am not. I am going to ask those same figures for Somerset because I don't quite understand why Somerset in your report is not considered a critical area and yet in the bill they are made part of this Northeastern setup and charged with being a county that is essentially benefited by it. Now I am not only interested as I said the other day in Middlesex, but I am interested in Somerset and I'd like to know why if, for example, Passaic is part of this Northeastern setup and Passaic claims it doesn't have any benefit or need for the water, why they are critical and included in this area. So I'd like to develop it from the standpoint of all of the counties - of the seven counties you talk about.

MR. LIEBERMAN: We have found in breaking down the costs of the assessments as set up in the proposal that Middlesex County would be called upon to pay 11.3% or $226,000 annually as its share of the amortization costs.

MR. STEPACOFF: $226,000 annually?

MR. LIEBERMAN: Yes.

MR. STEPACOFF: Is that for 35 years?

MR. LIEBERMAN: That is for 35 years for their share of the amortization cost.

MR. STEPACOFF: 35 years.

MR. LIEBERMAN: We have found also from our studies that Middlesex County will in 1970 require 18% of the water developed. Of the total water developed not only at Chimney Rock, but of the total 147 million gallon development proposed by the report, Middlesex

...ill require 18% of that.

MR. STEPACOFF: How much is that in gallonage?

MR. LIEBERMAN: Well it is 18% of 147 million. I have worked this out in percentages because I thought that way it would be a more effective comparison.

MR. STEPACOFF: Let me understand you. You say in Middlesex, they require 18% of 147 million?

MR. LIEBERMAN: That's right.

MR. STEPACOFF: Is that in 1970 or 1980?

MR. LIEBERMAN: 1970.

MR. MC CARTHY: That would be twenty-eight and one-half million gallons.

MR. STEPACOFF: Is that twenty-eight and one-half million gallons increase of what it is getting now?

MR. LIEBERMAN: That's right.

MR. STEPACOFF: Is that the idea?

MR. LIEBERMAN: That's over and above its present dependable supply.

MR. STEPACOFF: In other words, as I understand it, if we are to subscribe to this project, we will be getting in return for that at least up to 1970, 28½ million, and we are going to pay for that at the rate of $226,000 a year for 35 years. Is that correct?

MR. LIEBERMAN: That's right.

MR. STEPACOFF: Now, what about Somerset?

MR. LIEBERMAN: Somerset will be assessed 3.8% or $76,000, and will receive or will require by 1970 10.3% of the water developed.

MR. STEPACOFF: And what does that come to? Do you have that, Mr. McCarthy?

MR. LIEBERMAN: It is roughly 15 million gallons.

MR. MC CARTHY: 10.308.

MR. STEPACOFF: 15 million gallons. How about Passaic?

MR. LIEBERMAN: We find that Passaic will be assessed, according to its present valuation 10% or $200,000 annually, and that, according to its dependable yield and projected growth, by 1970 it will require 8% of the additional water developed or approximately --

MR. MC CARTHY: -- 11.8.

MR. LIEBERMAN: Approximately 12 million gallons.

MR. STEPACOFF: So they are being assessed $200,000 annually for 35 years for 12 million gallons annually?

MR. LIEBERMAN: That's right.

MR. STEPACOFF: And let's come down to Union. That's a close county.

MR. LIEBERMAN: UnionCounty would be assessed 15.2% or $304,000 annually and would require in order to maintain an adequate supply of water 16.7 % of the water developed.

MR. STEPACOFF: What does that come to, Mr. McCarthy?

MR. MC CARTHY: 24.5.

MR. STEPACOFF: Twenty-four and one-half million. All right, we are up to Essex now.

MR. LIEBERMAN: Essex will be assessed 23.7%.

MR. STEPACOFF: Or --

MR. LIEBERMAN: --$474,000 annually.

MR. STEPACOFF: And get --

MR. LIEBERMAN: And will require by 1970, 21½% .

MR. STEPACOFF: 21½%?

MR. LIEBERMAN: 21½%.

MR. MC CARTHY: 31.6.

MR. STEPACOFF: 31.6 million gallons. All right, then we run to Bergen County.

MR. LIEBERMAN: Bergen County will be assessed 23.6%, $472,000 annually, and will require, according to our estimates 38.1% of the water developed in 1970.

MR. MC CARTHY: 56.2.

MR. STEPACOFF: Hudson County?

MR. LIEBERMAN: Hudson County would be assessed 12.3% or $246,000 annually. They will require in 1970 14.2%.

MR. MC CARTHY: 20.9.

MR. LIEBERMAN: You will notice, Assemblyman, that these figures will total more than 100%, indicating that before 1970 we will be eating into our reserve and that it will be at that time or some time before that perhaps necessary to start into the second phase of Chimney Rock.

MR. STEPACOFF: Yes. Now, Mr. McCarthy in your discussion of Dr. Leet's report, can you tell us, please, whether your calculations were based on a daily flow or on an average flow of the Raritan River?

MR. MC CARTHY: They are based on monthly average flows. Now, the difference between a monthly and a daily flow computation cannot amount to more than a few inches on a reservoir in a critical period. It is the accepted technique for this type of investigation.

they are based on 375 monthly figures. The method of computation to take the Raritan River at Bound Brook, take the net inflow from the drainage area tributary to the reservoir, less the evaporation on the reservoir and subtract from that the amount that is required daily for demand in the system and to either draw from storage when that is deficient or pump when that is available up to the limitations of your pumping capacity of your pumping station. The only year in which -- If it weren't for the critical period in the year 1949 -- We will put it this way. If we were making this type of analysis and we had not had a period such as 1949, we would have come up with a reservoir of approximately 26 billion gallons of capacity rather than 32. That is the extent of severity of the 1949 drought. Now, among the reserves that you have in a system such as this is 25% of your storage which is left in reserve, which is an accepted practice in studies of this kind. You have got your reserve in pumping capacity in your pumping station. We installed 450 million gallons per day of pumping capacity and utilized 380. The rest is spare. However, during critical periods, whenever you have such flows, you would undoubtedly use your spare. For this stage of engineering investigation we kept 20 feet of reserve in the taking area of land in the reservoir. It might be in final design, you would want to use one, two or three feet of that and leave 17 or 18 or 19 feet rather than 20.

MR. STEPACOFF: Now, if we could get the 77 million gallons in the northeastern part of this pre-existing reservoir as is now proposed by you, could we get an additional 30 million gallons

from the Raritan River without too much trouble for Middlesex County, for example. You intend to give Middlesex another 30½ million by your formula. Now could we get 30½ million more without a reservoir at Chimney Rock?

MR. MC CARTHY: It takes 32 billion gallons of storage to develop 180 million. To develop 30 million or one-sixth of that would take about 3 billion gallons of storage. No, it would take about 4½ billion to 5 billion gallons of storage. That is, if you were storing on the main river or its tributaries, but we are not storing water when the flow is at or below 130 million gallons per day. That makes a big difference. If you store water during the period when it is needed for industry, say for selfish benefit of any one water system, then you could develop 30 million gallons per day with relatively little storage.

MR. STEPACOFF: How much would you say it would cost with relatively little storage, without Chimney Rock? How much would it cost us to develop storage for 30½ million for Middlesex?

MR. MC CARTHY: The storage alone would cost you in the neighborhood of $4,000,000.

MR. STEPACOFF: And how much do you think it would cost for the 77 million in the northeastern part of the State?

MR. MC CARTHY: Approximately $22,000,000.

MR. STEPACOFF: Then for $26,000,000, isn't it true, we can get the 77 up in the northeastern part of the State and the 30 for Middlesex - 107 million gallons?

MR. MC CARTHY: No. That would only store it and release it in the river. You would have to build a filter plant. You

uld have to build an intake pumping station, transmission mains --

MR. STEPACOFF: How much additional would that be?

MR. MC CARTHY: It would be just about the same on a per million gallon basis as Chimney Rock, if you would take from the Chimney Rock figures. I'll tell you, our engineers can develop that while this hearing is going on and give it to you at the end. But it would take per million gallons about the same or a slightly higher unit price than for a larger project.

MR. STEPACOFF: Then, by the method of taking care of the northeastern part of the State and Middlesex with 30 million gallons, you would then have a total increase of 107 million gallons.

MR. MC CARTHY: Yes.

MR. STEPACOFF: That, according to your table on page I-18 brings us to a point of 1970 where you say that the Northeastern area would need 526 million gallons per day.

MR. MC CARTHY: Well, that is just --

MR. STEPACOFF: Just a minute. We have our 420 that we started with in 1953 and if we add your 107 million that you talk about now, we are up to 527 million dollars by just using these two supply sources, without spending any money for Chimney Rock.

MR. MC CARTHY: You mean 527 million gallons.

MR. STEPACOFF: Yes. In other words, we have already reached your estimate of need for 1970 of 526 million gallons by these two utilization plans, the Northeast and Middlesex. Why would we then have to have an expenditure of all these millions of dollars for Chimney Rock and just have it stand there without serving any particular need up until 1970?

MR. MC CARTHY: Well, I think as a minimum from the figures

that table, that you ought to be looking ahead for a 15% reserve in the area as a whole. That has been the trouble in North Jersey over the years, of not only having no reserve, but during critical years of utilizing a system up to 25 and 30 percent beyond its dependable capacity. In other words, I would take those figures, Mr. Stepacoff, and put about 10 to 15 percent reserve on them.

MR. STEPACOFF: All right. Let's do that. In our situation with Middlesex and the Northeastern part of the State still we are only spending the $22,000,000 that is involved, as you say, or approximately. Then why do we need Chimney Rock and all these additional gallons, where we are going to store all this water and spend all this money and have the principal and interest payments when we don't have any present use for the water, that is, up until 1970? Why have a monument up there?

MR. MC CARTHY: With a 15% reserve, you would need that water about 1962 or 1963 or 1964, in that range. You can't finish this more than a couple of years ahead of that.

MR. STEPACOFF: Do you think that for a 15% reserve, it warrants the issuance of a $72,000,000 bond issue?

MR. MC CARTHY: Yes.

MR. STEPACOFF: Does that sound logical and responsible to you?

MR. MC CARTHY: Yes, I think so. I think these assessments when you reduce it back to what they -- Take these amortization assessments. A person has a thousand dollar tax, gets about $10 added to it to get the guarantee of a dependable water supply. Now, speaking for myself, and everybody that I know, they were certainly interested in it.

MR. STEPACOFF: All right. Let's say we would need this additional reserve. Would you say it was 25%?

MR. MC CARTHY: No, I think if you keep 10 to 15 percent ahead --

MR. STEPACOFF: 10 to 15 percent of your 127 million gallons that you need.

MR. MC CARTHY: No, of your total. If you need 500 million, you ought to have about 75 million ahead.

MR. STEPACOFF: Now you figure that 25% or rather 25 million gallons per day more can be obtained from the Delaware Canal by reason of your interpretation of the United States Supreme Court decision, and you say that that waste would not be part of the 100,000 that they are charging New Jersey with. Is that right?

MR. MC CARTHY: Yes.

MR. STEPACOFF: So we have 25 million more we can count on. Isn't that right?

MR. MC CARTHY: No, a part of that 25 million. It depends on how much of that loss you can pick up. You are bound to lose some of it.

MR. STEPACOFF: Well, you wouldn't be charged with it, according to your interpretation? Isn't that true?

MR. MC CARTHY: Well, we hope that you wouldn't. We think it is worth talking about.

MR. STEPACOFF: You have prepared your report on taking the 20 million out of the Delaware Canal, on the assumption you are going to have that?

MR. MC CARTHY: Yes, that's right, that 20; I thought

meant beyond that. That 20 is feasible to take, yes.

MR. STEPACOFF: All right. couldn't you have an additional 5 million from that source if you wanted to have a reserve?

MR. MC CARTHY: You could get an additional 20, I think.

MR. STEPACOFF: An additional 20. So we are cut down now to what, 30 million?

MR. MC CARTHY: You are designing a whole project here in about five minutes.

MR. STEPACOFF: I am trying to design it with a little common sense; I'll tell you that. I don't like to see our State spend $76,000,000 right now when we don't need it until 1970 or 1980. I will tell you that very frankly.

MR. MC CARTHY: Well the 30 million gallons per day would cost $22,100,000 between storage, intakes, filter plants, pumping stations, equalizing reservoirs, and transmission mains. I think when you consider the value that reserve of water supply has to a region as a whole, and when you consider the investment in this Northeastern Metropolitan Area, ~~that~~ although this project seems like a lot of money, in terms of the scale of the region that it is serving and that it protects with reserve water supply, it becomes ~~relatively small~~.

MR. STEPACOFF: Let me ask you this, Mr. McCarthy. We have Passaic - and I am not a representative of Passaic except in the generic sense that I am an Assemblyman in the State - and Passaic claims it doesn't have any critical need for water in the immediate or in the distant future. Somerset certainly hasn't been designated by you as a critical area by your own engineers' report. I don't know how it ever got into the bill. Do you know how it got into

bill - how it all of a sudden became transmuted or transplanted from a non-critical area to a critical area?

MR. MC CARTHY: Because projecting ahead when the supply would come in, we feel it would need water and we have just delivered you those figures.

MR. STEPACOFF: Did you figure that in your original report, that Somerset was a critical area?

MR. MC CARTHY: Not today, but by the time the water could be brought in.

MR. STEPACOFF: That isn't the question, Mr. McCarthy. In this report, Somerset is not included in the northeastern area as a critical area and therefore was not considered as a specially benefited area. Isn't that true?

MR. MC CARTHY: Yes.

MR. STEPACOFF: Now, in the bill, 595, which seeks to assess the particular counties which get a special benefit, Somerset has been included. Now, do you know how it became a critical area over night, so to speak?

MR. MC CARTHY: Well, based on our projections that in the year 1970 -- What's the figure Mort?

MR. LIEBERMAN: The answer to that is, Gerry, that Somerset is not critical, but it is benefited, and that our projections show that it will need this water in the future and therefore it is included. It is one of the areas that can be the most easily supplied from Chimney Rock and will benefit greatly from Chimney Rock because its need will be furnished from Chimney Rock. Now, because we included that in a grouping with other counties that were

not critical, does not change the picture for this particular county.

MR. STEPACOFF: When you say it could be easily benefited from Chimney Rock, doesn't it now get water from the Raritan River which flows right along side?

MR. LIEBERMAN: Yes, it does.

MR. STEPACOFF: Why do we have to take the water from the Raritan River and pump it into Chimney Rock and then pump it back to Somerset?

MR. LIEBERMAN: We are not going to pump it back to Somerset; we are going to let it go back by gravity. And as far as the power is concerned, it doesn't make any difference because you have got to put in the same amount of power to provide pressure on your mains and you are getting the benefit of having a storage that is not dependent on power at all times. You are getting a supply that is always reliable.

MR. STEPACOFF: Mr. Lieberman, you say you are not going to pump it and it is going to go by gravity. Now, as I understand it, you are certainly going to pump this water out of the Raritan into the Chimney Rock Reservoir.

MR. LIEBERMAN: Yes, but you said we are going to pump it back to Somerset. That I said we were not.

MR. STEPACOFF: You are going to let it flow back to Somerset; is that right?

MR. LIEBERMAN: Yes.

MR. STEPACOFF: Now you are going to let it gravitate, if you will, from Chimney Rock back to Somerset; is that right?

MR. LIEBERMAN: Right.

MR. STEPACOFF: Now, wouldn't Somerset be in a much better position if you let it take the water directly as it does today without being charged for the privilege of pumping it into Chimney Rock and let it gravitate back?

MR. LIEBERMAN: No, they would not. In fact they don't do that entirely right now. The water is taken from the Chimney Rock area for Bound Brook.

MR. STEPACOFF: It is taken from the area?

MR.LIEBERMAN: Yes.

MR. STEPACOFF: Where is it taken from?

MR. MC CARTHY: There is a small project up there.

MR. LIEBERMAN: There is a small development in the Chimney Rock area. It is not pumped in.

MR. STEPACOFF: All right. The additional supplies that it might need and which you claim is only 15 million gallons, certainly can come from the Delaware and Raritan Canal, can't it?

MR. LIEBERMAN: Well, if you aren't going to make any other development or any other use of the Raritan River, of course you have plenty of supplies for 15 million gallons.

MR. STEPACOFF: I am talking now from the sources that are going to be specially benefited in accordance with your plan.

MR. MC CARTHY: I think the answer to that is that the State of New Jersey has an interest in looking out for all of its counties, and if there is water available in the Delaware and Raritan Canal and if it is needed in a region as a whole, that they can hardly be expected to hand it over to Somerset or Middlesex without letting the other counties share in it. I think it is part of your

overall statewide responsibility.

MR. STEPACOFF: Yes, but Mr. McCarthy I want to be very fair about this. I want to get the facts. I am not interested in any plan or any particular site. I was concerned about Camden the other day. They said that they weren't even being considered at all. They were claimed also not to be a critical area and would have no appreciable need for increase within the immediate future and they pointed out to this Body that Campbell Soup, for example, needed a large amount of water, and other industry needed water, and they said they were not being considered in this overall plan. Now it is true if we are going to be interested in the rest of the State, we want to know who is going to get the benefit of it. Now then, we have seven counties. Passaic claims they don't need it. Middlesex has an immediate source that they can go to. Somerset has a source that they can go to. The other four counties have existing supplies, which for about $22,000,000 they can get benefits from until the year 1970. Now if we have all the water we need up until 1970, where in the name of heavens can we justify the State to expend another $50,000,000 for a reservoir that is going to stay there. We will have to pay the interest on it for 35 years. We will have to pay the principal at the rate of over $2,000,000 a year. If we don't have any need for the water, why build a reservoir at this time at this place and in this manner? Aren't there other means that we can employ, more cheaply perhaps, where we can have available supplies?

MR. MC CARTHY: Looking ahead at the rate at which you will need additional water supply and taking the problem in proper perspective as to size, you know that you are going to need 200,

000, 400 million additional supply as time goes on and you know that our figures show that by the time you could finish a Chimney Rock project, you will practically have absorbed in this whole metropolitan area the 77 million that we recommended that the three public supplies either be encouraged to develop themselves or that be developed by the State or with State aid. That will all be used. The very first thing we did in this survey, Assemblyman Stepacoff, was to make a serious appraisal of the need for supplies. Now the main criticism that we have had on our investigation of water demand is that they are too low, but we think they are pretty good for domestic supply. But, frankly, our industrial water survey is still being carried on and I wouldn't be surprised that in our December 15 report we will be recommending by the year 2000 another 150 or 200 million gallons. So that when you take and carefully build a case by figures, that with two or three small supplies you are all set until 1970, you are just kidding yourself. You can't skip along year by year with no reserve. You are talking now about the year 1960 or '61 when you talk about Chimney Rock and you are talking about building it nine years ahead of when you need it and it's during that period it furnishes you a reserve. And what does it cost the average homeowner or the average taxpayer in terms of what he is spending on other things? It costs him an incremental $10 or $20 a year to have that protection.

MR. STEPACOFF: Mr. McCarthy, while we are talking about that, don't you think we are running along on pretty thin ice when you have to tap the Delaware River Canal for 20 million gallons in order to build up your 200 million gallons? Don't you have a

pretty small reserve to fall back on in case you need more water?

MR. MC CARTHY: No. You can put another three feet on the reservoir if you want and forget the Delaware and Raritan Canal.

MR. STEPACOFF: Where would you get the water?

MR. MC CARTHY: From the Raritan.

MR. STEPACOFF: All right. Now, as you know we had 131 days back in 1930 when the drought was so bad that it wouldn't justify any pumping for 131 days.

MR. MC CARTHY: That's all right. A four- to five-month period is your normal draw down. In 1923, you would be drawing from the reservoir five months. In 1930, it would be approximately five months. In 1931, it would be four months. In 1932, it would be four. In 1936, it would be four. In 1939 is your longest period of draw down prior to 1949; that is about six months. In 1941, it was four months; 1944, 2 months; 1946, part of a month; 1949, about seven months. Since you refer to the 1930 period, that is entirely true, but that is all taken into account in reservoir operation study.

MR. STEPACOFF: Mr. McCarthy, you said before I might be trying to design a system. I don't know the first thing about engineering, and, believe me, I don't profess to know. I am a little bit impressed at the moment with what Dr. Leet said because after all he is a geologist, a Professor at Harvard, and I would assume would have some standing. He says that projecting your figures, projecting your contemplation of the capacity of the reservoir -- he says that on May 3, 1930, assuming that your reservoir were full at 32 billion gallons, from May until February 1931, the net withdrawn at that

time - these are based on actual facts - was 31 billion, leaving the balance in the reservoir on February 8, 1931 of 1 billion gallons. Then, between February the 9th, 1931, and July the 25th, 1931, a net of 20½ billion was added. The balance in the reservoir on July 25th, 1931, which was a hot spell, I presume, was 21½ billion gallons. Now in this period between July 26th, 1931, and January 1, 1932, the amount withdrawn was 21½ billion gallons, leaving a balance in the reservoir on January 1, 1932, based on actual figures, of absolutely nothing.

MR. MC CARTHY: You are quoting from false figures; you are not quoting from figures that have been furnished you by a hydrologist, by somebody who is supposed to know something about it.

MR. STEPACOFF: Will you please explain that if you can? I'd like to know about it.

MR. MC CARTHY: In January, 1930, the Raritan at Bound Brook had 26,720,000,000 gallons of runoff. The net runoff from the Middle Brook - that is the Chimney Rock stream - less evaporation, was 458 million gallons. Suffice it to say that at that time the reservoir is full and there is no draft on it. In February, the reservoir is full and there is no draft. You had 32 billion gallons of water in the river that month. In March the reservoir is full and there is no draft. You had 36 billion gallons of flow that month. In April, the reservoir is full and you have no draft. In May you have 9,540,000,000 gallons of water in the Raritan. You need fifty-five hundred and ten to supply your system. That is 180 times 31. You need 5,510,000,000 gallons to supply your system. Your total pumping from the Raritan is 5,510,000,000 available for

mping. We pumped 5,333,000,000; the demand is 5,580,000,000. could give you the columns on this.

MR. STEPACOFF: That would take you down to almost a few llion, wouldn't it, almost a negligible amount?

MR. MC CARTHY: No, your reservoir is still full.

MR. STEPACOFF: If you had available 5,510,000,000 and you ew off 5,330,000,000, as I see it, there would be a balance of 0,000,000 left in the reservoir.

MR. MC CARTHY: The total pumped into the reservoir was 333,000,000.

MR. STEPACOFF: Pumped in and pumped out was 5,330,000,000.

MR. MC CARTHY: The inflow to the reservoir was 5,338,000,000 mped in plus 247,000,000 of local intake and the outflow was 580,000,000 which is the demand.

MR. STEPACOFF: How much was left then, according to those gures?

MR. MC CARTHY: The reservoir is full. At the end of the nth the reservoir is right where it started from. You pumped into e reservoir and you have had in local inflow the exact requirement. w, going through by months in 1930, in June you used 3,196,000,000 llons from storage -- no, in July. In August you used 5,534,000,000. September you used 5,213,000,000. In October you used 547,000,000. You have reached a total of 19,490,000,000 gallons at you have used from the reservoir. In November you store 8,000,000. In December you store 456,000,000. In January of 31 you store 4,237,000,000. In February of 1931 you store 449,000,000. In March of 1931 you store 6, 215,000,000. In April

you store 2,325,000,000 and the reservoir is full for the next four months. Then you start and you draw from August 1931 to December 1931. You draw down to 18,694,000,000. Then in three and a third months you fill the reservoir. It is full. Then in 1932 from June through September, you draw down to 19,524,000,000. The reservoir fills in October, November, December. January, 1933, the reservoir is full. Here is the month by month operation through 31 years and 3 months.

MR. STEPACOFF: Mr. McCarthy, what you are reading then, as I take it, is the mean monthly flows?

MR. MC CARTHY: That's right, and your figures are substantially the same for daily flows.

MR. STEPACOFF: Now, wouldn't it be more accurate if you had the actual daily flows rather than the mean monthly flows?

MR. MC CARTHY: Two or three inches on the reservoir, that's all. This is an accepted technique.

MR. STEPACOFF: The reason I say that, in fairness to you, is apparently Dr. Leet claims he has got figures.

MR. MC CARTHY: He has some error in his calculations. His foot has slipped somewhere and you just cannot support those figures.

MR. STEPACOFF: I don't want that slip to be costly, and I want to find out where that slip is. He says he has charts indicating the daily flow and the daily calculation that would be required to determine this problem. You have a monthly average and you say there is a slip somewhere.

MR. MC CARTHY: They would produce the same result.

MR. STEPACOFF: Well, according to his tables, his findings,

he comes to a conclusion which is diametrically opposed to yours and he says that this reservoir isn't even capable of holding the water that you say it should hold of 32 billion.

MR. MC CARTHY: I don't intend to repeat further what I have said.

MR. STEPACOFF: All right, sir.

MR. WILENSKY: While this has been a rather prolonged discussion, I think Assemblyman Stepacoff is correct. Any engineer designing a system of this kind --

THE CHAIRMAN: Wait a minute. We will call on you this afternoon. Then you can speak. We have questions now.

MR. WILENSKY: I just wanted to call to your attention that this month is a good illustration of why you have to depend on daily flows and not an average flow.

THE CHAIRMAN: You can speak on that this afternoon when you are called. Are there any other questions?

MR. FRANKLIN: Mr. McCarthy, I note in going over the report that the plans for Chimney Rock contemplate the installation of equipment to treat the water and I have wondered if you felt in your opinion that it might be necessary to carry out any further anti-pollution measures outside the reservoir and the installation, itself?

MR. MC CARTHY: I think the State Board of Health should enforce the requirements for septic tanks and that the zoning board should enforce the present zoning regulations to keep the population density from getting any larger than we had anticipated.

MR. FRANKLIN: Beyond those steps, do you contemplate the necessity of any additional pollution control of the watershed

of the Raritan Valley?

MR. MC CARTHY: We estimated a sewage treatment plant for Martinsville for the Chimney Rock Project. Now, as to further steps for pollution control in the Raritan Valley as a whole, within the terms of reference of our investigation, we are making continuing studies of the problem in the lower Raritan. However, we did not report on those in our July 15 report and we felt that they weren't of the urgency that required it. We concentrated on the number one problem.

MR. FRANKLIN: Is it your understanding as of the present moment that no further pollution control measures will be required or do you contemplate the necessity for such, at least immediately above the intake?

MR. MC CARTHY: We think that the type of development that you now have and anticipated for the area within the watershed above the reservoir will not constitute a pollution problem beyond what would normally be handled by the filter plant.

MR. FRANKLIN: Thank you.

THE CHAIRMAN: Has the Committee any other questions? I have a series of questions.

MR. MC CARTHY: I might just say that here is the monthly 31 to 40 year record, all worked out, which we stand behind, and our Deputy Project Engineer, Roland Kaser, is sitting here, who was in charge of working this up, and he is available right now to sit down with anybody who has any other figures and look at them. I think we can take a look at any other figures and they are welcome to see these and this afternoon you can report back the

facts on them.

THE CHAIRMAN: Here is a question by Mr. Bonyun: If the Passaic Valley Water Commission were to proceed with its expansion on its own cost, would Passaic County be taxed?

MR. MC CARTHY: I don't know how that would apply. Mr. Miller, do you want to take over on that?

MR. MILLER: The way the bill now reads the cost would be ten million dollars less in bonds issued by the State. To that extent the entire district would have less in tax to pay. But for any additional water, the Passaic area would also be taxed like other parts of the district.

THE CHAIRMAN: Here is a question by Mr. Engelhard, or rather a series of questions: If the use of Delaware River water will be recommended for long-term needs in the final report, or if the engineers agree with me that it is essential to meet New Jersey's future water needs, what advantage do the engineers see in postponing the use of Delaware River water?

MR. MC CARTHY: Well, if we had found that the use of Delaware River water initially would be more economical than the development of the Raritan, we wouldn't have hesitated to recommend it. It does involve Supreme Court and interstate problems, and I think they should be worked out in an orderly way as rapidly as they can. I think New Jersey should never give up its right to its share of the Delaware water. But I don't think that you gain anything on that right by hastening an uneconomical development of it. I think to take it in its normal economic order and to stand your ground on your right to your portion of it is the proper policy.

THE CHAIRMAN: The next question is: Will it become less expensive to obtain later?

MR. MC CARTHY: Well, the development of the Delaware is partially dependent on what is done with the Wallpack Bend Project. If that is developed for interstate use and made available to New Jersey, a regulated flow, then it might be more economical than to try to take unregulated Delaware flows today.

THE CHAIRMAN: And the next question is: Will it become more available later? Well, that is the same answer.

MR. MC CARTHY: I don't think you gain or lose anything on availability. It's a legal problem.

THE CHAIRMAN: Another question by Mr. Engelhard: Is it not more likely now than ever before in view of the disaster in Pennsylvania that that state will make every effort to control future floods on the Delaware and obviously at the same time make use of Delaware River water?

MR. MC CARTHY: Well, a reservoir flood control project for the Delaware -- if you are analyzing that from a flood control need, you would try to get above the Port Jervis area. You would try to get all the area of benefit you could. I spent many years in the Army Engineers on those same surveys, and I think that there will no doubt be from this flood an agitation for local flood protection measures and storage measures, and along with that, it is entirely possible they could develop conservation pools that will help to regulate the flow of the river. I think that the New Jersey representation in Congress should certainly take a positive stand to try and get conservation storage in any flood

reservoir project that might be developed on the Delaware.

THE CHAIRMAN: And that would really go back to the Indodel project, wouldn't it?

MR. MC CARTHY: Go back to that or some variation of it. If you are looking for flood control sites, you would probably be considering different sites than they were for water supply.

THE CHAIRMAN: Should not New Jersey coordinate its activities with Pennsylvania in this regard to make certain that it will participate to the fullest in obtaining the greatest possible use of this valuable water asset? Well, I take it you have answered that.

MR. MC CARTHY: By all means, they certainly should.

THE CHAIRMAN: Another question by Mr. Engelhard: Is it the opinion of the engineers that flood control can best be effected by on-river projects?

MR. MC CARTHY: Well you have only got three basic means of flood control: storage, local protection and diversion.

THE CHAIRMAN: Second, have the engineers been able in the short time possible for the preliminary report, to study this matter fully? You didn't study flood control at all, as I understand it.

MR. MC CARTHY: We haven't considered flood control. It's not within our terms of reference.

THE CHAIRMAN: Three, is it not true from an engineering standpoint that any off-river development dependent upon limited pumping capacity would only have a minor effect on flood control?

MR. MC CARTHY: That is right.

THE CHAIRMAN: Is there any similarity between the plans projected in the Preliminary Report and flood control measures taken in connection with this Missouri River or other rivers in this country which have caused flood damage in the past?

MR. MC CARTHY: No. There is none of our recommendations that would create a flood problem.

THE CHAIRMAN: On page two of the Preliminary Report, under "Services to be Rendered, Section 6," one of the items required of the engineers is, quote, "Evaluation of the incidental flood control benefits that will accrue from the construction of the water impounding structures," unquote. Was any consideration given to this in the preliminary report?

Might not full consideration of this item substantially change recommendations made without its proper consideration?

MR. MC CARTHY: Of the projects that we were evaluating, the only one that would have a positive or a negative effect on floods, would be the Raritan on-river development, and, as studied, needed structures maintained for water supply - you would have to be very careful that you didn't increase floods with them.

MR. STEPACOFF: Mr. McCarthy, in that connection, I notice in the contract that matter of flood control which would accrue, the benefits, was to be treated by you as incident to the problem.

MR. MC CARTHY: Incidental, yes.

MR. STEPACOFF: Have you studied it from that aspect? I think we are all interested because of our present situation.

MR. MC CARTHY: Only to the extent to determine that there was no flood benefit from an on-river Raritan project, and if you

weren't careful in its operation, you would increase floods. A full reservoir with a flood coming on it, unless the spillway is carefully designed to raise that pool and hold some storage in spillway surcharge, you will increase the flood. You have taken away the valley storage within the water area of the reservoir that normally would have filled as the flood rose and the fact that your rainfall comes in 24 hours or less and it runs off in five or six days at Trenton -- that lagging effect is all caused by the natural storage in the valley as the river goes up as the flood rises. And if you take that away by taking away the valley and building reservoirs, you return the flood in part to its original state of a flash that follows closely after the rainfall.

MR. STEPACOFF: Pursuing that just a step further to clarify it in my own mind, then you would think in your opinion apparently that the problem of flood control should not be part and parcel of a plan for the increase of the use of water? Can it be integrated so as to solve both problems perhaps at the same time?

MR. MC CARTHY: In a multi-purpose storage project, you have to maintain a certain part of the storage for flood control, a certain part for low water increase or water supply and you can have a certain part of it in common that you operate on rule qurve operation for both. But there isn't much double benefit that you can take up. For reservoir flood control of the Raritan, for example, the reservoirs would have to be of such capacity that the flood benefits wouldn't be incidental, they would be the major benefit, and I would doubt if in the long term many of the Raritan reservoirs would be developed for multi-purpose, for those

two. In continuing with our on-river studies for development of that last 140 million gallons a day on the Raritan, we will be looking at the possible incidental flood benefits. But frankly I anticipate that the height to which you would have to carry your structure and the areas that you would then flood from the back water from the reservoir during floods might create problems equal to what you get into in flooding lower down in the valley today without control.

THE CHAIRMAN: I only have a couple more questions here. Here is another one by Mr. Englehard: The testimony of American Cyanamid indicates that a minimum flow of 130 million gallons per day may not be sufficient to meet current needs, leaving aside growth needs. Representatives from Middlesex County have advocated a flow of 200 million gallons daily and the elimination of the use of 20 million gallon daily of Delaware and Raritan Canal water. Do the engineers feel that if a minimum flow of 200 million gallons were necessary, there would be sufficient water to sustain Chimney Rock?

MR. MC CARTHY: Yes, there would be, but you would cut down on your future on-river growth beyond. In other words, you have a total of 450 to 470 million gallons that you could economically develop, and if you want 180 to 200 million in Chimney Rock and if you want 130 minimum for low-flow regulation, you still have another 120 or 140 million available for water supply. If you want to allocate some of that to further low water flow increase, when and as it is needed, it could be regulated by on-river compensating flow developments.

THE CHAIRMAN: Now a question by Mr. Rutenberg, does not the Army Conservation Plan #2 embrace both flood control in the Passaic River and the construction of a reservoir thereon with a capacity of 90 billion gallons daily with a dependable water supply of 120 million gallons daily?

MR. MC CARTHY: That's right; it does.

THE CHAIRMAN: Any other questions?

MR. FRANKLIN: Mr. McCarthy, is your company before its final report, going to consider from an engineering point of view the feasibility of various Delaware River projects?

MR. MC CARTHY: Yes.

THE CHAIRMAN: Any other questions? If not, we will adjourn until two o'clock for lunch.

(RECESS FOR LUNCH.)

P U B L I C H E A R I N G

on

SENATE AND ASSEMBLY BILLS ON WATER SUPPLY

Held:

Assembly Chamber
State House
Trenton, New Jersey
August 22, 1955
(Afternoon Session)

Before:

SENATE AND ASSEMBLY COMMITTEES
on
REVISION AND AMENDMENT OF LAWS

Members of Committees Present:

Senator John M. Summerill, Jr., Chairman
Senator Thomas J. Hillery

Assemblyman David I. Stepacoff
Assemblyman William R. Vanderbilt
Assemblyman Benjamin Franklin, III

I N D E X

Afternoon Session - August 22, 1955

MR. SUMMERILL: The hearing will come to order. If Mayor Carlin is ready, we will hear from him right away.

HONORABLE LEO P. CARLIN, Mayor, City of Newark

Mr. Chairman, members of the Committee and other interested parties in this legislation:

As Mayor of the City of Newark, I wish to present to the Committee the results of several conferences held by me with the Municipal Council, and with our own City Engineers who are in charge of the Newark water supply system, with respect to the proposed water supply legislation.

There is no doubt that the matter of inadequate water supply is an important and pressing one. It is a State-wide problem, and should be dealt with on a State-wide level. By no means should it be the subject of political maneuvering and jockying. Our immediate remarks are addressed to Senate Bill 372 and Assembly Bill 595 now under consideration, which provides for the establishment of a reservoir in the vicinity of Chimney Rock and other reservoirs, works and facilities. It is the considered opinion of our engineers that Round Valley should be developed in preference to Chimney Rock. Round Valley has a far greater storage capacity than Chimney Rock. Its source of water is acknowledged to be superior to that of Chimney Rock, and it would affect far fewer families and farms than the Chimney Rock project. If, however, it is contemplated that both Chimney Rock and Round Valley be accepted as reservoir sites, then we feel thatChimney Rock should be developed first. Because of the nature of Chimney Rock and the area around it, the construction of a reservoir would require the removal of several hundred families, and it would not be a realistic approach to acquire it now, and hold it for future development perhaps ten or more years from now. It would be more feasible to acquire and hold Round Valley for future development, because it affects only approximately fifty families and farms.

During the period for which Round Valley is held, it could be devoted to a State Park, or other public purposes. If, however, the Legislature should determine that only Chimney Rock, and not Round Valley should be developed, the City of Newark will endorse the bills as to this feature. Our endorsement is based on the realization of the urgency of establishing a system immediately. We do not feel, however, that the method of financing as contained in the bills is equitable.

The problem is a State problem to assure communities an adequate supply of water. As a State problem, it is our firm opinion that the establishment of the system should be financed by the State. Water supplied by the system should be paid for by the communities served; otherwise, a grave injustice is done to communities which, at the cost of millions of dollars, have established their water systems, and at a great expense maintained them. We feel strongly, too, that the bills should definitely state that the New Jersey Water Supply Board to be established will not have the right to take over existing water supplies, and that municipalities should have the right to expand their existing facilities with their own funds, providing such expansion is economically feasible, and has the approval of the Division of Water Policy and Supply. We have in mind that the City of Newark does not want financial assistance in developing the Charlotteburg addition to its aquatic supply. The City of Newark would favor Senate Bill 372 and Assembly Bill 595 provided they are revised to include the aforementioned recommendations.

Further, Mr. Chairman, I would like to say that if, for any reason, there seems to be a hold-up on these bills because of perhaps a certain amount of confusion and pressure one way or the other, perhaps immediately we ought to acquire the two sites, and then at a future date try to resolve the problem of how they should be developed in the coolness, perhaps, of the conference room, or around the conference table. Thank you very much.

MR. HILLERY: Your city is one of the six or seven cities who applied for the right to build Round Valley, is that right?

MR. CARLIN: That is right.

MR. HILLERY: Can you assure me that these cities united would have the funds to develop Round Valley? I know that many of the cities have used up their bonded indebtedness in the State for school purposes, and I was wondering if that money would be available to build Round Valley.

MR. CARLIN: Of course, Senator, I only can talk for the City of Newark, and whatever commitments the City of Newark has made - I think it is close to 15 million gallons that we pledged - I think we can keep, because our own water supply is a going concern, so to speak. I cannot speak for the others, Senator.

MR. HILLERY: The reason I asked you that was because you said water was a State problem, and you felt any large water facilities should be developed by the State.

MR. CARLIN: Of course, Newark has taken the position that the municipalities should develop Round Valley themselves.

MR. HILLERY: In any event, you want the water.

MR. CARLIN: There is no question about that.

MR. STEPACOFF: Under the Chimney Rock plan, your county will be assessed at the rate of 474 thousand dollars a year, almost a half-million dollars, for the next 35 years, on the principal. That is not considering the maintenance, cost of operation, and so forth. On that basis, under this Chimney Rock plan, the engineer indicates that you would receive an additional increase of 31.6 million gallons per day. Do you know how much you need in the immediate future?

MR. CARLIN: Well, first of all I would like to say that the legislation, if adopted as it is now drafted, the City Council and myself, as

Mayor, would strongly oppose the legislation, because we take the position that the cost should be assessed on the basis of use, and the construction and development should be on a State-wide basis. The State should spread it over the entire 21 counties.

MR. STEPACOFF: In other words, you are then opposed to the plan of financing as proposed at the present time?

MR. CARLIN: Yes, very strongly.

MR. STEPACOFF: You would recommend, however, a users tax to pay according to the amount of use?

MR. CARLIN: That is right. Not really a users tax, but as the water is used, the development or construction of these two sites, or Chimney Rock, should be taken over by the State. And, of course, as the water is used, it should be charged to the users.

MR. STEPACOFF: Now, if we went ahead with this project, we are appropriating some 72 million dollars in this proposed referendum. If, until 1970, assuming Pequanock, Wanaque, and Jersey City had increased their own facilities by the payment of some 22 million dollars, you would have a reservoir with adequate supplies until 1970, wouldn't you?

MR. CARLIN: Yes sir.

MR. STEPACOFF: Then what would you recommend for the payment of those 50 million dollars which would still be owing for this Chimney Rock development?

MR. CARLIN: Well, in my opinion, the State should assume that burden.

MR. STEPACOFF: Who would pay for it?

MR. CARLIN: Spread it over 21 counties. I have no objection to that.

MR. STEPACOFF: In other words, you would recommend, then, that the cost of the project be apportioned to the various counties, but all of the 21 counties to be included.

MR. CARLIN: Yes sir. That is why I suggest we buy the two sites, and try to resolve the other issues later on.

MR. SUMMERILL: Mayor, you recommend that the capital cost be spread over the 21 counties.

MR. CARLIN: Yes.

MR. SUMMERILL: And the cost of running it, and delivering water, be on the user.

MR. CARLIN: Yes.

MR. SUMMERILL: Now, on a referendum throughout the State, don't you think that would be a hard subject to sell down in Cape May County, and Cumberland County, and Salem County, that they should contribute in their municipal budgets to setting up a water system for four or five North Jersey Counties? Do you think you could get them to vote for it?

MR. CARLIN: It might be a hard thing to sell, but it is a question of what is right. North Jersey has been paying for many things that South Jersey counties have benefited by, and there has never been any question of only charging it to particular counties.

MR. SUMMERILL: Don't you think electricity, and water, and utilities like that, where they could pay as they go are a little different from roads, or something like that, particularly where you have to have a referendum to do such a thing? Even though you say that it's right, don't you think you would have a hard time convincing the ordinary voter to that effect?

MR. CARLIN: That is my reason for suggesting that we acquire the sites, and then perhaps through conference we might come up with something that you could not arrive at in the heat of a political campaign.

MR. SUMMERILL: Don't you think water as a utility in the smaller municipalities is a good business proposition? It pays its way both as to capital investment and as a business proposition. Don't you think it could be made that

in the northeastern section here so-called?

MR. CARLIN: Of course, you are assessing this thing equally over seven counties, and if each municipality was going to use the water, I would say yes. But we may not use any of the water for a certain period, and why should we pay for someone else's use, someone else's utility?

MR. SUMMERILL: That is the same answer these smaller counties might give.

MR. CARLIN: That is why it is a State problem, and should be spread over the 21 counties.

MR. STEPACOFF. Mr. Mayor, as I understand your suggestion then, you think that it might be feasible and wise to obtain these additional sites?

MR. CARLIN: Yes.

MR. STEPACOFF: Now, would you want to tie in that condition, or that idea, with the referendum as it is now proposed under 372, which is geared and tied in to the Chimney Rock project where we have got to raise this 72 million dollars on the project, which you have some doubts about, at least in so financing this?

MR. CARLIN: Of course, I'm not sure, but it was my understanding that you could acquire the sites without a referendum.

MR. STEPACOFF: That is true.

MR. CARLIN: But it is also my opinion that if this goes to a referendum, after the short study that was given to Chimney Rock - our engineers have studied Chimney Rock for over 30 years - I think if you go to a referendum now, you face a strong possibility of defeat because of the confusion.

MR. STEPACOFF: Would you recommend the referendum now?

MR. CARLIN: No, I recommend that you acquire the sites now, and put off the referendum until such time as you make a further effort to resolve the differences of the counties and the various municipalities.

MR. SUMMERILL: Thank you, Mayor. I am next going to call on Oscar Wilensky, counsel for the North Jersey District Water Supply Commission.

OSCAR R. WILENSKY, Counsel, North Jersey District Water Supply.

Mr. Chairman and members of the Committee: We would like to thank each and every one of you for the time you are giving to this very important problem. We think that the legislature, in spending 165- or 200 thousand dollars obtained one very valuable result, and that was that it reaffirmed what the people in New Jersey have been told for a long time by the State Water Policy Commission, and the North Jersey District Water Supply Commission. And that is that we need new water supplies in the immediate future. That should resolve all doubts in anyone's minds as to whether something should be done or should not be done.

Now, a lot of these bills and reports, although they appeared in the press from time to time, were not actually available to the Commission and its municipalities for many days thereafter. It is unfortunate that we have to present all of our arguments in the short space of a hearing of this kind, rather than before the State Water Policy Commission that is composed of a number of gentlemen that have served many, many years on water problems, and who are fortunately equipped to consider water projects. Although we have differed with them from time to time, nevertheless we feel they perform a very important function in this State, which is now being by-passed, perhaps unintentionally. And I say that very significantly, because there have been representations made in the engineering report as to what quantity of water willbe taken; that it won't be taken when the flow is less than 130 million gallons a day, and there will be 20 million gallons taken from the D & R Canal. And I want you to know there is nothing like that in the bill. There is no assurance that this board that may be created will be bound by these representations. Whereas, on the other hand, you will recognize that when the State Water Policy Commission has a hearing, objectors have a chance to be heard, and all the limitations for the right to take water are placed in the grant, and you are bound

by it. Their duty isn't just to prevent damage by reason of diversion. Their duty under the statute is to prevent undue damage. Damage, as they consider it, is something that can be compensated for, and will not have an over-all bad effect. But undue damage is something that is very, very important.

I know the procedure here is the usual legislative procedure, but I think the provision of the bill hat struck me first - and it should have struck this Division of Water Policy Supply - was that that agency that has performed a very useful function in this State for the protection of private individuals, and cities, and corporations, is absolutely being by-passed, and that you gentlemen, unfortunately, are being called upon to pass upon technical engineering questions, which I know most of you are able to grasp, but nevertheless you cannot get the full drift or significance of the remarks of these engineers unless they are subject to cross examination. From this report, and what we heard, no reasonable cross examination could be completed of Mr. McCarthy in less than four or five days. And so I say we are at a disadvantage, and so are the other water agencies that are here today. And we ask you to bear with us if we cannot explain every little detail.

Now, the report consists principally of a rehash of a lot of statistics that have been known by the responsible executive agencies in this State, in North Jersey, and others. And I might say at this time that the North Jersey Commission was never mentioned in this report, and yet it is an agency that was created by a former legislature way back in 1916, to perform a very important function. And it was not just a paper board, but has produced substantial results - the development of over 100 million gallons of water per day, and a reservoir of over 30 billion gallons, by the cooperation of municipalities, by their own financing.

Now, we represent in these proceedings the composite view of 13 municipalities that are both present applicants in the Round Valley application, and present participants in the existing project, and they are Passaic, Paterson, Clifton,

Newark, Kearny, Bloomfield, Montclair, Glen Ridge. Those are present participants. Bayonne, Elizabeth, Hillside, Orange, Cedar Grove, are new applicants, and of our present participants, Newark, Kearny, and Bloomfield are ready to go into a new project.

Now, we are here today, because as of a few years ago there were not sufficient municipalities that were ready to finance a project. Three or four years ago, when bills were first introduced in the legislature, there were three, at the most. As of January first of this year, there were eight municipalities ready to commit themselves to the Round Valley project, and they paid $25,000. proportionately for that preliminary survey. And I might say that survey, I think, for the $25,000. was a little better prepared than the one for $165,000, because when it came to appraising real estate we did not take spot checks or make averages. Mr. Chairman, these municipalities are jealous of their rights and Home Rule, and they feel this is an intrusion by the proponents of this measure, not the legislature, to take over what is a local or district problem, simply because some municipalities that have not made, and perhaps one or two who have applied, might have a little difficulty in issuing bonds.

All we came to the Legislature for was to tell them that the people of this Stateneed additional water supplies, and that they need some financial help. The history of water development in this State is such that the large cities develop their water supplies, not only for their own use, but for the use of neighboring and continguous municipalities, and they therefore serve a very useful and functional purpose. The City of Newark has been outstanding in the development of water supplies. They have more water than the City of Newark needs, but they are supplying many other municipalities, and many other private water companies in an effort to obtain a good neighbor. And I think that is a thing that should not be forgotten. The Passaic Valley Water Commission has more water than it needs for the cities of Passaic, Paterson, and Clifton, and they too

serve many more municipalities, and have helped out the Hackensack Water Company. And the City of Jersey City likewise has done the same thing. And so the opinion of these municipalities should not be cast aside. And simply because a few of the suburban municipalities do not have the financial resources to go into a project, the State should not seek to grasp control of private and public water supplies that are developed on a local basis.

Now you, Mr. Chairman, and others have asked this question: Are these eight municipalities ready to do this job? And we say to you they are ready to do the job, and they are ready to have any minor legislation necessary to assist one or two that might need it to clarify the bond law. But there are many other municipalities that are waiting to see what happens, and if they are told that they can be helped by the State by a loan of money, they will join in this project. And I want you to know that we have operated under the present law more than adequately to take care of not only the applicants, but of many other cities in the State. We find that in our operation, that in the cooperation and the consultation that we have with our municipal participants, it has been helpful in presenting the viewpoints of the consumers of the northern part of New Jersey. We find that that has been more important. Whereas, if the State should take over, you will find that everybody has let the State pick up the tag.

Now, the State should not use this as an opportunity to seize control and dominate, and to order and direct municipalities that know what they are doing. The men that we represent, not just our own engineers, but the engineers who are most capable of knowing the water problem, they say, give us the money, and we will have the water. And the North Jersey Commission was able years ago to have these cities join together, and as of a few years ago, we were able to have more of them join together to build the Ramapo project for five million dollars, and that has been a life saver for more than New Jersey. But

for the State to come in in one fell swoop, and throw the Division of Water Policy and Supply out the window, and to throw the North Jersey Commission out the window, and all the municipalities and private water companies and tell them they don't know how to manage their business, is an absolute falsehood, because these municipalities are well able to do it. But if your have laws on the books that prevent these municipalities from issuing bonds, then you can correct it, and I know that they can sell those bonds.

Now, of the eight cities that apply here today, there are six of them who are fully capable of issuing their own bonds without any trouble. The City of Elizabeth is fully capable, except for a minor technicality, and I want to explain it to you. The City of Elizabeth has a water board, separate and apart from its municipal government, and they have operated their municipal water system by buying water from the City of Newark and the Elizabethtown Water Company. But the men at the head of that, and in charge of it, were very conservative, and instead of accumulating surplus at the end of the year, they reduced the water bills. And so when the time came for them to issue bonds, they had no way of obtaining a profit, and yet every one knows that the water rates of the City of Elizabeth are fair, and could be raised very slightly so these bonds could be issued.

As for the City of Bayonne, a city of 80,000 people, they were obligated on some sewer projects, and they had to issue a lot of bonds. And so these matters, as I want to point out to you, are purely financial, and that is all there is to it. The rest of it has been injected, gentlemen, for other reasons.

Now, we find that the engineers base their opposition to the Round Valley project on two principal points. One of them being the cost, and the other is the difficulty in obtaining water from the Delaware River for the second stage of this development. The first stage, and there has been a lot of misconception as to what the Supreme Court means in its decree - and I had the

good fortune of serving under Republican Governor Driscoll, and Democratic Governor Meyner, with the Attorney General's Office - that decree, and I had a lot of negotiation, and I think I can speak with some authority - there were members of the Division of Water Policy and Supply, both lawyers and engineers, and the Chairman of the Board, who helped to make up this settlement with New Jersey and Pennsylvania. We obtained a very valuable right from the City of New York and the State of New York. We raised the minimum flow almost three to four times over what it was in the decree of 1930. The Supreme Court decree guarantees a flow at Port Jervis by the City of New York on the worst day of the worst month of the worst year of 12 hundred million gallons a day at Port Jervis. And you knew that there are a number of streams that flow into the Delaware below that point and above that point which we expected would divert th. Lehigh, the Musconetcong, the Flatbrook, and the others. Now, in addition to that we felt that the City of New York was overstating its case, and perhaps taking too much water out of the Delaware. And there was a sharp difference of opinion between the State of New York and Pennsylvania, and New Jersey, as to whether they were going to need this water. And, after long negotiations, it was settled in the decree that 83 percent of the unused yield on the City of New York, which amounts to about 600 million gallons a day be let down the river during the four summer months, or at any other time that the river master found it necessary. It is an important compensation flow. On the other hand, if New York City should use, or find it necessary to use that water, then it will not be obligated to add that bonus, as we call it. But our figures indicate that most of this bonus water, as we call it, will be available to the State of New Jersey and the State of Pennsylvania for the next 40 or 50 years

and so that is the compensation which we find it is not necessary to produce at this time. We would be wasting our money to build any compensating water so long as New York is providing that flow. And after 50 years or more is over, New York is still bound to leave 1200 million gallons a day down to Port Jervis under all conditions. Now, what is New Jersey taking out of the water shed? We are taking practically nothing out in comparison to the flow that river has, and I am talking about the minimum flow, not the average or maximum flow. Out of the minimum flow, we have a right to take 100 million gallons a day without any compensation. But above that, we have a right to take whatever we need in the State of New Jersey. And the only thing that the State of Pennsylvania can do is to question whether compensation water is needed. But I am telling you from these facts that when the City of New York is required to let down 70 million gallons of water, that we would be throwing our money down the sewer to build any compensating reservoir.

Now, there is a big point made in this report that there is a serious problem in respect to inter-state water. But the first stage does not include the inter-state water, and the first project is supposed to take five years in development. Certainly, five years is enough time to work out with the State of Pennsylvania what the compensation would be, and if any is required, and if they are adamant, the Supreme Court is our guardian, and that is the place it is to be settled. So, we don't have to delay Round Valley, or any other Delaware project because it happens to be inter-state waters. Otherwise, we wasted the State's money in this litigation. We though we accomplished something and gained something, and therefore I say to these engineers, who are engineers, and not lawyers, that this is no obstacle, and should be no obstacle to any plan in developing water from the Delaware River.

Now, it is admitted by these engineers in their discussion of the two projects, they say, "Furthermore the Round Valley and Chimney Rock sites were found to be the only major storage sites capable of supplying the demand at reasonable cost." And so Round Valley must be considered, and was considered by these engineers, to be a matterof reasonable cost. And if the cost is reasonable, then we ought to consider what the advantages are, and not the disadvantages of each of the proposed projects. And we take the same position as the Mayor of the City of Newark. The final judgment of determining whether Chimney Rock or Round Valley should be developed is for you gentlemen to decide and if, in your final judgment, after hearing all the facts, you feel that Chimney Rock is the right thing, we are in favor of that production of water. But we feel that your eyes should be opened, and that you should listen to what the difficulties are, because you will face them i. the future.

Now here are some of the comparisons. The Chimney Rock reservoir has 32 million gallons in storage capacity, whereas Round Valley has 50 million. Now, in this report, and any water engineer will bear this out, storage is a very important factor in any reservoir. Its purpose is not only to conserve waters during the periods of plenty as against the dry periods, but it has a great effect upon the quality of the water and its treatment. In fact, these engineers say that the difficulty with the Elizabethtown plan is that the reservoirs are too shallow. And yet they did not directly answer you here today to tell you that the average depth of Chimney Rock is 28.4 feet, and that the average depth of Round Valley is 50 feet. That is almost twice as much. And so we cannot understand why the criticism, if it is sound against Elizabethtown Water Company, should not be a very important factor in their consideration of Round Valley. The difference in 50 percent capacity cannot be passed over lightly by Mr. McCarthy, by a little double talk. When you have 50 percent more capacity, you can store 50 percent more water. Now, the difficulty with the Chimney Rock program is that there is a

ceiling of 200 million gallons a day on the Chimney Rock Reservoir. And, in fact, there is a serious question whether they can get 180 from the flow, and they still have to borrow 20 million gallons from the D & R Canal, which is a duplication. But when you consider the Round Valley water supply, the south branch of the Raritan, and the Delaware River, with its huge quantities of water, you can develop Round Valley to over 300 million. And so you cannot compare them, because they are not the same, and you are not getting the same for your money.

Now, in addition to that, let's consider the quality of water - and I want you to know that these proposals originated with the engineers of the State Division of Water Policy and Supply in north Jersey - thirty years ago our commission drew a report and recommended Chimney Rock - a very detailed report - but at that time they recommended the reservoir be 50 billion gallon storage, and not 32. They also recommended that the water not be taken from the lower Raritan, which was polluted, but to takeit from the upper reaches of the upland source of the Raritan. We as a public agency have always felt - and I know the Division of Water Policy feels the same way, because it has been in their reports - quality is not to be overlooked. It is important, and the public expects the best water, and not the cheapest water. And the Supreme Court of the United States, when the City of New York sought the upper reaches of the Delaware, and passed up the Hudson River, they held in that case that a city has not only a duty, but an obligation, to seek the best. And I see no reason for throwing that policy away today. You should consider that the City of New York goes 150 miles to the upper reaches of the Delaware to procure the highest quality water, and passes up one of the greatest sources of water supply in this nation, the Hudson River, which they could pick up practically at their doorstep at a very nominal cost. But the City of New York is proud of its water supply, and their citizens are proud of it. And if you drink water in one area, you will understand the difference of quality.

Now, some quality, of course, can be removed by filtration. It is bound to leave some little difference in taste. But hardness is important to industry, and the home, and other factors are important. And I think that when the State of New Jersey considers the serious aspect of going into the water business, it should not make the mis-step of picking the worst quality, but should seek the highest quality. Because I am sure if we ever recommended that, the North Jersey Commission would be condemned in these legislative halls no end.

Now, the elevation between these two reservoirs is substantially different, and that has a great effect on the operation of a reservoir. The top elevation of Round Valley would be 380 feet above sea level, whereas the top elevation of Chimney Rock is 280. I am not an engineer, and I am not going to try to explain to you the difference, but as laymen I think you can understand the rule of gravity as well as I can, and that has a very important function in the development of a water supply.

Now, the North Jersey Commission, in its many applications, received objections, as many water supply projects do. We have always felt that the right thing to do is to disturb the fewest amount of families in the development of public water supply. And I think private water systems have followed that same policy. There has been talk here of 350 families, and 447 families. We think their rights are important. We do not think any water engineer is going to say it should be the only controlling consideration, but it is a substantial consideration to disturb the lives and well-being of 447 families, and in an average of four, it is a couple thousand of people. And I do not think we ought to just walk over those people unless we are really sure that it is necessary to do so.

Now, of course, in the taking of the ratables, it seems to me another consideration should be, are we taking valuable lands, or are we taking cheaper

lands. The difference in the real estate cost between the two naturally is going to affect the ratable situation, and not just the ratable situation, but the ability of areas to develop. And we think that is an important consideration.

We have to disagree with Mr. McCarthy, and I think we could prove it by cross examination, but I have to make the statement based upon what I am told, and that is that the development of Round Valley by the use of the south branch of the Raritan restricts the Elizabethtown Water Company in their proposed developments in a very minor degree, perhaps to the extent of 10 or 12 million gallons of their proposed 144 gallon plan. But we have to disagree with Mr. McCarthy that there is going to be an opportunity for the Elizabethtown Water Company to expand, if they are going to take 180 million gallons a day at the tail end of the river. I think the Elizabethtown Company can answer that for themselves. But in our plan, we have always tried to plan parallel to private agencies that have served a good public useful purpose. We have never tried to restrict, or put people out of business and destroy their future plans. We think the Elizabethtown Water Company, the Hackensack Water Company, and many others, have served a useful purpose. This is a business that is not restricted to the public alone; it simply has the public interest. But they should be considered, and we say our plan leaves them in business; leaves them room to expand, but that the Chimney Rock plan does not.

Now, the ability to expand the Round Valley project by a minimum of 100 million gallons more than Chimney Rock for future use is something that we think is very important. The difference between a plant locating in a congested city area, with no extra land, and an industry located in a suburban area, with some extra acreage to prepare for future use, should not be considered lightly, and say we will cross that bridge when we get there. Because this report indicates that after Chimney Rock is finished, Round Valley may be a good project to take care of Somerset County and local interests. So that could be

50 or 100 million gallons with the greatest stretch of the imagination. Now, that would simply mean that you have built two reservoirs when you should only have built one, and that is a factor which you must take into consideration.

Now, we think it has been clearly brought to the attention of this committee, and the people who are here, the public, that actually this development of Chimney Rock is not a development for 200 million gallons a day. It does not produce an additional 200 million gallons a day; it only produces 180 million gallons a day, if it exists. And therefore in calculating the cost per million gallons, you must divide the total cost by 180 million gallons, and not 200 million gallons, because as Assemblyman Stepacoff pointed out, you are simply taking water which is available and stored in a canal, and putting it through a reservoir, and bringing it back again. And that does not increase the ultimate yield of the total resources of the State of New Jersey.

Now, we think there is another reason we think Round Valley has a greater merit, and should be considered. It is the interference with industry that may develop, and that presently exists on the lower Raritan, and above the point of the proposed diversion at Bound Brook. The Round Valley plan envisages taking the water very far upstream. It takes a much lesser quantity, but we find from our studies that we will not interfere with the future industrial development that was pointed out here by the representative of the American Cyanide Company. We think there is great room for industry to locate along the river where they just need water for cooling purposes, and that is an important item in the future development of that area.

Now, we prepared, and will submit to the Committee, a comparison of the cost of the two projects with respect to the first stage, and with respect to the final stage. For the purpose of my discussion here, I would like to review the first item, real estate and right of way. Our figure was 3,270,000 dollars. The

engineers for the legislature fixed that at $4,895,000. We made a detailed appraisal of Round Valley. We hired five independent appraisers who live in Hunterdon County, and they appraised the reservoir site for $1,700,000. And we asked them to be liberal. The balance of our figures is for right of way purposes. We understand that as of a recent meeting held in the Governor's office, that these engineers admitted they had only made a spot check appraisal. We think that the detailed appraisal should carry much greater weight, unless the independent appraisers in that county did not give us the right information. And I might say we obtained them from both political parties to make sure they are right, and they checked each others figures.

Now, with respect to reservoir construction, our figure was higher than their's by about a million and a half dollars. On the pumping station, we were higher than they were. On the treatment plant and booster pump station, we were lower by far. On the transmission main, and balancing reservoir, there was a slight difference. Taking the engineering, legal, and administration, the interest during construction, it is indicated that according to our figures, the cost per million gallons for the first stage of Round Valley was $815,645. The consulting engineers indicated that their figures were $856,300. We think the principal part of that difference is made up by the difference in the real estate cost. But for all intents and purposes, the estimates of the consulting engineers reaffirmed our own figures with respect to our construction of Round Valley. Now, when it came to Chimney Rock, their estimates were 51 million, and the average was $744,100 per million gallons. And I wouldn't blame this on the engineers, because there are situations that developed, and because they are not familiar with local interests, and have not gone through the mill, so to speak, they could not anticipate some of the problems which I think men living in the locality, having 30 years experience, could have anticipated, and they are as follows. The

compensating reservoir, because of the great taking of 30 percent of the river, we could foresee there would be at least 4 million dollars, and I understand that figure is raised today to about 4 and a half or five.

In addition to that, there is a causeway. Now, with respect to the causeway, we are not highway engineers, but we do see from the map that approximately three-quarters to a mile of causeway will be necessary. We think that is a very long causeway. We have a causeway that we constructed across our reservoir 25 years ago of 500 feet, and it cost us $250,000. Considering that prices are about three times what they were, that 500 feet would cost $750,000 today, and if they have seven or eight times that, it will cost nearer four or five million dollars, and not less than a million dollars. From our layman's knowledge, we have yet to find that they would be able to build a normal highway for a million dollars, and especially when it is a causeway. And necessarily there has got to be some bridge construction to let the water go through from one side to the other. Naturally, the legislature has at its call the State Highway Department who can certainly verify that figure. The bill, although not recommended by the engineers that the taxes be paid to the locality, and that they be reimbursed, nevertheless, the legislation does include the payment which we understand to be $150,000. a year. Now, the North Jersey Commission pays taxes too, but the taxes in Round Valley will be about 20 to 25 thousand dollars a year, whereas at Chimney Rock they will be about $150,000 or more a year. In order to compare these projects, you must capitalize the perpetual cost of that item. Now, it would be much better if you could pay it off in 35 years, but the way the bill is written, you can never pay it off, and so it is a double liability. It is not a liability for 35 years; it is a liability forever, and the capitalization of that cannot be less than $6,000,000. Now, because of these added costs, and because of the other items which we know will develop, we think their engineering cost, and additional interest rates will cost them another million. And so for the first

stage of the project, we find that they have a total true cost, real cost, of this will be $69,810,000., or $97,000 per million gallons, as compared with $815,000 under our figures, and $856,000 under the consulting engineers figures.

Now, one other item I left out. It is quite clear now from what we have heard here, and what we know, and we think the people are reliable, there will be an additional hundred homes that will have to obtain the difference between $350., and $400. Figuring 100 homes at $20,000 - and I understand that figure was more or less acceded to by Mr. McCarthy at the Governor's conference, you have to add another $2,000,000.. That will bring it up to the $698-. Now, those are the items which you have to consider if you are talking about purchasing. For the first stage, you are going to pay more, and you are not getting the future possibilities that exist in Round Valley.

Now, as to the complete estimate, we have prepared here a sheet showing the total cost of Round Valley by North Jersey; another column showed Round Valley by the consulting engineers, and probably the revision of Round Valley and the consulting engineers estimate of Chimney Rock. And probably revision is indicated by many things that have been said, and are being said. Now, I might say that there is - and you don't have to be an engineer to see that there is bound to be a difference in thinking of the transmissioning. All you have to do is look at the map, and you say that Round Valley is 18 miles further west than Chimney Rock, and we didn't have to spend $165,000. to find that out. But no one can tell with any degree of certainty where the water will be needed. I believe many real estate men have made many mistakes in not buying a lot of acreage, because ten years ago they didn't think acreage was going to be utilized. We have planned the second stage of Round Valley with much shorter pipe lines than that planned by these engineers, because wefeel that the area of need will be different. We know, and they say now that it was only for the purpose of comparison, that they were going

to deliver 200 million gallons a day at the end of the Elizabeth pipe line. There are no facilities to handle such quantities of water, and there is no such demand at that point. You must remember that all the present large reservoirs are northwest, and generally flow southeast. And what we were trying to do with Chimney Rock and Round Valley both is to bring water up from the south, so we would have an integrated system. And we have pools of water at one end, and pools of water at the other end, so we could handle water wherever the demands might require it. But to bring 200 million gallons to Elizabeth is just building a lot of pipe line for nothing, and anybody that anticipates it that way doesn't know the facts of water experience. The City of Elizabeth has a limit on what it can use. It may increase its per capita consumption, but can it locate the tremendous industrial plants that can use large quantities of water. And the same thing is true in the City of Newark, and all large congested cities. These industries, who are the largest consumers, and who consume two-thirds of the water there in northern New Jersey will determine the average need. And if they could tell us today where they are going to be located, we would know whether or not we are right, or they are right. But the difference in transmission lines should not necessarily at this time, when it is a pure guess on anyone's part, determine the difference in cost between two projects.

We have increased west of Round Valley from industry when the Round Valley plan was announced. Industry is interested to know that it can locate in the more sparsely populated section of the State. And if they know that Round Valley is there, and will produce water at that point, they will look in that area for development, because they too are limited by the places they are going to go to by the quantity of water.

Now, in this probable revision of figures, we want to say there are some other differences. We find that we reduce our acquisition cost of lands to the

figure which we know we can substantiate. When it came to reservoir construction, we didn't quibble too much on that. When it came to the pumping station and the main, we didn't quibble too much on that. When it came to the treatment plant, and booster pumping station, there we must differ with the engineers, and subtract 4 million dollars from their figure, because it is obvious to us from their figures that they are treating water from the south branch of a higher quality as though it were polluted lower Raritan water. The type of treatment which we propose is pressure filtration while there is, we understand, gravity filtration. And so there is a difference in cost of 4 million dollars in capital cost for the treatment of one water as compared with the other.

Now, without going through each figure, but I want to give this to the committee, I might say that if the North Jersey District Water Commission's figures are correct - and I might say they have been reviewed by competent engineers representing these municipalities, and we stand by these figures, then the cost of the development of Round Valley for 200 million gallons will be approximately 85 million dollars, which the consulting engineers say will be $143-. The probable revision of the consulting engineers figures, subtracting some of the items which I mentioned, would bring that figure down to 134 million, if we leave all the transmission mains in that they consider. But when it comes to Chimney Rock, the consulting engineers figure 200 million at 102 million dollars capital investment. And we find the necessary revisions that have been discussed would bring that cost up to $120,650. Now the cost per million gallons for the development of one million gallons a day represents 603 thousand dollars under the probable revised Chimney Rock plan, if you divide the cost by 200 million gallons. But if you divide it by 180, which is the true amount of water which they are going to produce, then the figure per million gallons comes to about $670,278, as against our figure of $423,000 for the probable revision of their figures in

leaving the transmission mains in of 783,000. So that in the end, we are either going to be substantially cheaper than they are, or at the worst, if our figures are wrong, we are going to equal their figures. Now, maybe the engineers play with statistics, and maybe they can't. But our commission has had experienced engineers. Our last project was estimated at the cost of $5,000,000., and it cost $5,000,000. It didn't cost ten; it didn't cost twenty, or any other such figure. People have handed me information that one of the men associated with this firm made a very bad error in estimating his cost in Kearney, but I am not going to hold that against these engineers. I think they want to do the right thing, but I do not think they have had the experience in the development of water supplies that many people believe. I think they are very competent engineers. I think they know their business. But from what we understand, only 2 percent of their business ever involved water supplies, and I do not think you can substitute that knowledge for the 30 years experience of the combined thinking of the engineers of all these municipalities, and the North Jersey Water Commission.

Now, we have a point we would like to make here. We believe that the second stage of either Chimney Rock or Round Valley may not require attention for at least forty to fifty years, according to the engineers' preliminary report, page 1-18. They indicate that a total of 659 million gallons a day will be required by northern New Jersey in the year 2000. That shows that an additional amount of 239 million gallons over the present yield will be required. Now, Round Valley, or Chimny Rock, can produce 70 million gallons a day in its first stage. We find that the expansion of the three systems will not produce 77, but rather approximately 62 million gallons. The Elizabetown Water Company, under the Round Valley plan, would be free to utilize its reserve of 25 million gallons a day, which it has at the present time, and would be able to develop further supplies for 70 million gallons a day if they think it is advisable. The

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Hackensack Water Company is expanding its system from 10 to 20 million gallons a day, and the D & R Canal has 20 million gallons a day which is available. That makes a total of 258 million gallons a day which would meet the need, as estimated by these engineers, to the municipalities, to the year 2000. So we are not involved at this time necessarily with the second stage of development. And I say, therefore, the second stage of the development, although it should be considered as part of the whole, should not necessarily determine the attitude of the legislature at this time, because 50 years is as far as you can look ahead in water. We don't know what the situation will be then, but at least we will know that if we have to go to the Delaware, it is available to us for large quantities of water to meet the future needs of not only northern New Jersey, but western New Jersey as well, and central New Jersey, and South Jersey.

We asked a question here today of the engineers, because there was no underlying da . There appeared in the report, near the end, the cost per million gallons of various developments. The question was answered by Mr. McCarthy, and he said that the treatment cost, the operating cost, and all other costs, excluding principal and interest, was $23. a million gallons. Those figures do not bear out the figures which he had on this page, because if you are going to capitalize 57 or 59 million dollars, or approximately that figure, at two and a half percent or two and a half percent amortization, or any such figure, and get an average rate, you will find that about $90. per million gallons is the cost of the water of a 70 million gallon a day project. The difference between 90 and 147 is $57.00. The difference between 90 and 163 is $73.00. And they haven't satisfactorily answered why the operating cost, or whatever others there are hidden in the figures, would lead anyone to believe that water is going to cost that on either project, and we can never tell that until they break it down. But I am sure with this $23.00 a million gallons, these figures will not stand up.

Whereas, if you look at the report of North Jersey, it is just a very simple schedule which appears on page 19 of the report. The yield of the project was 70 million gallons a day; total cost of the project, 57 million; interest rate two and a half percent; annual debt service $2,270,880; annual cost of operation $700,000., making a cost per million gallons of $116. Now, there is something wrong with their arithmatic, or there are some costs here they are not telling us about. But we know, and these other agencies know they can produce water for less cost than was represented it can be produced for in this report.

Now, we think that the legislature is imposing a great burden on this committee to make such a recommendation. But if Chimney Rock is what they want, as I said before, all the municipalities desire that I express the thought that they want the water, but after careful examination, they are willing to put their money into Round Valley if they are given a choice, rather than putting their money into Chimney Rock. And I think those municipalities who are willing to put up the money ought to have that considered, because I do not think they want to throw away 40 million dollars.

Now, of course, the North Jersey District Water Supply Commission operates in such a manner that there is no tax on real estate. The consumers and the water systems assume the burden. We are nothing more than a combined municipal development water source. They issue their bonds; they commit themselves to take a certain amount of water, and they pay for it whether they use it or not, and they spread the cost of that over their other water cost. That has worked successfully for 30 years. And I think if you ask most municipalities, they feel that they would like to do that, because at the end of 35 years or 40 years, they own something, and they own it free of a mortgage, just as a man who owns a house under an FHA mortgage. But if the State is going to take this over, and the bonds are paid off, who is going to get the benefit of that? Are those

revenues going to the general State treasury that were paid for by the people of northern New Jersey and northeastern New Jersey? And is the proposed tax which was collected for them, the capital tax to provide the capital for this to be invested in the State of New Jersey, and have the State of New Jersey make the profit? I don't think that was what was intended, but that is the way it works out. Now, we have recommended that Senate Bill 214 be considered, because it represents a program for the whole State of New Jersey, not just the northeastern section. You may recall the provisions of that bill, that there is no project mentioned; there is no district mentioned; there is no area mentioned. It represents loans to municipalities in any part of the State, and can be used by any agency in any part of the State that can convince the committee set up under the bill that it requires a loan. And I am sure that the legislature will set up a proper committee to loan this money out, as they did in other cases, for veterans housing, veterans loans, and what not. But in that way, you will preserve the municipal interest in the project; you will keep the State out of the water business; and you will encourage municipalities that may find it a little bit difficult to put up money today to withdraw the excuses that they may have today. At least the State should try it out. It should find out whether these municipalities are sincere, and whether they are willing to borrow the money, and obligate themselves to pay this money back. In that way, there is no complicated inequitable tax formula, and assessment formula.

Now, let me say this with respect to the financial stability of this bond issue. There is a serious constitutional and legal question as to the tax that is mentioned in that bill and in Assembly 595. As has been indicated here to some degree, there is a question whether certain counties are being benefited, and yet the legislature, in effect, says you are benefited. And I read in the newspapers that there has been some talk about the New Jersey Turnpike compulsory financing

with respect to voting machines in your county, Senator Summerill. And I know you don't like it when the legislature says to you that this is what you are going to do whether you like it or not. And I find that the rest of the members of the legislature felt that was a little high-handed, and modified their position. And we in North Jersey don't like to have the legislature say to us - you must do this, and you must dothat, whether it is good or bad for you, whether it affects the financial stability of your water system, in something in which the State should only have a secondary interest, and not a primary interest. The secondary interest is important. It is your duty to see that the municipalities and the private water companies perform their functions, but we are trying to explain to you that if you will loan us the money, you will cut the time element down to zero. But if you say that the people of New Jersey turn down the bond issue, North Jersey is not going to be without water, because the municipalities will find a way to finance it, and the strong ones will help the weak ones. And I might say, while Mayor Carlin is here, what he is doing for the City of Newark, and what the City of Newark is doing is most commendable, because what he is doing is trying to help Newark's neighbors whom he considers part of metropolitan Newark, and I think it is a worthwhile method.

I think you should give the municipalities the right to work cooperatively. I think you ought to try to loan the money to them, and take the proper security for the return of the money. I think you ought to insure that New Jersey has an over-all comprehensive water plan. We think you should give the State Water Policy Commission the power and the money to prepare such a plan. We think all water developments ought to fit into a master plan, just as you do with zoning - you have a planning board, and you have a board of adjustment. And they should be the planning board, and they should have the money to determine the best methods of meeting the supplies of South Jersey, West Jersey, or North

Jersey. We think they should be given the power to eliminate any inequities that may exist. We think they should be given the power to force interconnections between systems where voluntary arrangements are not made timely. We don't object to a State agency having supervisory control. We think that it is important that the people in this valley who are not protected under this bill about the taking of above 130 million gallons should have a full and complete hearing, as everyone gets before the Water Policy and Supply Council, that has the understanding to resolve the question that was raised here today, as to whether that average flow is the right way to calculate a reservoir or a daily flow. And we don't think it is necessary at this type of a hearing for us to try to indoctrinate you busy members of the legislature, and try to tell you that when it is an on-river proposition you can use averages, but when you have an off-river proposition, you must use daily flow. And although we didn't make and try to contradict the ability of Chimney Rock to take 180 million gallons a day, the utter ridiculous position taken by Mr. McCarthy that you should approve the expenditure of 70 some odd million dollars on an average monthly flow record, I think, is preposterous. Because all you have to do is to take the flow of the last 30 days prior to today in the Raritan River, and if you took the average, you could have pumped 380 million gallons a day for 30 days, which would produce over 10 billion, 400 million gallons of water. That is what his method of reckoning would have produced. Whereas, if you took the true facts, and you found that you could only take 380 million gallons a day for four days, all you would have gotten was a billion. And so, under Mr. McCarthy's method, you would have been nine billion gallons short, and I don't think that is the way to measure the water supply for the people of New Jersey. And as to these gentlemen here who say they have a hydrograph, and a hydrograph is the most important determination in the development of water supply, I think you ought to examine that hydrograph. You

ought to have somebody from the Water Supply Commission check the very voluminous figures that are necessary to make that up, and determine whether or not the representation that was made here today is true or not, and not listen to a lot of double talk. Engineers can check those figures, and it is a long and lengthy proposition. But to try to sell us a bill of goods for 180 million gallons a day on the Raritan River, when it may not exist, I think is dangerous representation.

Now, with respect to these bills, I might say that I did work with others in drafting many bills for the legislature, trying to express the thoughts they had from time to time, and I find that Senate Bill 22 which I drafted, with others, was used for the basis of the present Senate bill with a lot of new paragraphs thrown in. Assembly Bill 595, in my opinion, is a hodge podge of duplications and contradictions, and goes far beyond the representations made in the report. And on the other hand, it is deficient in putting in some of the things that are most important to the people in the Raritan Valley, and that is the limitation of not taking above 130 million gallons a day.

Also, are they going to build a causeway? Also, are they going to have some of the compensating reservoir? This bill creates a water board, and practically and for all intents and purposes, abolishes the State Water Policy and Supply Commission, and it is going to recommend the appointment of five men to be appointed by the Governor without salary in the beginning, but the implication is that there is going to be a salary later on. And it says that you are the boss for the whole State of New Jersey. It isn't clear from this whether their powers are so broad and vast that they can take over the whole system. In one place they say they can; in another paragraph it says they cannot. We cannot understand the meaning of this bill. It would take me a few hours to itemize each question that is raised here. The idea, though, of trying to, by force - I call it that - take over the right to expand the three existing water systems, I think has been very

well defended here today. But in the bond bill it appears, and the people will vote on the bond bill, and not the other bill, it appears that the board shall not undertake such an increase in the dependable yield - that is on page 5, paragraph 5 an increase of the dependable yield of an existing system unless it shall first give the system notice and an opportunity to be heard. The board shall permit an existing water supply to undertake it in its own behalf. If I had not seen the other bill, and I read this, I would think that each of these agencies would have the absolute right to build it themselves. But if you read 595, it doesn't say that. 595 says after such hearing, the owner may submit a plan of procedure offering to undertake the proposed project on its behalf, period. If the board finds that such plan and procedure is feasible, and it provides a statement of reasonable assurance of a prompt completion of the project, the board shall authorize it. So that it is the new board that is going to determine whether or not these existing agencies are going to be able to expand. It is not an absolute right.

I only point this out as one indication of this bill. This bill has the broadest powers of any water bill I have ever seen, and I have been in the legislature and read every one of them for the past 18 years. And I have sat as chairman of the committee, Senator Summerill, as you have, in which State water authorities were proposed time and time again. And in every instance the legislature turned down such an authority because they didn't feel that it was necessary for the proper protection of water supply. Unfortunately, the legislature could never be convinced that it was necessary for them to give some help in the intervening past 15 or 20 years. And the legislative committee report indicates that they feel there might be a little negligence on the part of the legislature, and I don't want to blame them for it. Perhaps we are to blame. Perhaps we couldn't convince the people of New Jersey that it was

necessary to do a job. But in any event, if this bill passes, the financial stability of every water system in this State is in jeopardy.

Assemblyman Stepacoff this morning started to touch on the very thing that I am trying to point out. We are going from a famine to a feast. The engineers recommend the immediate development of 77 million, and at the same time, 70 million. So within five years, they want to build 140 million gallons. We know, considering wet and dry years, you are talking about dry years when you talk about 147 million gallons. When you talk about wet years, there is much more water in each of these individual systems. It is very important in understanding water phraseology that we are talking about the lowest, or the safe dependable years under the worst conditions. But if for the next five years, you have five wet years, there isn't a municipality in the State that isgoing to try to buy any water from Chimney Rock. And we know, from the facts and figures indicated here, as the engineers indicate, that the water developed by the pancake hollow will be the cheapest development that there is, and they are going to sell their water at a reasonable price taking that cost into consideration. And so every municipality, including Elizabeth, and all these other customers, are going to buy from Passaic Valley, or from Jersey City, or from Newark, where the water is going to be cheaper. And as Assemblyman Stepacoff pointed out this morning, that Chimney Rock reservoir can stand there empty, and not just a tax on seven counties, but a tremendous interest cost and deficit charge. When you build water reservoirs, you should be prepared to build in stages. And the only reason we recommended Round Valley at this time is because we felt that it is a logical time for a large scale development in the south. And if that is built first by these municipalities, Passaic Valley, the City of Newark, the City of Jersey City, when they need the water for their customers, you can rest assured that they are going to develop it, and you will not have to urge them. But it will be wise

not to duplicate deficits and interests for a period of years when it is not necessary.

Now, in the legislative committee's report, not the engineer's report, on page 9, starting on the bottom of page 8, it says, "Hence, many existing systems, although recognizing the need for substantial additions of supply within the next two decades, are reluctant to undertake costly programs that will be unprofitable for at least a substantial period of time. In any event, it is apparent that no concrete plans are under way to produce the increases in the supply needed by 1960, and the period following up to 1975." Gentlemen, it was that statement that prompted us to ask the question this morning whether or not these engineers ever heard of our application by eight cities in hearings before the Water Policy and Supply Council. I think that the failure to even mention those proceedings was not fair to the members of the legislature who are going to read this and try to form a conclusion. Some of them may know, but I believe the majority of them may not know how far these municipalities have gone, and how far they are ready to go. And I don't think, in advocating a proposition, that it was fair to totally disregard what eight cities have done, and what the North Jersey and the Division of Water Policy are going through in order to create a project.

Now, I might say this, that there is one very simple source of water which we asked about in the questions, and that was about the Ramapo River. We know that there is a reserve for substantial quantities of water in the Ramapo River which can be used without the expenditure of five cents of capital cost. We are permitted under our grant in the State to take nine billion gallons of water under certain restrictions, and those restrictions are that we cannot take during June, July, August, and September. We also cannot take any water except for the flow above 40 million gallons a day. Now, in 1954, a dry year, we completed the project around January first. From January to June we pumped our full allotment

of 9 billion gallons of water. And although the balance of the year would have provided - and that is exclusive of the summer months - an additional six billion gallons a day, we were not permitted by this grant to take it. Now, I don't want to blame the Water Policy and Supply Council for that. It was the way the application was made, and a misinterpretation of certain testimony. But the Water Policy and Supply Council, I am sure, if water is needed in northern New Jersey, that they will cooperate and permit us to develop that grant to its ultimate capacity. Now, that is something that will produce water with no capital cost, and the only cost there will be is the pumping charge which is comparatively nominal. And so we are not going to run out of water in the northern part of New Jersey. We have enough water to carry over with these particular extra amounts. We know that the Hackensack Water Company can complete their project. So we don't want to create any unnecessary fear in the minds of people that we are running out of water tomorrow. But we do urge that developments do take place. We do urge that if the legislature wants to be helpful, it should be helpful to the whole State and not just a part of the State. We do believe that the northeastern part of New Jersey is the most critical of the group, but we don't think necessarily that all of the funds should be taken exclusively for northeastern New Jersey. And that is the reason that bill provides for 85 million dollars, rather than just for the first stage of Round Valley.

There is one amendment which we might suggest. We did put a provision in there that no project should be developed for less than 25 million gallons, and that was to prevent the money from being frittered away on small insignificant projects. We think that can be reduced to perhaps 10 or 15 million gallons to accommodate all of the State, where perhaps some of the projects should be developed for 25. We think there is reasonable room for the legislature to help, and to be of assistance in the development of water supply. But we certainly feel

that there is no need for a new layer of government.

And I might say this in commenting, that someone said to me in the hall about this little discussion we had this morning - and I think we ought to have a little humor after a lot of serious talk. One is that Chimney Rock, if you look at it in the report, is shaped like a boomerang. I don't know who it is going to hit back. I know we advocated it thirty years ago, and it has hit us back. I am wondering whether it is going to hit back those who advocate it now. But I also want to say this with respect to the using of the daily averages as against the monthly averages - I don't think you have to be an expert to understand that you don't draw checks on your banking account based on average deposits. It is what goes in to a reservoir that determines what you can use each day, and not averages.

I think this committee is to be commended for the time it has given the many people here, and the time it is going to give. Unfortunately, there has been more or less of a mental deadline placed on this water problem. The simplest thing that we suggested the State should do is propose Senate Bill 214. If there are any alternates in methods of financing you want to put in, add them in. But let the people vote on a referendum, and then if the people pass it, let the legislature determine which is the better method of handling the money for the purpose of building a reservoir. I don't want to recommend, nor does our commission, all of whom were appointed by the Governor, want to recommend any delay. We want a bond issue if possible. If you feel you want to encourage municipalities, make it a flexible bond issue so that these other questions can be resolved, and New Jersey can proceed to obtain its water supplies in a sensible manner.

Thank you very much.

MR. SUMMERILL: Mr. Wilensky, in the first part of your talk you mentioned the fact that most of the municipalities were prepared to go ahead

financially, but a few were not.

MR. WILENSKY: Not seriously.

MR. SUMMERILL: And did I understand you to say that some changes in our bond law would clear that up?

MR. WILENSKY: I am so advised.

MR. SUMMERILL: Are you prepared to say what those changes are, raising the debt limits, or excluding the debt, or what?

MR. WILENSKY: I might say this, that under the present law, as I understand it - I'm not a bond attorney - water projects are self-liquidating projects, and therefore are not in the bond limit. But where the municipality, because of its operation of its system, has not shown the ability, and hasn't raised the rates sufficient to make it a self-sustaining project, then they can't issue the bonds. The Public Utility Commission now must pass on the issue of those bonds to make sure that they will be liquidated as they are agreed to be. But unfortunately, as I said, Elizabeth operated one way, Bayonne operated another way, but they are not insurmountable, and they may be very minor changes in our legislation.

MR. SUMMERILL: Would you care to submit those to me later in writing in the next few days?

MR. WILENSKY: The necessary changes to the bond law which would enable the municipalities to finance it.

MR. SUMMERILL: That's right.

MR. WILENSKY: All right.

MR. SUMMERILL: And as I understand it, if those changes were made, the municipalities could proceed themselves with the financing, and not need State loan, or could sell their bonds in the market. Is that right?

MR. WILENSKY: That is right.

MR. SUMMERILL: Will you submit those to me?

MR. WILENSKY: Yes sir.

MR. FRANKLIN: Mr. Wilensky, assuming that this Chimney Rock proposition was adopted by the legislature, and then subsequently was passed in referendum, is it your feeling that these municipalities that you have been talking about would proceed with their application for the Round Valley project?

MR. WILENSKY: They have so indicated. We had two meetings within the past ten days in which representatives appeared and discussed this legislation and this report. Naturally, we didn't have the vote of each municipality, but the impression they have left with us all this time is that they want this project. Last week we had a hearing before the Water Policy and Supply Council. We put th officials on of each city, and each of them testified that they want this project, and they are ready to go ahead with it.

MR. FRANKLIN: Of course, we don't know what the legislature is going to do. But in the event that it should adopt legislation calling for a referendum on this Chimney Rock proposition, and the people in the State of New Jersey in the referendum express their desire for this Chimney Rock proposition, and authorize the bond issue, in that case have the representatives of these various municipalities indicated that they still want to go ahead with their application for the Round Valley project?

MR. WILENSKY: I don't think they could, because you would be pulling the rug right out from under them. You would be taxing these people, and there would be a duplication.

MAYOR CARLIN: I would like to make one observation for the City of Newark. If the legislature passes this present legislation, and the people adopt the referendum, I am certain that the City of Newark will withdraw from the Round Valley project.

MR. SUMMERILL: I have a question from Morgan Seiffert for Mr. Wilensky. Do you consider that it is proper for eight municipalities to develop under the North Jersey District Water Supply Commission all the water resources of North Jersey, and appropriate these resources for their use. And, is that not your present plan in your application to the Division of Water Supply?

MR. WILENSKY: No. I think that question arises from a misunderstanding first of our application. Our application says it is for eight cities, and any other cities that care to join. Our act provides that we must consider the application of any city as a participant who wants to come in, and this project was proposed for 200 million as an arbitrary figure so that all cities would know that there is room for additional cities to join. Now, in addition to that, we are obligated by law to sell water to any city, even though they are not a participant if the water supply is adequate. And at the present time, we are selling the City of Bayonne under that provision, and, in fact, we went to court over it. And we are compelled to sell them because the water supply is adequate, and they don't have a dollar invested in the project. The way this law was drawn - it was felt that municipalities should have a right to join, and there should be no limit on the number that can join. Only the size of the project limits the number of municipalities. May I say this, because many of our people are not familiar with the act, it is Chapter 5, Title 58 of the Revised Statutes.

MR. SUMMERILL: Mr. McCarthy, we have twelve minutes left, and this will be your last hearing, as I understand you are going away. Do you care to make any other comments before we close for the day?

MR. McCARTHY: Yes. I would like to speak once more on this matter of technique of analyzing reservoir capacity. Over the lunch hour, and during the past hour, we have taken the year 1949 which is the critical year for the capacity of the Chimney Rock reservoir, and we have examined the difference between a

daily analysis through this critical period and monthly average flow analysis. This morning I said I felt it might make a difference of three inches on the reservoir. Well, I was wrong. It would be four inches. Actually the increased draft on the reservoir is one-third of a billion gallons, which is roughly four inches on the reservoir. Instead of using 25 billion gallons you would use 25.3. Now that substantiates what any good and experienced hydrologist would realize, that during drought periods when you had your most serious draft on your reservoir, you very seldom get any appreciable flash flows, and they are the only ones that make a difference.

During this seven-month period in 1949 that became the critical one on Chimney Rock reservoir capacity, the two techniques of analysis make a difference of four inches.

I would like to thank Mr. Wilensky for his charitable statement that he finally found that he thought we were competent, that he is at least in agreement with a few thousand of our associate professional engineers and several hundred of our clients.

Now, as far as the percentage of work that our firm does in the water resources field, more than half of our work is in water resources, and I believe in that field we do more work than any other firm in the world. Now, if that experience is not adequate for the analysis of these water resources problems, then I would stand corrected.

Now, as far as the $165,000 is concerned, that is a ceiling on a reimbursement type of contract to carry through

December 15. During the period up to July 15, I don't have the figures in mind, but the chances are that our costs were in the neighborhood of thirty to thirty-five thousand dollars, and for that we covered a pretty broad field.

Again, I would like to make this offer: We have our detailed records of the analysis of the hydrology of our streams. These records were carefully developed by our own staff, by our consulting hydrologist, Professor Gordon Williams of L.I.T. He was for several years head of that department in our office and he is today one of the recognized experts in the consultant field in the country. We are confident that they are sound and that they are right. Now, there has been a very serious difference of interpretation of records made by others here, and I think that they should sit down with our engineers and let us see where they are wrong, if they are, and let them look at our records and see what they think of them and the computations. As a matter of fact, that would normally be a professional engineer's approach when reviewing anybody's work.

Now, just a brief comment on the memorandum of Metcalf and Eddy of last Friday. I thought it was a good memorandum. The observations and the questions raised are quite parallel to what we might have made if we had been making such an analysis. The normal procedure among professional engineers would have been first for the reviewing firm to advise the consulting engineer that he was making such a review and to await an invitation to come to his office and look over all supplementary data, which of course is on file in the course of any study. And that is still available. I might say that practically all

of the questions raised in that memorandum, which was a good professional analysis, have been considered by us. Most of them have been evaluated; some are still under study. The ones that were essential to the preliminary report were evaluated, and anyone from any serious interested source is welcome to come to our offices and look over our data and talk with our engineers. Within three days after our report was first submitted, we had two representatives from the Washington Valley visit us. We welcomed them and showed them everything we had. I think that it helped them to understand exactly what we proposed.

With respect to the costs quoted by Mr. Wilensky, all I can say is that our costs are prepared very carefully and in detail. We know that you can't take water in Round Valley and put it on horseback or turn it loose and let it fly down to the areas where you need it, but that you've got to convey it and it's going to cost some money, and I think our comparative estimates for Round Valley and Chimney Rock are true in each essential. Where we differed, even on minor items, I would say that we may have made a more complete engineering lay-out of the works; we have gotten preliminary quotations on all mechanical equipment and all conveyance equipment, on all filtration equipment, and we have worked pretty carefully with installation costs and with the other attendant costs in a construction project. I note that for the second stage of the Round Valley project, the North Jersey Commission estimated $300,000 additional for administration and engineering. We estimated three million odd. You just can't do that sort of thing for $300,000.

Now, as far as the causeway is concerned, we have made a detailed take-off of the yardage of fill, of the paving, of the drainage and flow structure, and we think we are on sound ground. I believe that the million and a half dollar figure that has been quoted was made for a divided-lane highway, that that was prepared by the Highway Department; they contacted us to get the information on where a causeway might go and the stationing and the heights of it, which we furnished, and in conversation at that time I asked what type of highway they were thinking of, and they said they had been instructed to estimate the cost of a divided-lane highway. Now, I would like to ask you all, in Washington Valley on a straight road crossing a reservoir, why should you have the only divided-lane highway anywhere back in the secondary road region? We just can't see the justification for that, but even at that, their estimate for a divided-lane highway was a million and a half dollars. It would not be four and a half million or four or five million dollars, as Mr. Wilensky guessed. You can't compare causeways in one reservoir and another, any more than you can compare apples and peaches, or whatever the previous allusion was.

We are using pressure filters at Chimney Rock just as we would use at Round Valley. The initial South Branch of the Raritan supply to Round Valley is of better quality than the Raritan water at Bound Brook, but it only taps 144 square miles of drainage area as against 780 square miles at Bound Brook. So it only taps a very small part of the Raritan. But when Round Valley takes water from the Delaware, the average quality of water entering Round Valley will be not better than and may not

be as good as the Raritan water. It is principally because of the pollution of the Delaware by the Lehigh River, up stream from the point of taking.

MR. SUMMERILL: I have a question here of Mr. Engelhard's. It says, "The figures Mr. McCarthy used to divide the taxes between the counties are based on a seventy million dollar proposition, while the amount of water to be divided is based on the final one hundred and two million dollar project." It says, "Is not this misleading?" Do you care to comment on that?

MR. McCARTHY: Would you repeat that, please, Senator Summerill?

(Question repeated).

MR. McCARTHY: That is incorrect on both counts. The figure used to divide the taxes is based on the assessed valuations of each of the counties - nothing to do with water in that division - and the amount of water that would be allotted to each county is based on the 77 million gallons on the three extension projects and the 70 million gallons in the first stage of Round Valley, or 147 million gallons.

MR. SUMMERILL: Thank you. Any other questions?

MR. ROACHE: Senator Summerill, my name I entered and asked if I could be heard. I am Director Roache of the Morris County Board of Freeholders, and you assured me that I would. We also wrote a letter in that we would like to be heard.

MR. SUMMERILL: We will be back here Wednesday at ten o'clock and will be here all day, so if you will be here we will be glad to see that you are heard.

MR. ROACHE: I'll be here.

MR. SUMMERILL: We will now adjourn until Wednesday at ten o'clock.

PUBLIC HEARING

on

SENATE AND ASSEMBLY BILLS ON WATER SUPPLY

Held:

Assembly Chamber
State House
Trenton, New Jersey
August 24, 1955

BEFORE:

SENATE AND ASSEMBLY COMMITTEES
on
REVISION AND AMENDMENT OF LAWS

Members of Committees Present:

Senator John M. Summerill, Jr., Chairman
Senator Thomas J. Hillery

Assemblyman David I. Stepacoff
Assemblyman William R. Vanderbilt
Assemblyman Benjamin Franklin, III

I N D E X

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MORNING SESSION - AUGUST 24, 1955

SENATOR JOHN M. SUMMERILL, JR. (CHAIRMAN): The meeting will come to order, and by reason of the fact that we have a mechanical recording machine here today also, I will ask that every speaker give his name in full and whom he represents before he speaks so that it will show up that way in the mechanical recorder.

The first man I am going to call on is Robert W. Kean, Jr., President of the Elizabethtown Water Company.

MR. KEAN: I am Robert W. Kean, Jr., President of the Elizabethtown Water Company. Mr. Chairman, members of the Legislative Committee, and water experts: It is with great reluctance that I appear as an opponent to the legislation here considered. It has been billed as legislation to create new water supply. If I believed it would create new water supply I would be its most ardent supporter.

Rather, it seems calculated to shrink the ultimate potential of the very water sources it claims to expand, and in so doing imposes an unusual and unnecessary financial burden upon the peoples who are being most injured.

I am here, then, defending the rights of the people of Middlesex, Somerset, and Union Counties, whose future growth depends entirely upon waters from the Raritan Valley.

Union County is a particularly good example. It was there that Elizabethtown Water Company was first given a legislative franchise over 100 years ago. For a long time, Union County got its needs from the Elizabeth River, the Rahway River, and from extensive well fields within its boundaries. Yet today there is no more undeveloped water left in Union County, and

its future growth is entirely dependent on the Raritan Valley. Its needs must be given primary consideration in any plan to develop the Raritan sources, as must the needs of all the counties lying in the Raritan watershed.

These people must have assurance that the Raritan Valley supplies will be developed economically and in such a way that their greatest potential expansion may be realized. The engineering report recently submitted to the Legislative Commission on Water Supply gives no such assurance.

Two outstanding errors occur in the Report. One is the assumption that by taking water from a storage canal and pumping it into a storage reservoir we would be creating new water supply. The other is the failure to recognize the compensating flow requirements must be exactly the same for an off-river as for an on-river storage project.

Once these two false premises are corrected, the facts assembled in the Report recommend on-river development of the Raritan, and the Chimney Rock project becomes economic and engineering nonsense.

There are four important conclusions to be drawn from this report:

1. New Jersey's water resources, if properly developed, will meet all needs for the foreseeable future.

2. It is far cheaper to expand existing supplies than to create large reservoir extravaganzas.

3. If Northern New Jersey's local projects, as shown in Chapter 3, Page 7, of the Report, are developed as needed, they will fill all requirements estimated in the Report (Chapter 1, Page 18) until the year 2000.

4. On-river development of the Raritan will be superior to the Chimney Rock storage plan, both with regard to quantity and cost.

What is this on-river development of the Raritan? It has been repeatedly referred to as the Elizabethtown plan. We have no pride of authorship, but we were the first to publicly advocate it, mainly because our obligation to our consumers gives us a vital interest in proper development of the Raritan.

We prefer to call it the Raritan Valley Plan, for it will directly benefit all present and future residents of the Valley by restoring the Raritan to what it was when it was given the name "Queen of Rivers." A series of dams and lakes can regulate the flows of the Raritan to over 300 million gallons daily. The floods of last week could instead be the water supplies for next month. The trunk sewers would no longer have compensation worries. Not only could present industries flourish and expand, but new ones could locate. Communities served by suppliers like ourselves could have confidence in the future, for we could continue to advertise, as we do today, "Water for Sale."

The population figures which I have referred to are those in the Report. When those population figures are corrected in the light of information that apparently was not available or not used in the Report, the case is even more striking that local supplies should be developed for local areas and would meet all needs for fifty years or more into the future.

We approach the grouping of counties from a slightly different angle than has been done in the report, because it seems more logical to us to approach it by means of watersheds. Bergen County has sufficient supplies within its boundaries that can be developed to meet all its needs in the foreseeable future. Therefore, they are a group by themselves. We then have the Passaic River counties - Hudson, Essex, and Passaic, which may be grouped together, both in terms of needs and supplies. The Engineer's Report has referred to 77 million gallons daily that can be developed from local supplies to meet the needs of this area, this three-county grouping. The needs of these areas when their population figures are translated into million gallons daily growth are only 45.6 for the next 50 years. If you deduct from that the eight million gallons that Essex County is now sending over to Union County, through means of its Newark-Elizabeth connection, and which could easily be supplied from Union County sources, you get a total of 37.8 million gallons daily requirements for these three Passaic River counties for the next 50 years. That is less than half of the local supply which can be developed in those territories, according to the Engineer's Report.

The third and largest natural grouping of counties is the Raritan group. It is here that your great needs are going to be realized and it is here that fortunately we have the largest potential water supply, the supply of the Raritan Valley, the River and the Canal. The counties which are going to need those supplies in the future are Union, Middlesex, Somerset, Morris, Hunterdon, and Mercer. Those counties form a natural group and those counties will have access to supplies in the river as long as they are developed in the river and not pumped out to some other project which will be out of their reach. The demands of those counties within the next 50 years will probably exceed 100 million gallons. Fortunately, the water can be developed from those sources and it seems logical that those counties will not have any concern waterwise from the standpoint of available sources.

Briefly then, our two major points here are: Number 1 - The Legislature should recognize that it is far cheaper to develop local sources by expanding existing supplies than to enter into huge reservoir projects. Therefore, the expansion of local supplies should come first. Number 2 - If the Legislature feels that these local supplies should be developed faster than they normally would, we believe that they should consult with and hold conferences with the local suppliers in these different areas so that under the existing framework, they can determine what can be done to expedite the creation of such supplies.

I am being followed by our Chief Engineer, Mr. James [illegible]. I don't know whether there are some questions that

you want to ask me first or whether you want to wait until both of us are through and then go ahead on the questions.

THE CHAIRMAN: I think Assemblyman Stepacoff has a question.

MR. STEPACOFF: Mr. Kean, have you under consideration any plan for expanding the present facilities that you feel are necessary?

MR. KEAN: Yes, sir; our next plan is for an expansion on the Raritan River. Middlesex County is growing very fast. We think it is possibly in its highest stage of growth. Union County, as I have mentioned, is depending entirely now on the Raritan. Somerset County we see as the sleeper which is going to have tremendous growth in the future. We do plan to file application as soon as we can put together the details that are required for such application to dam the river and create Raritan River supplies by means of stabilizing to a certain extent the flows of that river.

MR. STEPACOFF: Mr. Kean, can you tell us to what capacity you intend to enlarge your present facilities to aid these three counties you are talking about?

MR. KEAN: The first step would be to create in the neighborhood of forty or fifty million gallons additional water supply in the river. In line with that, we would enlarge our filtration plant as needed year by year to meet the demand. That also applies to our transmission system. The actual design we have on our filtration plant today that we are working on and hope to start construction on in the spring is for another 20 million gallons daily capacity.

MR. STEPACOFF: Can you tell us the approximate cost that you people are ready and able to put into this project?

MR. KEAN: That is very hard to put into exact terms because our projects can stretch over a period of years; in other words, we build them as needed. We build a supply and perhaps the damming of the reservoir part of it will cost, to use round figure, three million dollars. From then on, the transmission mains, the filtration plant, and so on, we build from year to year as needed; in other words, it is entirely self-financing. We pay for it out of sales of water. We have in round figures said that 15 million dollars overall would create a supply, including transmission, pumping, filtration, dams, and everything else, of approximately 50 million gallons daily.

MR. STEPACOFF: Where would you put these improvements?

MR. KEAN: Well, we already have the intake, of course, on the river; we already have our filtration plant; we already have the major part of our transmission system. It would be a matter of adding to these facilities.

THE CHAIRMAN: Assemblyman Vanderbilt has a question or questions.

MR. VANDERBILT: Mr. Kean, you mentioned what is called the overall Elizabethtown project. Have you promulgated that project out so that you can see it in the foreseeable future, the entire plans; in other words, have you drafted it out so you know what the overall plan is that has been referred to the Elizabethtown project?

MR. KEAN: The projected plan.

MR. VANDERBILT: The projected plan.

MR. KEAN: In terms of storage?

MR. VANDERBILT: In terms of storage.

MR. KEAN: Yes. We believe the river can be stabilized to over 300 million gallons daily. Obviously, that's very far in the future, but when you take into account all the needs of the counties who are going to depend on the Raritan, plus the needs of the on-stream industries, the sewage disposal projects, it is very logical to assume that that entire amount will some day be needed. Now, neither ourselves nor any other water supply company can now sit down and now get to work and build facilities which will not be needed for another 50 years, so the only thing we can do is take it as it comes, build to meet our needs, and assure ourselves that there will be no shortages from anyone who has access to our facilities, and we have connections with ten suppliers in the area.

I might say in passing that this is nothing new. We have continued our expansion and in the last five years alone, we have spent an average of over a million dollars a year. Those stages of the expansion were not in water supply because it wasn't supply facilities at that time that were needed. It was transmission mains, pumping equipment, and filtration capacity.

MR. VANDERBILT: On this projected plan for a long-range viewpoint of 300 million gallons, you mentioned in the course of your remarks that it would be necessary to put up a series of dams, and I also believe you mentioned lakes. Where would these be located?

MR. KEAN: These would be located on the various tributaries and branches of the Raritan. The effect they would have would be to stabilize the flows of the Raritan. The Raritan in effect is now a flash flood river. You get very high flows like the thirty billion gallons that went down in two days' time last week and you get extreme low flows of not more than 50 million gallons a day. The effect of building a series of dams, and therefore lakes that would be thus created, would be that thereby the stream flow could be regulated; you could store your high flow waters, your flood waters, let them down in times of lower flow, which is a fairly restricted period of two or three months in the summer. It's the standard method of increasing water supplies for all purposes with the river. It's the cheapest way to do it generally. You stabilize the river and try to return it to the shape it was in when nature created it.

MR. VANDERBILT: Again, Mr. Kean, on the overall project, how much on this extended plan-- how much acreage would be taken in order to carry out these series of dams and lakes?

MR. KEAN: Again, it's extremely flexible and I may be talking 50 or 100 years in the future when I'm talking about, say 6,000 acres- I think that was the figure mentioned in the Report. They had access to a good deal of our materials when they made up that Report and of course did look at some of these sites. The first stage would be relatively small, of course. Fifty million gallons daily is going to go a long way.

MR. VANDERBILT: Still on the overall project, the extended plan, I am not quite certain from looking at the map where these dams would be in these tributaries. I presume that you have them laid out in your plan. Could you tell us whether these dams would come in any improved area where there would be dislocation of houses, industries, public buildings, or roads?

MR. KEAN: Generally speaking, the areas to be flooded would be areas that lie in the flood plain of the Raritan; in other words, an on-river reservoir development wants low lands because those are the lands that are easily flooded and those are the lands that will give you your reservoir. I don't know whether there is any land at all that would be useful in lakes that wasn't under water last week, for example. The actual locations of these reservoirs, we have never given out and would be extremely reluctant to do so, I think, for obvious reasons. The Engineer's Report has mentioned six locations. Actually there are more than six potential locations. It is flexible from the point of view that one or the other could be chosen, depending on which seemed more advisable at any given time.

MR. VANDERBILT: One final question: In your remarks, you mentioned that if Elizabeth no longer received the 50 million gallons a day from the Newark system, there are other sources in Union County where you might get that 50 million gallons a day. Can you tell me those other sources?

MR. KEAN: Yes. The sum is 8 million gallons a day. The City of Elizabeth at the moment takes 8 million gallons from Newark. They take 2 million gallons from our company,

from Elizabethtown Water. In our visualization of these counties as being properly dependent on certain watersheds, we have felt that ultimately the City of Elizabeth would be taking all its water, as is the rest of Union County, from Raritan sources. With that in mind, over six months ago we actually made an offer to the City of Elizabeth and told them that if they felt that Newark could not or would not, or if they wished to help the water situation farther north, we would be happy to serve them their entire requirements and could do so by this current summer.

MR. VANDERBILT: Thank you.

THE CHAIRMAN: Assemblyman Stepacoff has a question.

MR. STEPACOFF: Mr. Kean, under the Preliminary Report submitted by the Engineers to the Legislature, they proposed to take 180 million from the Raritan River and still maintain 130 million average mean flow, or minimum flow. How does your plan affect that 130 million in minimum flow in the Raritan?

MR. KEAN: Well, under the original plan, they weren't going to protect any minimum flow or return any compensating water. They were going to take out water that would create 180. The only concession they made to down-stream flows was that they would not take out any water at times when the minimum flow was not greater than 130 m.g.d. As far as we are concerned, as I have said before, we consider this project a multi-purpose project for numerous beneficiaries, not for ourselves; we don't know who is going to develop it; we are willing to go ahead on one step of it and, when the time comes, the next step, but we see so many people benefiting from this

Raritan development that we think over the years the sewage authorities, your other water suppliers, your big industries, possibly flood control projects, and everyone else interested in the Raritan, are going to get together and ultimately carry the ball through some other type of agency. We don't know that that's true.

Specifically, you have asked me what our plan visualizes doing as far as compensating flows are concerned. We are considering relying on the determination of the Water Policy and Supply Council, as we have in the past in matters of this kind, as to what is proper in the public interest, as to how much flow can be taken out, how much should be left in, how much compensated if necessary. These gentlemen are experts and have broad experience in this field. It is not so simple a matter that you could come up with a certain figure and say, "That's what should be left in that river." It's a very technical and a very complicated procedure. We have a body in the State set up to handle just that type of thing. They could weigh the public interest as far as those on-stream and off-stream future requirements, present requirements, and everything else, and come up with an answer, and generally speaking we think they are pretty good.

MR. STEPACOFF: Mr. Kean, when you say that the Raritan River could be stabilized to the point where you feel that in the future 300 million gallons a day could be taken from the river, have your engineers figured on the minimum flow of the million in the Raritan River?

MR. KEAN: I didn't say 300 taken from the River. The 300 stabilized flow - I was speaking of all uses; that is, on-river uses and off-river uses, waters we would take out, waters that might be taken out at Flemington, New Brunswick, waters that might be used by your industries on the River, waters that would be necessary for pollution control, and any other necessary uses of water. In other words, I have grouped that together from the point of view of all water uses. It is very hard to separate.

THE CHAIRMAN: I have a question by Mr. Simpson, Division Engineer of Water Supply of the City of Newark:

Are you prepared to say what the cost of this water per million gallons is likely to be?

MR. KEAN: What water?

THE CHAIRMAN: On your proposed project, I presume.

MR. KEAN: On the entire project? Of course, that varies largely from year to year. The things we are building 25 years from now may not be built at the same cost that we are building today, but as far as we can see from things we have been building and things we are building today, we think we can build them and sell the water at present rates.

THE CHAIRMAN: Are there any other questions? If not, thank you, Mr. Kean.

MR. KEAN: Thank you, sir.

THE CHAIRMAN: The next person I will call on is Mr. James Girand, Chief Engineer of the Elizabethtown Water Company.

MR. GIRAND: My name is James Girand, Chief Engineer of the Elizabethtown Water Company.

I would like to comment on the technical aspects of the Engineer's Report.

Legislation based on the report is being pressed with such haste that none of the 33 water supply agencies, serving more than 3,000,000 people in the Northeastern Metropolitan Region, has been consulted on needs. Not one of these 33 agencies has expressed unqualified approval of the proposed bills at these hearings. Most of them are very much opposed to the legislation.

We are opposed to this legislation because: the expansion of local supplies is cheaper, and the expanded local supplies will be adequate to meet the needs of the area far into the future.

These hearings have raised so many important questions as to the adequacy of this Preliminary Report it appears we would be very foolish to gamble $76,000,000 on the information now available.

The failure to consult fully with the 33 water supply agencies, and the haste in presenting these bills, have resulted in some glaring deficiencies.

The agencies were not consulted as to the real need for water and the actual sales which could be made. The projections of growth and ability of the local agencies to meet this growth would indicate that if the Chimney Rock project is built, there would be no sale for the water until after the year 2000. The project would be a white elephant and the cost would fall entirely on the taxpayers of the region because there would be no water users.

Besides, failing to make a canvass of the possible purchasers of water from this project, the engineers failed to realize that price is a major consideration among some of the water suppliers who are seeking some sort of a subsidy to reduce the cost of their water. When it becomes obvious that they cannot pass these costs on to others who are not benefited, they will then buy their water from the lowest bidder, which would NOT be the Chimney Rock project.

The fact that there would be no sale of water from the Chimney Rock project can be demonstrated by the engineers' report. Table 1 on Page I-8 shows the projection of population in various counties to the year 2000. Table 6 on Page I-18 shows the estimated growth in water use based on these population figures.

The report also suggests that three projects totaling 77 m.g.d for Northeastern New Jersey be constructed immediately. These are the Newark-Pequannock for 7.4 million gallons; the Jersey City-Rockaway for 14.6; the Passaic Valley Water Commission for 55 - a total of 77 million gallons a day.

Add to these a project of only 60 m.g.d. of the increase proposed by Elizabethtown, we get a total supply of 137 m.g.d. or the amount required by the year 2000.

Let us look at the figures in the report. By using the population figures shown and adding an interpolation for the year 1953 for a starting point, we have made a breakdown showing the estimated growth in the seven counties proposed to be taxed to support the Chimney Rock project. I have a detailed calculation which I will submit to anyone who wants

it, but I will give you the summary, which is the important part. Essex County shows a growth of 200,000 people up to the year 2000; Hudson County shows a decrease of 36,000; Passaic an increase of 180, or a total of 858,000. Those are the three counties in the Passaic system. Translating those figures into water consumption by the method used in the report itself, we get an increased need in those counties of 45.6 million gallons a day.

The three counties of the Raritan Valley group - Middlesex shows a growth of 312,000; Union 248,000; Somerset 130,000 - a total of 690,000. These show a total water need up to the year 2000 of 92.2 million gallons a day.

I must correct one figure in my first group. Bergen County has been eliminated from these growth projections. Testimony will be presented here showing that Bergen County is entirely self-sustaining into the most remote future and would not need any water even by the year 2000.

That brings the growth in the three north counties to 344,000, which produces the increase in consumption of 45 million gallons a day.

But adding together this use in the Passaic group and the Raritan River Valley, we get a total indicated growth in consumption by the year of 2000 of 137 million gallons a day, which, as stated before, could be met by the expansion of the local facilities.

The second deficiency in the report is the lack of pre-[illegible]tion that the real problem is supplying water during the [illegible]load of the summer. Water is not sold on a monthly [illegible]ge, any more than pumped storage can be filled from an

average flow. It must be delivered as needed on the peak days. Most of the local water supply agencies have adequate supplies for nine or ten months of the year. The problem and cost of supplying summer loads will not be solved by this legislation.

We had a very striking example of that: We served the City of Rahway on a long-time peak load contract. In the last two years they have only taken water from us two days, which was this summer. Out of the entire year, they only required water two days. Now, the problem of coping with that kind of a load takes some very intensive study, but that's the kind of a thing that has to be solved in this long-range water problem. A customer who only wants water two days out of a year is some customer.

The third and most serious deficiency of the legislation is the failure to provide for the needs and growth of the customers in the large areas served by the privately-owned water utilities in Union, Middlesex, and Somerset Counties. No provision whatever has been made for the immediate needs of these areas, which are the fastest growing areas in the State. Neither has any provision been made for the future needs of these customers, except, to quote the report, "they may buy water from Chimney Rock." Of course, the price is far above the price the private companies are now selling water for, which would require a substantial rate increase as well as direct taxation as proposed in the legislation.

It is most difficult and unreasonable to argue the merits of three major plans before a legislative committee. Such a thing really should be settled by conference among the

engineers. When these engineers were employed by the State, it was our hope that they would evolve a practical and workable plan which would, at each stage of the growth of the area, produce the necessary water at an absolute minimum cost. We were astounded to find that in order to justify their project they had ignored the immediate needs of the Union, Somerset, and Middlesex areas and had completely stopped the practical development of our plans. If their proposed plans are carried out through this legislation, the three counties of Union, Middlesex, and Somerset will be faced in a few years with the worst water shortages ever experienced in New Jersey.

Our company must be permitted to proceed with the development of one or more of the on-river dams immediately, in order to prevent a serious crisis by 1957.

We now find ourselves in the position that we must argue the merits of our plan as against the astronomical construction proposed in this legislation.

The basic economy of our plan is that we propose a number of small on-river reservoirs which will be built as needed. Unnecessary construction would be deferred until needed - and a deferred expense is money saved.

We have the backbone facilities in our filter plant and transmission system which can be expended to over 100 million gallons per day at a reasonable cost. We can build one or more dams on the river also at a reasonable cost. Due to the flow characteristics of the river, the first storage constructed yields a very high return in stabilized flow. We can produce over a 100 million gallons per day at a very reasonable

cost. Our operating costs would be far lower than any other plan, as the present plant personnel now on the payroll could handle the expanded plant.

The result is that when one speaks of an Initial Project to produce 50 to 70 million gallons per day, there is no question that on-river storage is by far the cheapest.

This project, together with the expansion of other local supplies, can meet the needs of the Northeastern Metropolitan Area for many years in the future.

Our project can be added to from time to time and without investing large amounts of capital which would be idle. We believe we can undersell any other project for at least 25 or 50 years in the future. After that time, it might be necessary to have a reappraisal of the situation to see whether a publicly financed tax exempt, or tax subsidized, project would be needed.

It appears to us perfectly obviously that the proper sequence of developing the water needed for Northeastern New Jersey is to first let us build immediately the small on-river reservoirs which we propose, and then at a later date construct some larger project and obtain water from the Delaware River.

There has been a lot of argument as to the relative merits of on-river versus pumped storage and the quality of water.

It would cost at least $400,000 to pay the power bill for filling the Chimney Rock Project for the first time. The evaporation from the reservoir would have to be replaced with

pumped water and would cost about $30,000 a year. While storing water in large lakes over a period of time does improve the bacterial quality, it does not solve the problem of algae and taste and odors. Usually these large lakes have water flowing through from an inlet at one end to an outlet at the other, which tends to keep the water moving and discourage objectionable growths. There would be no such circulation in the Chimney Rock Reservoir.

On the other hand, the on-river reservoirs would fill with every flash flood, without pumping costs. Due to the moderate size of the reservoirs, the spring floods would tend to sweep out any deleterious deposits. Evaporation would be a minor problem with no pumping costs. The on-river reservoirs could well serve a useful purpose for flood control, although not designed primarily for this purpose, just as the Wanaque Reservoir was effective in preventing floods after the storm of last week.

In conclusion, we wish to thank this Legislative Committee for hearing us. We are greatly concerned with this water supply problem and we will always be available to with with any group toward a solution of the problem.

THE CHAIRMAN: Assemblyman Stepacoff has a question.

MR. STEPACOFF: Mr. Girand, I take it you are the Chief Engineer for the Elizabethtown Water Company?

MR. GIRAND: Yes, sir.

MR. STEPACOFF: Would you mind telling us just what type of engineer you are?

MR. GIRAND: I am a civil engineer who graduated from Virginia Military Institute in 1923. My home is in the far West - Arizona and California. I have been in the water supply business all my life. My father's firm and myself have built a number of the larger dams in Arizona; I have been connected with hydraulic work, water supply, irrigation, and water work of all kinds during my entire business experience.

MR. STEPACOFF: Mr. Girand, with reference to this Engineers' Preliminary Report, have you given any consideration to the question of the adequacy of the pumping facilities to take advantage of the peak flow as well as the recharging of the reservoir after abnormal withdrawals?

MR. GIRAND: We made an analysis of the flows of water which would be available to the Chimney Rock project. We have made very extensive hydraulic studies of our own projects, and when this Report was handed to us we made a similar check of their hydraulics.

MR. STEPACOFF: Have you determined whether or not there is sufficient capacity in the proposed reservoir at Chimney Rock to handle this 32 billion gallons.

MR. GIRAND: It is our conclusion that the figures shown in the Report do not check. For instance, they state they will obtain a stabilized flow of 180 million gallons a day with 32 billion gallons of storage and with pumps which will only pump when the river is above 130 million, and the pumping capacity would be 380 million, which includes 20 million of canal water.

MR. STEPACOFF: Then would you say that the calculations for pumping capacity must be based on figures of actual daily flow rather than the mean or monthly flow?

MR. GIRAND: Yes, sir. There is no question that the flash floods that come down the river could not be caught by these pumps and that using average flows for computing the re-filling of the reservoirs leads to an erroneous result.

MR. STEPACOFF: Then you are satisfied insofar as your conclusion is concerned that this reservoir will not have the capacity for the designed result?

MR. GIRAND: Yes, sir. The project as stated and laid out in the Report would not produce the flows that the Report says it would.

THE CHAIRMAN: Any other questions? Assemblyman Franklin?

MR. FRANKLIN: Mr. Girand, you spoke about the possibility of an intermediate water shortage in the event that the State decided to go ahead with Chimeny Rock, I believe. When do you think that shortage might take place?

MR. GIRAND: It might take place next summer. The Report completely ignored the needs of these three Raritan River counties and the needs of the various water agencies supplying them. Now, if the legislation is passed forthwith and the machinery starts rolling, any agency, whether it be privately-owned company like ours or a public one, could not finance any development whatever. They have stated they are going to take the water of the Delaware and Raritan Canal; outside the authority of the Water Policy and Supply Council,

your water rights would be worth nothing. They have stated that there is no place for our development if their development goes ahead. Now, with those kinds of financial threats hanging over anyone, particularly a private company, you couldn't finance construction.

MR. FRANKLIN: Do you have any estimate as to what the amount of the shortage might be?

MR. GIRAND: Well, it could be very acute. In our company alone, our loads in this year of 1955 increased 10 million gallons a day over the previous year. Our projections for next year are 15 million gallons per day. This area is growing tremendously and if we were stopped, other agencies stopped cold from doing anything until after Chimney Rock comes into production, which is five years off, it would be a most acute situation.

MR. FRANKLIN: Well, now, Mr. Kean, I think spoke about plans that you had to increase your transmission and filtration facilities by about 20 million gallons. I assume you are planning to go ahead with that project before Chimney Rock?

MR. GIRAND: We have a call for bids out right as of today for the construction of our filter plant additions.

MR. FRANKLIN: I wondered if you had the additional water supply in that amount immediately available?

MR. GIRAND: We have to before next summer and before award contracts, resolve these problems. That's why it is extremely pressing and why we are here today.

MR. FRANKLIN: Am I right in assuming that before this Chimney Rock question arose, you felt you would be able to

procure that additional 20 million gallons?

MR. GIRAND: Yes, we have thought that we could build a dam on the river and move the project right ahead full speed.

MR. FRANKLIN: So that before this Chimney Rock project came into the picture, you had plans to take care of this intermediate shortage that you are talking about?

MR. GIRAND: Very definitely. Now, when we refer to shortage - if we can do our work, there will be no shortage. We have had no shortage in our area whatever. In fact, we have increased our output to our neighboring companies by very large amounts - ten million gallons in one instance this year. There has been no shortage and there will be none if we can proceed.

MR. FRANKLIN: If this Chimney Rock project should be adopted, does that mean that you would not go ahead with your present plan?

MR. GIRAND: Well, it would mean that our right to go ahead, our legal right, would be in the gravest jeopardy and probably impossible of solution. It pulls the rug out from under the Water Policy and Supply Council; we would have no one to turn to to obtain water rights, and it would leave the whole thing up in the air. I mean, I don't see how anyone could move.

THE CHAIRMAN: Any other questions? No further questions.

I will next call on Jean Sinclair, Secretary of the League for the Preservation of Washington Valley.

MRS. SINCLAIR: Gentlemen, my name is Jean Sinclair. I am Secretary of the League for the Preservation of Washington Valley.

The point I would like to cover has been touched on briefly in the last two hearings; that is, the houses that will be taken. The statement in the report of the Engineers indicates that there are approximately 350 homes, farms, and suburban residences in Chimney Rock. This has caused us, the people whose homes are affected, a considerable amount of anxiety, but it has given the general public, the members of Senator Anton's Water Commission, and other members of the Legislature a completely false picture of the actual situation.

The difficulty has been compounded by the inability of the engineers to state where the line of condemned properties will start. They have variously stated it orally as 280, 284, 294 and 300 feet above sea level. The report itself gives no indication of where this line will be.

When the strain of not knowing what was happening to us became too great, a group of us decided to count the number of homes in our valley. We know that Washington Valley, the watershed, is approximately eight miles long and a mile wide. All previous reports on it have accepted this God-given situation. We drove up and down the lanes and roads, counting. We took names off mailboxes and where the family received its mail at the local post office, we went into the house and asked for the name, so we would know who lived there.

There are 997 homes in the Washington Valley Watershed; the bottom, the sides, and the rim. Annexed is a list of the

census we made, giving the homes and the roads that they are located on. Among these 997 homes, there are 30 farms and 76 businesses, Although the Engineering Report states that there are no important buildings in the area, there are three churches, a large Sunday School building, and the Martinsville public school.

Now, if we accept the latest oral statement of the Engineers as given by Mr. Lieberman in Somerville last week and assume the taking line will be 300 feet above sea level, we find that there are approximately 446 homes to be condemned in their operation. This is 96 homes more than they originally estimated in their Report, or a discrepancy of 27 per cent.

But actually the 300 foot taking line is an unrealistic and unfair method for producing a low cost figure, and we do not think it can hold up in practice. It cuts through the most populated area in the valley, along the Washington Valley road, and if enforced, it would separate homes from their back yards and farmhouses from their farmlands. A man's farmhouse is of no use if his orchard is taken from him behind him. The farmhouse is just above the contour line of Washington Valley Road, below the south end.

We feel that the number of homes ultimately condemned will have to be more than 446. The water level is expected to be at 280 feet. Since the sides of the valley begin to rise fairly rapidly at that altitude, at 300 feet many houses would not be much more than 20 feet from the edge of the storage basin.

Any project which is undertaken for all time, and not

merely as an expedient for the immediate present, must take into account the rights of the humans it will inconvenience, as well as those it will serve.

This projected reservoir will not be the clear, turquoise lake it has been falsely painted. It will be a storage hole for the polluted waters of the Raritan, which contain among other things the industrial wastes of the industries on it, and sewerage from the City of Somerville. As the drought of summer approaches and pumping from the river is curtailed, this smelly mess will sink lower and lower, exposing mud flats and eroded clay on which have been deposited dregs and scum. Obviously, swimming in this would be unthinkable. We can't imagine what kind of fish could live in it. The person who dreamed up boating on this lake hasn't said how he plans to catapult himself and his boat through the muddy sides into the water far below on a hot July day. So much for the pleasures of this man-made beauty of nature. Yet this is what we have been told would increase the real value of the houses left.

Certainly this reservoir will not add to the value of the properties left sitting on its edge. Contrariwise, those properties will be damaged far worse than the properties that will be condemned outright. Instead of beautiful green hills, which are part of their present real estate value, the homes that are left will look out on a large morass.

There are now seven roads which cross Washington Valley over the south ridge: Mt. Vernon Road, Crim Road, Chimney Rock Road, Vosseller Avenue, King George Road, Morning Glory Road, and Warrenville Road. They take residents to work, to

market, to school, and to the hospital. No place in the Engineer's Report is there any provision to replace these roads for the people who remain above the 300 contour line, with bridges or causeways. Oddly, since the League has been pointing out this omission, there has been talk of an amendment to the bill which calls for one causeway. Mr. McCarthy said here the other day that one two-lane causeway would amply serve the people who were left. Gentlemen, this is not so at all. The seven roads I just listed are all good, black-top roads and we are very well satisfied with them. When they plan to leave almost two-thirds of the people in the valley, how can they substitute one two-lane road for seven? In addition, do not only the people in Washington Valley use those roads, but the people over the second Watchung on the north ridge from Bedminster, Far Hills, Basking Ridge, and Bernardsville all go over those roads to get beyond the first ridge, or the first Watchung to go to Bound Brook, New Brunswick and all the towns there. This watershed lies athwart a large section of Somerset County.

Even if this causeway is put in, the people living in the homes that are left in the valley will have to travel many additional miles every day, around the ends of this eight-mile storage basin, or to the one central causeway, if there is one. Certainly the value of the properties which remain will fall sharply, and there appears to be no intention to compensate the owners.

We submit that all of the 997 homes in Washington Valley are adversely affected by the proposed reservoir.

Literally thousands of people will be hurt if this project goes through. The hurt to the people cannot be figured in dollars and cents. For this reason, perhaps, it doesn't appear in the Engineer's Report, but it should certainly figure largely in the thinking of the Legislature.

In closing, I would like to read two short paragraphs from the Engineer's Report. They are on page I-17:

> "Hunterdon County consists of nearly 70% farmland, mostly dairy and poultry farms. Many of its new residents are gentlemen farmers who commute to business or have retired. Its relatively old population results in a low rate of natural increase. A gradual rise in population of this rural county is foreseen.
>
> "Somerset County has experienced rapid growth in manufacturing activity, even when others were suffering set-backs during the depression. Although still predominately agricultural and residential today, this county will certainly follow in the footsteps of neighboring Middlesex as a place for much new industry. It is well situated with respect to rail and highway transportation and offers plentiful sites. Its growing population will provide manpower for industry, both local and in the entire expanding area."

Gentlemen, there seems no question to us about which county should provide the reservoir, if there is to be one. Thank you.

THE CHAIRMAN: Do you have a copy of your written report for filing?

MRS. SINCLAIR: Yes.

THE CHAIRMAN: The next person I will call on is Charles Lifland, who is Assistant Corporation Counsel of the City of Jersey City.

MR. LIFLAND: Mr. Chairman, members of the Committee, and ladies and gentlemen: My name is I. Charles Lifland and I am Assistant Corporation Counsel of the City of Jersey City and I speak for the residents of that city today. I don't know whether I should be called an opponent or a proponent of the plan which comes before you today. After listening to some of the proponents or those who have been labeled proponents, I doubt it very much whether they were proponents. I do not feel that there is any question whatever but that water is an important subject and should receive the attention of the Legislature of this State. I think we all can say that. That's like saying we are all against sin. Of course, that's so. But I am greatly troubled by the proposed legislation, gentlemen, because it appears to me that this kind of legislation rewards the laggard and penalizes the vigilant. And why do I say that? And before I proceed, gentlemen, may I say that I learned to speak on political matters from the back of a truck many years ago, and I see some faces here of those who had the same privilege. It was always our aim to be the first to speak, because we could speak on all of the subjects, we could just gloss over them and then we could sit down and we didn't care what happened to the speakers that followed. I learned that lesson early and on one occasion I got myself placed at the head of the list and I spoke and I spoke and I spoke, and I could see the next speaker standing up there writhing in agony, thinking what is he going to speak about, what is he going to say; this fellow Lifland is covering the entire gamut of the entire subject. Well, I didn't care. I had to

get my speech over, and I did, but this is what this young fellow did when he got up to speak: He said, "Ladies and gentlemen, you have listened to Mr. Lifland talk on the subjects which are the issues of this campaign. I don't want to repeat them. As for myself, I say, 'Me, too.'" And he sat down. I thought that was a mighty good speech.

So I am going to say to you gentlemen that with your permission I am not going to cover the gamut of all of the legal arguments that have been made before this Committee as to the effect of this legislation, this proposed legislation. I have watched the members of the Committee, I have listened to their Socratic questioning of the speakers, I have heard several gentlemen expound very clearly and very forcefully the evils in this proposed legislation, and I am not going to speak upon them again except to advert to them most generally.

It seems to me that by legislation of this sort, and, mind you, I do not take any position as to whether Chimney Rock is a good proposition, whether Round Valley is a good proposition, because I have a great deal of confidence in the integrity of the engineers who have proposed both of those projects; I know Mr. McCarthy; I know his firm; I think they're a good firm; I think they're a firm of integrity. I also have listened as an observer to the presentation of the Round Valley project before the Water Policy Commission. That seems to me, too, to be a good proposition. In other words, it seems to me that the municipalities interested should have a great deal to say as to what kind of project they are interested in and what kind

of project they want to pay for. I have watched the Policy Commission at work, their interest, their attention. I have seen the engineers who have testified before them and have heard them. Why is it necessary now to have legislation to do away with these particular boards who are doing such a good job? Why is it necessary to have legislation that will affect the interests of the private companies who have supplied water at such a low rate and of the municipalities particularly who have done such a fine job insofar as their own waterworks are concerned. I'm speaking about Newark, I'm speaking about Jersey City, I'm speaking about the Passaic Valley Commission, the water commission, and I am speaking about the North Jersey District Board. It seems to me that from the point of good business, if you have any employee or if you have anyone who is doing a good job, you should keep on helping them do a good job instead of cutting the feet from under them and undertaking a project that you, yourself, are not yet satisfied will do the job.

Now, of course, I am speaking for Jersey City. I don't think that there is a question in the minds of anyone in this State that we in Jersey City have a water system for a municipality that is second to none. We have a good one. Our water rates are very low. As a matter of fact, I think you will find that they are the lowest in the State. Our supply is good. The quality of our water is excellent. We have done this job for 80 years. Why aren't we permitted to continue on? Why is it necessary to take away those facilities

from us and place them under a board, and I was very much interested in this particular question about the powers of this board. I have read this Act, and I was amazed at the powers that the proponents of these bills are trying to give to this particular board. They can do whatever they please; they can even tell you how much water your wife should put in your beef stew, and I think they're some people who don't like too much water in their beef stew. And I say to you, examine that, and I am satisfied that the lawyers on this Committee, and they are good lawyers, will go into that bill and they will hesitate very much to give to a board the powers that are delineated in those bills, particularly in Assembly Bill 595. Why, the right of eminent domain, the principle of eminent domain, has been changed to such an extent that at a luncheon meeting the other day one of the members of my group said to me, "How are you going to advert to that?" and I said, "Well, there is one word that I could use, but I see several very charming ladies in the audience so I will content myself and refer to that kind of legislation as the illegitimate offspring of the eminent domain policy of the State." Why, some of those things are ridiculous, and we who live in a democratic country do not like that; we like to have something to say, and if we are opposed to a ruling, let us find some place where we can have that ruling changed.

There are three American principles that I think are violated by this kind of legislation. One is the principle of Home Rule, the other is the attack, the violation on private enterprise, and the third is taxation without representation. The idea of taxing counties, of taxing cities,

which have no use for this water and will not use it, in order to supply some organization or some community that has not taken its place in the forward-looking movement on this matter, it seems to me is most repugnant, and the people of my city do not like that. I don't think anyone likes that. Of course, if these communities need help, give it to them. Of course, if they need to find some financing, help them, but help them do what they should do. Let them find some way and, yes, I say, members of the Legislature, if they can't afford it, help them, but let it be done in such a way that those who use the facilities are the ones who pay, and don't call upon people who do not use them, who have spent millions of dollars in putting their own projects in such fine shape, making them pay too, and at the same time take away the power to control their own facilities.

Maybe I've talked too long, and I'm going to ask the Chairman of this Committee if he will give the opportunity to the Chief Water Engineer of the City of Jersey City to follow me, so that he can talk upon the technical aspects of our particular project and on the other projects that have been mentioned by the speakers before us and by the engineering company that has made this survey.

And may I read a very short statement that I think will place the position of the City of Jersey City before you:

The Commissioners of Jersey City are aware of the need for a new intra-state water supply development to aid municipalities whose sources of supply have been expanded

to their limit. They are also cognizant of the fact that Jersey City has owned and has successfully operated a municipal water supply since the year of 1874, without the aid of any outside agency.

Our Engineers keep constant check on the water requirements and the dependable yield of our system. When the margin of safety between water requirements and the dependable yield decline, we do something about it.

In 1946, we felt that within the next two years our water requirements would be approaching the dependable yield of our system, and we immediately started the development of Split Rock Reservoir as an auxiliary to our main storage reservoir. This new reservoir was placed in service in 1948, again providing the necessary factor of safety between water requirement and dependable yield.

Looking forward to the future, the sum of $50,000 was appropriated by Jersey City for the preliminary engineering surveys required for the development of the Longwood Valley Reservoir. Under date of April 19, 1955, the firm of Havens and Emerson, Consulting Engineers of New York City and Cleveland, were engaged to do the necessary engineering work required for the construction of the reservoir.

Within the next few months, our application will be submitted to the Water Policy Council for permission to proceed with the development of the Longwood Valley Reservoir.

Another project is now under way to increase the dependable yield of the Jersey City water supply system. A contract has been awarded, and within the next two weeks the installation

of Bascule Type Gates in the spillway of the main storage reservoir at Boonton will commence. This improvement will increase the storage in this reservoir by some 800 million gallons.

The completion of these two projects should satisfy the demand on the Jersey City water supply system for the next 25 years. We sincerely hope that well within this period a new intra-state water supply project will have become a reality.

All of the improvements to the Jersey City water supply system have in the past, and will in the future, be paid for from the earned income of the Jersey City Water Department, without the need of financing from any state agency and without any additional burden being placed on the taxpayers of our city.

We are not in favor of the State of New Jersey competing with the present municipally owned and privately owned water supply systems. First, because of the fact that it may very well place an additional tax burden on the home owners of the counties listed in the northeastern area, some of whom at this time will receive no tangible benefits from a development of this type. Second, an enterprise of this type is an infringment on Home Rule.

Now, just a few more words, gentlemen: I have listened with a great deal of interest and I have been here since this proceeding started, and I have heard some of the proponents or those labeled proponents talk on the measures, and I say to you gentlemen that they talked on the question of the need

for water. I have not yet heard one who came out in favor of the proposed legislation.

Thank you very much.

THE CHAIRMAN: Thank you very much. Have you a copy of that statement we can file with the stenographer?

MR. LIFLAND: Yes.

THE CHAIRMAN: We have a couple of questions. Assemblyman Stepacoff?

MR. LIFLAND: You say that Hudson County has been in the process of study and have ample means to improve their facilities?

MR. LIFLAND: I would say that about Jersey City.

MR. STEPACOFF: About Jersey City. So that at Longwood Valley you indicate there is going to be a storage capacity of an additional 800 million gallons, is that it?

MR. LIFLAND: Well, there is going to be a large additional amount-- I think I said that the spillways that are going to be created in the main storage reservoir at Boonton will increase the storage in that reservoir by some 800 million gallons. Longwood Valley would be an additional storage facility.

MR. STEPACOFF: So that in one source alone, you have one thirty-second roughly of what is proposed at Chimney Rock. Is that right?

MR. LIFLAND: I think that is correct. Is that not so, Mr. Ohland?

MR. STEPACOFF: Well, the proposed amount in Chimney Rock is roughly 32 billion storage.

MR. LIFLAND: Yes.

MR. STEPACOFF: And 280 feet my colleague, Mr. Vanderbilt, indicates. Now in this one place alone you say 800 million gallons storage, so that is roughly one thirty-second of your capacity at Chimney Rock.

MR. LIFLAND: I think that's true. And I say, Assemblyman Stepacoff, that I have with me here Mr. Ohland who is our Chief Water Engineer, and without apologies to anyone I think that I can say that he knows more about water or he knows as much about water as any engineer in this State, and I think those technical questions that you have can be answered by him much more accurately than by myself, and I would request then, sir, that any questions of that nature be put to him.

MR. STEPACOFF: I see. Now, Mr. Lifland, I want to assure you that I am as little versed in the matter of engineering as a lawyer as you are, and I am just trying to get the scope of the problem into intelligent view.

Generally then, may I ask you this? Would Jersey City be willing in its scheme of improved capacity, and so forth, be willing to participate with other cities in the furnishing of water where they do not have sufficient supplies.

MR. LIFLAND: Why, of course. We are doing that at the present time.

MR. STEPACOFF: There is no controversy about that issue, is there?

MR. LIFLAND: No, none at all.

MR. STEPACOFF: You are able and willing to furnish these people with water.

MR. LIFLAND: We would like to, sir.

MR. STEPACOFF: And you feel you have sufficient natural resources in your end of the woods, so to speak, to supply neighboring communities and as well as the county and other counties?

MR. LIFLAND: That is true, sir.

MR. STEPACOFF: And, therefore, as I understand your contention, there is no need at the present time or in the immediate future, or in fact in the distant future, for any taking of water from the Raritan for your end of the State?

MR. LIFLAND: That is true, sir.

MR. STEPACOFF: Thank you.

THE CHAIRMAN: Are there any other questions? If not, I will call on Harold M. Ohland, Chief Engineer of Jersey City Water Supply.

MR. OHLAND: Mr. Chairman, members of the Committee, ladies and gentlemen: After listening to the eloquence of my esteemed friend and the Assistant Corporation Counsel of Jersey City, I feel like a member of the team of Amos and Andy standing before this microphone. I will not try to enlarge upon anything that Mr. Lifland said because if I do it would be superfluous and just a repetition of what you have already heard. However, I would like to make a few comments on several of the paragraphs in the Legislative Commission's Report and in the Consulting Engineers' Report.

If my interpretations of these paragraphs are correct, then I think there should be a clarification of them for the benefit of everybody concerned in this proposed legislation.

However, if I am incorrect in my interpretation, I will gladly apologize.to the Committee and to the Consulting Engineers.

Now, I refer you to Page 7 of the Report, under the heading Legislative Commission's Report, First Stage Development. This paragraph infers that the Hackensack Water Company was the only major water supply system in the north-eastern district that has made any effort to increase the dependable yield of their system. As a matter of fact and prior to the time your Consulting Engineers' Report was prepared, Jersey City had appropriated, as stated by Mr. Lifland, $50,000 for the preliminary survey work for our Longwood Valley Reservoir. That took place back in the fall of 1954, and on April 19 of 1954, as Mr. Lifland said, we engaged an engineering firm to do that. Now, all of these facts were brought out to the representative of the Consulting Engineer when he sat in my office discussing problems of requirement yield, stream flow records, and so on, and I am wondering why it wasn't brought out in the Report. I think it has a direct bearing on the future dependable yield of North Jersey.

Now, in the same Commission's Report on page 10, paragraph 1 states that the water used in 1953 was 420 mgd, while the dependable yield at that time was 456 mgd, or a dependable yield of 36 mgd above the requirements of that particular year of 1953. The paragraph further states and I quote: "With the proposed addition of 77 mgd a future water supply of 533 mgd is thus assured." Now, the 77 mgd

referred to only includes the proposed increase as stipulated in the Engineers' Report for the City of Jersey City, the City of Newark, and the Passaic Valley Water Commission. No mention was made of the fact of the 20 million gallons that will be derived from the new Forest Lake Reservoir of the Hackensack Water Company, where they are presently in the stage of construction and I dare say that they will have that 20 million gallon yield within the next year. If this 20 million were added to the 77 million, as stated in the Report, we would then have a total of 97 million gallons as the dependable yield from the four systems. The entire yield of the northeastern region would then be 553 million gallons instead of the 533 millions as indicated in the Report. Bergen County is a part of the northeastern region, and the increased yield of the Hackensack Water Company should have been included.

The Report further indicates that by 1970, the requirements of the northeastern region would probably be 526 mgd, while the dependable yield in 1970, including the Hackensack Water Company, which is not indicated in the Report, would be 553 mgd instead of the 533 as shown. This would provide a margin of safety of yield over requirement of approximately 27 mgd, which is pretty close to the figure that we had in 1953, and by that time we certainly should expect that a new major water supply will be brought into being for the benefit of those who will require it.

I would like to say one more word on the North Jersey District Water Supply Commission and the Water Policy Council of the State of New Jersey. On both of those boards and in

each of their own sphere, those men have had years of knowledge, they are capable, they have the know-how. The North Jersey members have the know-how to construct and develop reservoirs and to operate. The Water Policy Council over years of experience and with competent engineers have the knowledge of the diversion of water and how to handle it in the State of New Jersey. And I would like to see those two commissions remain in force instead of having a five-man board take over the duties of both of these commissions.

Thank you very much.

THE CHAIRMAN: Mr. Ohland, on this expansion of the Hackensack Water Company, that is located in New York State, is it not?

MR. OHLAND: It is located - the reservoir itself is located in New York State, but the yield will be into the Hackensack system in New Jersey.

THE CHAIRMAN: But in the future there would be the possibility that we might lose that; isn't that correct?

MR. OHLAND: Not to my knowledge, no. I believe there is a certain requirement that permits the Hackensack Water Company to bring that water into New Jersey.

THE CHAIRMAN: I wanted to get your idea on that because the report, I believe, intimated that in the future as their needs grew greater in New York State there might be a possibility of losing that. I just wanted to get your opinion on that.

MR. OHLAND: It might be possible but I would prefer the Hackensack Water Company to answer that question.

THE CHAIRMAN: Assemblyman Stepacoff?

MR. STEPACOFF: Mr. Ohland, may I ask you what kind of an engineer you are?

MR. OHLAND: I have been a licensed professional engineer in the State of New Jersey since 1922. I have been the Chief Hydraulic Engineer for the City of Jersey City since 1936. I have been a member of the Joint Operation Board of the Water Policy Council in an advisory capacity for ten years. I served on Governor Edison's Water Supply Committee for two years. I can continue to qualify if you need it.

MR. STEPACOFF: No, that's all right. I just wanted a general idea so that I could ask you this question: Did you consider the Engineers' Preliminary Report with reference to the adequate capacity for pumping facilities to take advantage of the peak flow or the recharge of the reservoir after abnormal withdrawals?

MR. OHLAND: No, I have not. To be perfectly frank with you, I wasn't too interested in what was happening in Chimney Rock.

MR. STEPACOFF: I see. Are you prepared at all to give us an opinion as to whehter or not there will be sufficient adequate pumping facilities to furnish this 200 million gallons?

MR. OHLAND: Not without making a study of the Report - no, I can't do that.

MR. STEPACOFF: As an engineer, can you tell me the capacity of a geologist to determine a water problem as compared to a hydrologist?

MR. OHLAND: I prefer not to comment on that either. I think you've got qualified men in this room who can give

you the figures on it, or the facts rather, on that.

MR. STEPACOFF: All right, sir.

MR. OHLAND: Oh, I beg your pardon. Mr. Chairman, may I allot two minutes of my time to Mr. Connors who is the Secretary of Commissioner Sapiero, the Director of our Department, and I think he would like to take two minutes to say a few words on behalf of the Commissioner.

THE CHAIRMAN: He is not registered but I will allow him two minutes if he cares to speak.

MR. JOSEPH CONNORS: Senator Summerill, my name is Joseph Connors, Executive Secretary, Department of Public Works, Jersey City. I follow along the theory of Mr. Lifland and I will just say, "Me, too." But there is one point here that I would like to bring out on behalf of Commissioner Joseph Sapiero, the part on page 8 of the Assembly Bill that states that the State, if we do not meet their requirements in expanding will take over our water system and at a later date we may apply to buy it back. Now, as it has been brought out, we have been in the water business since 1874. We are not only satisfied with our system but we are proud of it. We do not know or we cannot foresee what requirements the State will put down that we should expand our system to their specifications. We do not know and have no assurance what the price will be if we want to buy back our system. Since we have used Home Rule in the past, our foresight has been adequate to meet the needs of our people. We feel that this part of the bill alone should bring out our resentment to your bill.

Much has been said about water systems and many figures have been quoted. On behalf of the Commissioner of Jersey City, I would like to invite the committee of the Legislature to visit our water system, see what it's like, see how it operates, and see in actual operation what we expect to do for our people.

I'll not take any more of your time. I want to thank you, and I hope for the sake of the people of Jersey City that this bill does not go into effect.

THE CHAIRMAN: Assemblyman Stepacoff would like to ask Mr. Ohland one question.

MR. STEPACOFF: Mr. Ohland, can you tell us how much you can furnish, both your county and the area, by an improvement as you contemplate presently?

MR. OHLAND: At the present time, Jersey City is supplying approximately 61 per cent of all the water consumed in Hudson County. We have a dependable yield of our system at the present time of approximately 68 mgd as against the consumption of 62 mgd. While I am on the subject I would like to bring out another point here.

I am a little skeptical of the dependable yield that the Engineers state we can get from the Longwood Valley Reservoir. I believe their Report indicates that to be 14.5 mgd. We know that the reservoir watershed area up there is approximately 24 to 25 square miles, and I am quite certain that we can get a lot more than 14-1/2 mgd out of 24-1/2 square miles that the report would indicate.

MR. STEPACOFF: Would you say presently you have 68 mgd?

MR. OHLAND: At the present time without the development

of the Longwood Valley Reservoir.

MR. STEPACOFF: Now, with the development, how much do you propose to project it to?

MR. OHLAND: Our dependable yield with the complete development of the Longwood Valley Reservoir, would run from 88 to 90 mgd.

MR. STEPACOFF: An increase of about 20 to 25 million.

MR. OHLAND: Roughly, 20 to 25 million.

MR. STEPACOFF: Thank you, sir.

THE CHAIRMAN: The next person I will call on is Peter W. Weber, Business Manager of the Operating Engineers Union. Mr. Weber? Mr. Weber apparently is not here.

The next person is Walter Hesse, a citizen of Somerset County.

MR. HESSE: Mr. Chairman, members of the Legislature, ladies and gentlemen: My name is Walter Hesse. I live in Martinsville, New Jersey. My profession is engineering.

In behalf of the League for the Preservation of Washington Valley, I want to thank you for the privilege of being heard. I want to submit to you and make public some important findings of our engineering group and our outside consultants. This information is the result of the work of many different people. The basic engineering studies were made by a group of competent engineering, scientific and technical employees of some of the outstanding industries of the Raritan Valley. The experiences of these people cover a wide range of technical backgrounds and abilities. They are used to working with complex problems and with figures.

The statements made by Dr. Leet on August 19 were based upon data which we are now presenting. If your Sergeant-at-Arms will come here, I will be glad to give him the entire documentation and charts.

Those of us who have worked and lived in the Raritan Valley know that the Raritan River is highly erratic in its flow. It can vary from 30 to 35 million gallons a day to 20-30 billions.

We have prepared charts which show that the proposed reservoir at Chimney Rock will not do the job the engineers have promised.

This charts which I have submitted to you, Mr. Chairman, are identical with the ones which will now be placed on display in order to assist me in the presentation of the discussion which follows:

This graph covers the years 1930, 1931 and 1932, and this one the year 1949. They represent a pictorial presentation of one portion of the total amount of work which has been done on this problem.

The graph presents two things: the lower portion of the graph is a hydrograph of the water flow and characteristics day by day of the combined Millstone and Raritan Rivers. The upper portion represents the level of water in storage in the proposed Chimney Rock reservoir. The reservoir has a capacity of 32 billion gallons. The dotted line represents the 8 billion gallon level of the reservoir. To go below this reasonable 25% reserve is commonly regarded as a dangerous operating procedure and water service curtailment is ordinarily put into effect when a reservoir is drawn down

to or below this reserve. To go below this line means that the reservoir has become dry.

The lower graph, our hydrograph, has imposed upon it a line at 130 mgd. This line represents the river flow at which the water supply pumps for the Chimney Rock reservoir will cease to operate. The upper line represents the maximum output of the proposed pumping installation and any river flow which occurs in excess of this capacity continues on down to the sea and does not find its way into storage at the reservoir. At this point I would like to mention that our graph paper was not large enough to allow us to plot the full extent of those peaks. They would be, if drawn to scale, approximately 30 to 35 times as high as they are shown on that graph. The paper would have to extend almost up to the ceiling of this room.

These values concerning the pumping capacity, the reservoir levels and its contents, have been arrived at from figures given in the engineering report of the firm of Tibbetts-Abbett-McCarthy-Stratton, and by assuming that they had a pumping system which would be capable of withdrawing water in increments from the lowest pumping value to the maximum.

We have assumed that the reservoir would be called upon to supply 180 mgd of potable water. We have not assumed it to be a 200 mgd facility because 20 mgd would have been drawn from the Raritan and Delaware Canal. We have assumed that the full 380 mgd could be pumped into the reservoir in our calculations. This in effect has given the proposed system a benefit. Our calculations simply balance out the water taken from the Delaware and Raritan Canal.

You will observe that for 1930, during the months of May, June, July, August, September, and October, the reservoir had an ample supply of water. However, in November, December, January and February, the available water in storage was seriously depleted. Following the rains which occurred during the months of February, March, April, May, June and July, we find that instead of the reservoir having reached maximum capacity it is left with only a partial fill of water - 21 billion gallons rather than the maximum of 32 billion gallons and with this amount of water we would enter the dry season of 1931. The reservoir's content would have been continuo usly depleted until October of 1931, where we once again are using up the reserve, and by the end of December 1931 this reservoir would have been dry for a period of approximately one week. When the rains started in January the empty reservoir once again begins to fill, and by the end of the rainy season of 1932 the reservoir had reached a volume in storage of 17 billion gallons and with that amount of water on hand we enter the dry season of 1932. By the middle of July, this proposed reservoir once again is depleted below its reasonable reserve and by the end of August we once again enter a period where the reservoir is again bone dry, and by this time the bone dry condition endures for about two months.

A reservoir design cannot and must not be based upon one year's operating experience. It must be designed to handle a succession of relatively dry years. We might say it must be designed by methods akin to sequential analysis.

For the purpose of comparison we have included upon the reservoir performance chart a line which represents the calculated performance of this proposed Chimney Rock reservoir when these identical assumptions are employed using the average monthly flows of the combined Raritan and Millstone Rivers. We find that if the calculation is based on average monthly flows that the reservoir at no time would have been in operating difficulty as stated by Mr. McCarthy.

I point out to you that this represents a theoretical situation and if any of you have attempted to quench your thirst with a theoretical glass of water, you realize this significant point.

I submit to you, gentlemen, that in order to engineer an off-river storage reservoir, the actual daily flow of the combined rivers must be used as a basis for analysis and that this analysis must be carried through a succession of dry years such as we had in 1930, 1931 and 1932. You cannot use average monthly flow rates.

There are several other periods during the past 25 years when similar conditions could exist. We have plotted one other period, the period from May 1949 to August 1950. In May the reservoir could be assumed to be full. In November 1949 the water is below the 25% line, and it is not until February 1950 that the water is above the 25% reserve line. Here once again we find that the spring wet season was not extensive enough to allow the reservoir to return to maximum capacity. It actually would fill to the 28 billion

gallons storage line. You will note for the year 1949 that the monthly and daily average storage calculations do not differ significantly and this agrees with the calculations presented by Mr. McCarthy on Monday. However, for the year 1950 the filling cycle shows great discrepancy between the two methods - monthly average vs. daily actuals. You will note that we enter the dry period of 1950 once again with a partially filled water hole.

We believe our calculations are correct and will welcome the opportunity to go over them with the state water authorities or other qualified and impartial experts.

The data clearly indicate to us that the Raritan River, by the very nature of its day to day flow, is not capable of economically providing for large scale off-river storage of water. If the water in the Raritan is to be stored in the quantities needed for potable and industrial uses, the place to store the water is on the river in reservoirs located on the river as recommended by the New Jersey Chamber of Commerce.

We have 25 to 30 copies of the hydrograph and copies of summary sheets of the description of calculations which are available to the press and all interested people.

I thank you, sir.

THE CHAIRMAN: Could we have a copy of your statement as read?

MR. HESSE: You have it, sir, along with the graphs, the original calculations which I have already presented to you. They are inside the rolls.

time.

MR. HESSE: And in that I concur 100 per cent, sir.

MR. STEPACOFF: No question about it in your mind?

MR. HESSE: No, sir, none whatsoever.

MR. STEPACOFF: Now then, your actual daily flow records were obtained from what source?

MR. HESSE: From the United States Geological Survey tables which are available to all people.

MR. STEPACOFF: And you went over these tables from what period to what period?

MR. HESSE: Actually we have examined them from approximately 1927 to 1955, sir.

MR. STEPACOFF: I take it that would be sort of a Herculean effort to obtain the daily figures for that time and to compute it as you have.

MR. HESSE: This, sir, has taken a great number of man hours in excess of 180, of the professional engineers that we have with us and there was a great deal of assistance on the part of other members of the League for the Preservation of Washington Valley.

MR. STEPACOFF: Do I understand you to say then that you had 180 engineers in this calculation?

MR. HESSE: No, sir, I said 180 engineering man hours. I might illustrate that point by also adding that we are in agreement with Mr. McCarthy - it took us one man hour to compute the performance of the reservoir using monthly averages for the year 1949, which would more or less confirm

his statement that he made a rapid check during his lunch hour.

MR. STEPACOFF: I don't quite comprehend what an average engineer's hour might be. Will you please explain that a little more in detail for us? Give us some idea as to how much effort you put into this study.

MR. HESSE: Well, sir, the original sheet of calculation, which I have presented to you, contains in excess of 10,000 numbers and if you will unroll it you may get some idea of the physical volume of numbers which is involved merely in the calculation of the years 1930, 1931, 1932 and 1949. I believe it is on the table. About ten engineers is the simple answer.

MR. STEPACOFF: About ten engineers have worked on this?

MR. HESSE: Yes, sir.

MR. STEPACOFF: I see. Thank you.

THE CHAIRMAN: Mr. Franklin?

MR. FRANKLIN: I wonder if you can tell me if there are any significant local sources of supply that flow into the Chimney Rock reservoir; that is, local creeks, etc.?

MR. HESSE: We were unable to obtain figures for the flow through the watershed of the entire area, the entire watershed area of the Chimney Rock region. The geological survey tables which were available to us did not contain such data. We are of the opinion, however, that we have been very liberal in our approach to the stated pumping capacity and by using the 180 mgd draw down on the reservoir rather than the 200, we believe we have given the reservoir an additional advantage and we hope it is sufficient to compensate for the minor omission which we have made with respect to the watershed.

MR. KASER: Excuse me, Mr. Chairman. Could I have an opportunity to answer some of these things?

MR. CHAIRMAN: I am going to call on you, Mr. Kaser. Are there any other questions of Mr. Hesse?

While the charts are here, for the benefit of the Committee, I am going to call on Mr. Kaser of the engineering firm that made the survey to make comments or explain them as he sees these figures.

MR. KASER: In the first place, as Mr. McCarthy mentioned on Monday, we made monthly studies as a preliminary check to determine what the critical periods were, and we did make a cursory examination of the daily records to indicate whether we thought a daily analysis would upset those results. We now have made the daily analysis of both of the periods discussed here this morning, and we find that while both our firm and the engineers who presented their data must have gone to the same source, since it is the only source of flow data available, --and as to the state reports prior to 1945, they did not mention that the records at Bound Brook which are directly usable for this type of analysis only began in 1945 and it is necessary for earlier years such as the 1930 period to build up a record by the addition of tributary records and develop a synthetic record, as it were. We have done that on a daily basis by ordinary hydrologic principles. I might mention there are 31 square miles of drainage area tributary to the Raritan at the junction of the Millstone and Raritan and not included in the records of the Millstone River at Blackwell's Mills and the Raritan River at Manville.

We made allowance for that. I don't know what allowance the other engineers made for it.

Another point is that we found that the flow of the branches of Middlebrook into the Chimney Rock reservoir in all except a very few months would be quite a bit in excess of the evaporation from the Chimney Rock reservoir. So that our study was made with those two allowances, about the same as the engineers represent their study. We used a yield of 180 million gallons per day from the Raritan, which is in accordance with our report. We ignored the 20 million gallons per day from the canal for this study and we used 360 million gallons per day as the pumping capacity from the Raritan, leaving 20 of the designed capacity that we mentioned for use in pumping the canal water. On that basis we found that, as of course we had expected, it gave somewhat a worse condition for the reservoir than the monthly study; not in any respect as is pictured there. For instance, the reservoir began to draw down during the month of June 1930, and at the low point at the end of December 1930, and the total of 25.7 billion gallons would have been withdrawn from storage, leaving 6.7 billion gallons or 20.6% of the reservoir capacity still in the reservoir. The reservoir then would begin to fill and in the month of July 1931 would reach its highest point, which instead of being down - I forget the figure - they gave the figure of 21 billion gallons as the maximum storage in 1931 - we found 29 billion gallons, or the reservoir would still be down somewhat from the full amount.

Then at the low point in 1931, the end of December,

there would still be 10.1 billion gallons in storage. The reservoir then would begin to rise and would reach about the same point for the maximum in 1932 that was reached in 1931, an elevation of 72.5, or it would be 3.1 billion gallons from being full at the end of May. The reservoir then would draw down and at the end of October 1932, the total withdrawn from the full capacity would be 24.1 billion gallons and at that point would be exactly 25 per cent of the total capacity still remaining. The reservoir then would begin to fill and it would complete its filling in March 1933.

That is our analysis of the 1933 period. We did the same sort of operation for the 1949-50 period and, as indicated, a greater draw-down would be required at that time. The draw-down would begin in the month of June 1949, reach the maximum in December. At that time there would only be 6.2 billion gallons left in the reservoir, representing 19.1 per cent of the storage. That is a depletion of 6 per cent in the reserve, which we do not consider excessive in the length of the period studied. The reservoir then would refill during the month of July 1950.

Now that, gentlemen, is the result of our analysis of the daily flow records. We have never contended that on an off-stream reservoir you would be limited at times by the pumping capacity in what you could divert from the stream to the reservoir. However, that has been taken into account in these studies.

THE CHAIRMAN: Assemblyman Stepacoff has a question.

MR. STEPACOFF: Mr. Kaser, you stated during the course of your explanation that of course a daily study would show a worse condition than a monthly study. Did I understand you correctly?

MR. KASER: That is correct.

MR. STEPACOFF: Well, we are talking about worse conditions when we study these problems, aren't we? Are we concerned about periods of drought?

MR. KASER: That is correct, and I explained that we made a monthly study and we examined the daily records to assure ourselves that the results of that monthly analysis would not be upset insofar as general conclusions.

MR. STEPACOFF: So that when you resorted to daily studies, then I presume that you are going to find worse conditions existing in times of drought than you would get if you took a monthly study. Is that true?

MR. KASER: That is correct.

MR. STEPACOFF: Then why didn't you take the daily count instead of the monthly average mean when you made your calculations in the first place?

MR. KASER: The answer to that is, as I said, that we had assured ourselves from an inspection of the records which were available to us that our conclusions would not be upset. We had planned all the time to make this daily analysis of critical periods in the course of our further study. But it's another example of where the further detailed work has not upset our preliminary conclusions.

MR. STEPACOFF: Then do you agree with some of the engineers' conception that a daily count is much better and much more accurate than resorting to an average monthly count in determining the million gallons per day?

MR. KASER: I have agreed with that several times.

MR. STEPACOFF: All right. Then can you understand why Mr. McCarthy would then say that the proponents of the idea that this reservoir is not adequate were citing wrong figures.

MR. KASER: I am still unable to understand how they came to the results that they did with supposedly the same data. I would like to look into that further to see where I can find the difference.

MR. STEPACOFF: Well, of course, we are all agreed on that, regardless of Mr. McCarthy's characterization that these figures were not true figures and that when I was reading these figures that the figures were from a source that was not accurate and true. We are all agreed then that a daily study of the actual flow from the river is necessary before we can come to any conclusion.

MR. KASER: I did not say that. I said that the daily figures have to be considered. We came to conclusions which were on the basis of monthly data and examination of daily records which have not been upset by the daily analysis.

MR. STEPACOFF: But, Mr. Kaser, if you wanted to take a monthly average and thought that was sufficient, why couldn't you take a six-month average and feel that sufficient in calculations?

MR. KASER: I guess if you thought your additional evaluations could back it up, you could do so.

MR. STEPACOFF: Of course, we are not backing up anything. We are just trying to find out facts, but doesn't it seem to you, doesn't it seem reasonable for all of us to assume that the best type of figures to resort to in order to come to a definite conclusion as to the capacity of this reservoir would be to take the actual daily count of the flow?

MR. KASER: Well, we felt that we were charged with the responsibility of making a valid recommendation and that we had assured ourselves that we had done so and done sufficient work to back it up. We have done additional work, additional verification, and it still holds water.

MR. STEPACOFF: Mr. Kaser, I am not questioning the bona fide character of your attempt. What I am trying to ascertain is this: In order for you to present the best possible conclusion to this Legislature, you would have to predicate your findings not on a monthly average flow but rather on a daily average flow; isn't that true?

MR. KASER: I don't think it is absolutely essential as long as you have examined and evaluated critical points of difference between the two methods of study.

MR. STEPACOFF: I don't say it's essential any more so than I say it would be non-essential to have a six-month average daily flow if you wanted to compute it that way. But insofar as the best type of calculation is concerned, wouldn't a daily flow be the best type of

figure on it?

MR. KASER: That's right.

THE CHAIRMAN: Mr. Kaser, do I understand that regardless of the daily flow or the monthly flow, both of you engineers are agreed on your figures, but it's the answer that you get from the figures that you disagree on. Is that right? The way each one has interpreted these figures, that is the difference? Is that correct?

MR. KASER: Not necessarily. There are the two points which I mentioned - run off from 31 square miles of additional drainage area which they may not have accounted for, I don't know; the other is local in-flow to the Chimney Rock reservoir which I understood that they had not accounted for. Any other differences I don't know. The basic data used should have been the same, but I am unable to explain now why the results are so different.

THE CHAIRMAN: In other words, for as near ageement as you are on your figures, there is a big variation in the answers; isn't that right?

MR. KASER: Well, as I say, we are agreed on the source, I believe. I think it should be mentioned that the units used by the geological survey in publishing their records are cubic feet per second. Now, that is not the same as million gallons per day. There is a matter of converting from one set of figures to another. I don't know whether they came out with the same answers. I haven't seen the data.

THE CHAIRMAN: I have some questions here and I am going to ask you these: First, a question by Mr. Hesse: When did

you first make your daily flow calculations - before or after submitting your Preliminary Report?

MR. KASER: The daily flow detailed calculations were made after submitting the Preliminary Report. The examination of daily data, to indicate to us whether there was any possibility of upsetting the monthly analysis, was made before the Report.

THE CHAIRMAN: Now, here is another question by Mr. Engelhard: Would your new findings cause you to change Mr. McCarthy's earlier testimony in any way?

MR. KASER: No, I don't see that it would.

THE CHAIRMAN: Do you still feel that 200 million gallons could be reached without using the water from the Delaware and Raritan Canal?

MR. KASER: Yes. The Raritan will support that yield by adding possibly some on-river storage or using a little higher water level for Chimney Rock reservoir.

THE CHAIRMAN: Could the minimum flow in the Raritan still be increased from 130 to 200 million without affecting the availability of 200 million gallons per day?

MR. KASER: Could I have that repeated again?

THE CHAIRMAN: Could the minimum flow in the Raritan still be increased from 130 to 200 million without affecting availability of 200 million gallons per day?

MR. KASER: Additional storage would have to be provided, I presume, on the river to permit that delivery of the additional flows in the river, so additional storage would be necessary.

THE CHAIRMAN: Now, a question from one of the engineers with Mr. Hesse. Mr. Bell asks: To which watershed did Mr. Kaser assign 31 square miles of additional drainage area?

MR. KASER: That was largely the Millstone Watershed.

THE CHAIRMAN: All right, thank you.

MR. WILENSKY: Could we make a short statement with respect to the subject matter that is now at issue? It is only one paragraph.

THE CHAIRMAN: All right. We will hear that.

MR. WILENSKY: I would like to say that the North Jersey engineers on Tuesday tried to determine whether this reservoir could produce the 180 million gallons a day and made a partial check of certain years. We did not check the period from 1927 to 1953 but selected the critical years, and the figures based on daily flow records prepared by the engineers of the North Jersey District Water Supply Commission, under the direction of Dr. Charles Capen, who has been with us and the State for over 30 years and was former President of the American Waterworks Association and recognized, in my opinion, as one of the finest water engineers in this State, made on the same basis for Chimney Rock as for Round Valley and proven as to the method by experience on the Ramapo development, show that the project as planned in the Preliminary Report to the Legislative Committee will not yield 180 million gallons a day from the Raritan River, and he has the calculations here.

THE CHAIRMAN: Thank you, Oscar. One more question for Mr. Kaser from Mr. Hesse: For precisely which years did your firm do daily calculations?

MR. KASER: Our daily calculations were limited to the years 1930 through June 1933 and the years 1949 and 1950. We normally would not make such analyses except on the critical periods indicated by other methods of approach.

THE CHAIRMAN: All right. I will next call on John Roache, Jr., Director of the Morris County Board of Freeholders.

MR. JOHN ROACHE, JR.: Mr. Chairman, I would like to first extend the appreciation of the Morris County Board of Freeholders for your consideration and your courtesy in the hearing that is being held here today. I am a little handicapped in my speech. I am having some trouble with my teeth so you will have to bear with me if I can't make myself clear.

Your giving of this great time means much to the people of the State of New Jersey, because if these bills become law it will probably be the last time that you will ever be called on to decide anything that pertains to water. And that will also be true for the State Water Policy Commission. You will have a group or a board that will be a power unto themselves in the State of New Jersey.

My name is - and I should have given you this first - John Roache, Jr., and I am the Director of the Morris County Board of Freeholders.

Perhaps there may be many in this room who might wonder why Morris County is concerned with Chimney Rock. We happen to be aware of all the plans that are on file in the Water Supply Council and we know that any plan for the Raritan River will eventually tap the Musconetcong, and we know the Musconetcong concerns us greatly because of the great lake that we have in our county - and I am speaking now of Lake Hopatcong. We have also had experience with the development of water supplies in our county; the great supply of Jersey City is in our county, and we feel personally that they have reached the limit of the amount of water that they should take from our county. It hasn't been well to sit here and listen to practically every speaker in the room endorse part of this bill that tells us you must go to Morris County to get your new supply or additional supply. We have watched our supply develop - first with the Boonton Reservoir, next with Split Rock, and now Longwood Valley.

We are receiving a tremendous growth in Morris County. The figures that are projected here by the engineering firm are not correct. They are taken from the regional plan and the regional plan is not up to date as it concerns the County of Morris or Somerset or Middlesex. Our own planning board has projected figures that show our population will double by the year 2000, and the Somerset County Board and Middlesex will show that the rate of growth in these counties is staggering in the last three years. The record is not complete. The figures that are shown here are not complete because of that. It is our feeling that any development in

this river is going to affect us and it should be left there for the counties that are concerned with that water supply. We can picture ourselves in Morris County, if you will, by the year 2000 or later, when we need water and we will be begging for it because our supply has been sent all over the State of New Jersey.

This will be true of Somerset County if this becomes a project of this type. It will be true of Middlesex. We are hopeful that some day the Legislature in its great wisdom will have the foresight to leave these small developments alone, if you will. As the lady stated right there, they are mostly mud puddles the biggest part of the year, and they are not good to look at, and they are not good for the communities that surround them, and if they have to live with them it should only be because they have to use them.

We have available by law, and by right, if you will, an interest in the Delaware River, and there has never been a time when the State of New Jersey has made an all-out effort to secure this reserve for all the people in the State of New Jersey.

I don't think this bill will ever become law. The Board of Freeholders wants to state this right now that if no one else takes it into court when it's passed, we will, and if any others are going in and want our help we will join them. We don't think we should have laws like this on our books. There has been much said about the good-neighbor policy between these supplies. I have watched them work over the years and they don't get along too well together. They

joined together and I joined with them in something like this but most of the time it was a battle for business. The water business is a profit maker and they have all made profit and it might be well for the Legislature to check over the money that is made in the water business and know what it means and why in some of these developments, why they are asking that they should be made. What are these counties to do 20 or 30 or 50 years from now, when they watch their water being taken, when they watch their people being upset and stirred, when they watch these larger groups come in, if you will, and now the State itself moving in to take over.

We expect to oppose all these supplies. We expect to oppose the Boonton Supply when it comes in but there is a way to do it now. We are entitled to appear at a hearing and be heard, but under the new law that will not happen. Some power will step in and say, "This is it," and you must take it, and the power perhaps will not know as much as the people who are making the application. Legislation of this type makes you lose faith in our representatives. It isn't often that we read documents or legislation as you have here. It will never pass in the referendum. There are enough in this room now who have expressed themselves that they dislike it and they represent powerful political groups, and to place a thing like that on the ballot and get it knocked down isn't good, when perhaps in the future you must develop the Delaware River - and we have been very lax as a State in doing this, and let New York City, if you will, take its share without doing too much about it.

I don't think we got anything from this meeting that the State held with the City of New York. I think they came back with an empty basket. They guaranteed us the right of 100 million gallons a day from the Delaware that we always had. This committee was sent originally to see if we couldn't participate in the New York City supply, but they don't want the Delaware River supply; it costs a little more money. There is something else for the great streams of New Jersey besides building mud puddles on. People are shifting out in the open, out in these areas, if you will; your population trends are that way. They want to move out. They don't want to live there. The industry is moving out, and it's only going to be a short period of time before they reach a point where we won't be able to supply them with the things they need.

I don't intend to try to repeat the things that have been said here today, or on Monday, or last week. Repetition, as the gentlemen from Jersey City said, is just a little objectionable after a while. But we all do have to put ourselves on record as to where we stand, and that's the intention of the Morris County Board of Freeholders here today. We want our legislators to know that in Morris County we will fight this all the way. We will take it into court, and failing in that, we will go through the State to fight the referendum.

Thank you very much.

THE CHAIRMAN: Are there any questions? The next person I will call on is George H. Buck, President of the Hackensack Water Company.

MR. BUCK: Mr. Chairman, members of the legislative committee: My name is George H. Buck and I am President of the Hackensack Water Company.

The Hackensack Water Company supplies water for domestic, commercial, industrial and fire protection purposes to 54 municipalities in Bergen County and northern Hudson County, and through a wholly-owned subsidiary serves a portion of Rockland County in New York State.

The Company is completing a major addition to its source of water supply and has firm plans and substantial investment, including real estate for a further expansion to meet requirements up to about 1970. Attention should be called to the statement on page 8 of the Report of the Legislative Commission that the Hackensack's development in Rockland County will provide water for New Jersey customers "only until such time as the demand of the company's New York users is sufficient to utilize all of the increased supply." This, of course, is a misstatement.

In common with other public utilities, the Hackensack Water Company has continuously carried on studies of the probable future water demands of the areas it serves and of the best and most economical means of meeting those demands.

The Hackensack Water Company always has recognized its responsibility to provide for the present and long-range future water requirements of the area it is privileged to serve and has shown its willingness and ability to assist neighboring systems when such was desired. It rejects the statement that the anticipation of needs up to 50 years in the future is "beyond the financial capacity or proper responsibility of existing public and private water supply systems." Capital expenditures of the Hackensack Water Company, a relatively small util-

ity, for expansion of its facilities will exceed $23,000,000 during the period 1950 to 1955 inclusive.

Bergen County is ideally located for the development of adjacent sources of supply. These local sources of supply can be developed in stages in an economical manner. The resources within the County can be developed to provide the additional water required to meet the needs of all the projected growth in Bergen County until it reaches a stabilized population. Under arrangements with the State of New York permitting development in that State, such as already have been achieved in part, even greater capacity can be developed.

The planning of this Company provides for the step-by-step construction of the necessary works. It would be economically unsound, however, for it to construct now to the extent necessary to meet requirements 50 years hence. It is essential, therefore, that the local water resources of Bergen County be preserved solely for the use of Bergen County.

Bergen County looks to the State to prevent diversion by others of its economically developable water resources until such time as they are needed for Bergen County.

The preliminary report of the Engineers sets forth the adequacy of the water resources of the State to meet all forseeable future demands. In the short time available to them, the Engineers have developed and presented many valuable facts,

and it is to be expected that their final report will be more comprehensive with respect to the water resources and the economics of their development.

The report shows the outstanding economic advantage enjoyed by the local projects proposed by the Passaic Valley Water Commission and Jersey City, where an additional 69.6 million gallons per day can be obtained at a cost of $13,500,000. Similarly, it sets forth a development of six reservoirs on the Raritan River, impounding 33 billion gallons of water, costing $22,000,000, which would regulate the flow of the Raritan River to 274 million gallons per day. This regulated flow obviously can be allocated between water supply and augmentation of river flow below Bound Brook, in accordance with the relative public interest and benefit.

Even more interesting than the relatively low construction cost of this last development is its adaptability to stage construction with the even greater economies inherent therein. At an average cost of $667,000 a billion gallons, initial construction of one reservoir, impounding 5 billion gallons at a cost of $3,335,000 would provide a regulated river flow in the neighborhood of 100 million gallons per day. Stage construction of the six river reservoirs, followed by construction of the Chimney Rock project, would make possible the development of from 350 to 400 million gallons per day, regulated flow from the Raritan River alone.

It must be recognized that the water problem in different sections of the northern metropolitan district is different. Some public and privately-owned systems have sufficient water to supply their needs for some years to come. Others do not. Some own or control sources or have local resources readily available from which they can obtain water more cheaply than from any major project. The people in municipalities which have no present or prospective shortage of water will not relish the idea of being assessed for the cost of a great undertaking designed to meet the distant needs of the entire area or of having their local resources developed by the State for the benefit of others.

The Engineers estimated that 76.5% of the future growth of population in the Northeastern Metropolitan Region will take place in Bergen, Union and Middlesex Counties: 36 per cent of this is in Bergen County. The peculiar interests of the different sections, the adequacy of and the cost of developing their local water resources and the plans of the water purveyors must be given consideration in estimating the market for water from any major State project.

The Engineers estimate the present dependable yield of the water supplies of the Northeastern Metropolitan Region at 456 million gallons per day. This apparently does not include the 42.3 m.g.d. they set forth as now available from the

Delaware and Raritan Canal, or the developments of the Hackensack Water Company. These, together with the projects of the Passaic Valley Water Commission and the City of Jersey City, would increase the dependable yield to 588 m.g.d. or about equivalent to their estimated 1980 water requirements.

All of the foregoing points to the necessity for further and greater study of the tremendous economic advantage of stage construction starting with the smaller projects and of careful consideration of the divergent interests of the various sections of the Region. The situation does not appear so critical that decision cannot await study and evaluation of the final engineering report.

The Hackensack Water Company opposes the principle of subsidizing the sale of water by general taxation. Real and personal property now bear a heavy tax burden in New Jersey and every new proposal to saddle more upon it, however small it may appear to be, should be resisted.

If systems benefiting from a large state project were to be assessed the full proportional cost of the water taken, the added cost to the average homeowner would not exceed one or two cents a day, even during the early years of operation. There is little justification, therefore, for transferring this burden to taxpayers not benefiting from the project.

Proposals also are made to empower a new agency to enforce scrupulous observance of the terms of water company fran-

chises, to protect supplies against pollution, to establish formulae for controlling stream flow, to construct and operate interconnections, to undertake projects to increase the dependable yield of existing water supply systems, to establish rates for the sale or exchange of water through interconnections operated or controlled by the agency. The Public Utility Commission, the State Department of Health and the Water Policy and Supply Council now have adequate jurisdiction over these matters. The constituting of another agency with such broad and overlapping powers would be a serious error. Municipalities which at great expense have made provision for the future will not relish the idea of being deprived of control of their facilities and of having them turned over to the people of other areas who have not paid for them. Privately-owned water utilities should have more realistic rather than more regulation if it is the purpose of the State that they continue to exist and provide proper and dependable service.

Summarizing, the Hackensack Water Company considers it to be the proper function of the State to plan for conservation and the best utilization of the water resources of the State of New Jersey. It should be responsible for the study and evaluation of the proper use of our various sources of water supply. In order to conserve essential water supply resources for future development, it should have the power to purchase in advance lands necessary therefor, to aid others so to do or to take other appropriate action.

The Hackensack Water Company does not oppose the purchase of lands at Chimney Rock or of the Wharton Tract. On the basis of present knowledge, such appears desirable. The Company does not oppose the construction of a major water supply undertaking by the State if and when such is desirable and necessary in a rational and economical stage program or if other public and private utility systems fail to provide for their needs. It does, however, urge that final decisions wait on the completion and analysis of the full engineering studies. The situation definitely is not sufficiently critical and the matter is far too important for final decisions to be made on the basis of preliminary studies of ten weeks duration.

It is suggested that the State well might initiate research into how incentives and aid could be provided to foster the development of desirable nearby water resources by existing public and private systems well in advance of the need therefor.

The Hackensack Water Company opposes in principle the putting of State money into existing municipal operations and of the attempt to control and regulate such operations. It believes that it would be a serious mistake to give a new agency wide and overlapping regulatory control of construction, operation and rates of public and private water systems.

The Hackensack Water Company considers the subsidizing of sales of water from a State project by general taxation of those not benefited as wrong in principle and unnecessary.

The Preliminary Report of the Engineers has produced much valuable and accurate data in a very short time, and the Engineers are to be commended therefor. We look forward with great interest to the results of their complete and definitive studies.

THE CHAIRMAN: Will you file a copy of that, please. Any questions? No questions.

I will next call on Daniel H. Conroy, Mayor of Bound Brook.

MR. CONROY: Gentlemen and members of the Committee: My name is Daniel H. Conroy and I am the Mayor of the Borough of Bound Brook.

The proposed reservoir at Chimney Rock will have a serious economic effect on the Borough of Bound Brook. The Mayor, the Common Council and the Inter-Boro Chamber of Commerce, which includes Bound Brook, South Bound Brook, Middlesex Borough and Bridgewater Township have gone on record against the project.

The removing of approximately four hundred families from the area will be economically felt. These people use the business places of the borough for their every-day needs of life, such as food stores, clothing, fuel, car purchasing and servicing, drugs, medical, dental and banking services.

The flooding of the only three roads to the north of Bound Brook will make a serious travel problem for the employees of industry in trying to get to and from their

homes in the area north of the proposed reservoir. The Preliminary Engineering Report has no provisions for a causeway over the reservoir.

A serious threat to the real estate values is being created that our citizens can do nothing about.

The physiological effect of a lake eight miles long and one mile wide with two dams above Bound Brook cannot be underestimated.

We feel in fairness to the people of Bound Brook and Somerset County a more detailed study should be made by the legislators. We should not be the victims of a hurried preliminary engineers' report without first ascertaining all the true costs, not only in dollars but also in the lives of so many people.

THE CHAIRMAN: The next person I will call on is Mr. James W. Hurley, Counsel for Warren Township.

MR. HURLEY: Mr. Chairman and Members of the Committee: I shall be painlessly brief. My name is James W. Hurley. I am Township Counsel for the Township of Warren, Somerset County.

I have some figures that were prepared by the Planning Board of the Township and the Township Committee. They are not very voluminous. However, I think that you will agree that they are vital, at least vital to our Township, and I think you will further agree that the agencies preparing these figures are such that you might say that the figures themselves are from the horse's mouth.

We have 366 parcels of land that must be acquired for the Chimney Rock project in our Township. Of the 366 parcels, 218 of them contain either residences or businesses. The appraised valuation of the 366 parcels of land is $6,000,000. The assessed valuation is $800,000. Our little Township presently has a tax rate of $10.72 per hundred. It is already the highest tax rate in Somerset County. The figures that I am presenting are based on a taking mark of 300 feet and do not take into consideration the acquisition of land for the relocation of roads beyond that 300 foot mark. I think that these figures alone will certainly indicate to you that should this project be approved, it must of necessity result in the financial destruction of the Township of Warren.

In 1954 the total assessed valuations of property in the Township was $2,900,000. As I have pointed out, we now have the highest tax rate in the county and we presently are in the process of constructing a regional high school with two other municipalities at a cost of $1,500,000. Gentlemen, I feel that the State of New Jersey cannot and will not approve a project that will result in the financial death of one of the municipalities of the State.

Thank you.

THE CHAIRMAN: The next person I will call on is George R. Bell, a taxpayer of Somerset County.

MR. BELL: I want to thank the Chairman for the opportunity to be heard and I want to also express my appreciation to the Chairman for the eminently fair way

in which these hearings have been conducted. I asked this morning to have my name added to the opponents to this bill after having reviewed the proceedings to date.

We have heard considerable controversy on the capacity of the reservoir. I was a participant in the calculations which our group made and I might, for the benefit of the Committee, make a point or two.

We knew of the differences in the drainage areas to which Mr. Kaser referred. We made some preliminary calculations and we also made some calculations on the basis of his 360 million gallons a day pumping rate versus our 380 million gallons a day pumping rate. The report is not clearly worded in that respect, and it could be assumed that 20 million gallons a day additional pumping could be supplied for canal water, in which case there would be 380 million gallons available for river water, and the charts that you saw were based on that assumption. He stated this morning, however, that he used only 360 million gallons a day of pumping capacity, and I think that a review of the figures will indicate that the drainage area and the pumping capacities are offsetting errors. I do not know whether Mr. Kaser was aware that in the early 1930's also, there was a considerable in-leakage of water into the Millstone River from the Delaware and Raritan Canal. The amount of water is unknown; it was substantial, and of course it is not in there any longer and would therefore not be available as flow in a similar dry period, unless there were some means of so diverting, and I think that is contrary to -- I do not believe that the Delaware and Raritan Canal Water can

permissibly be used as compensating water in a New Jersey stream.

Now, I speak as a taxpayer. I am a member of the League for the Preservation of the Washington Valley, but I speak today as a taxpayer. On last Friday, Mr. Bond, one of our spokesmen said that if it could be shown that this proposed reservoir were in the best interests of the State of New Jersey and of the general population, then we would be for it. However, based on our own studies, I submit to you, gentlemen, that it is not in the best interests of the State, that it will be substantially more costly than the Preliminary Report indicates and that the volumes and capacities and the safety factors which should go into a reservoir of this type will not be met.

I think also that I as a taxpayer would like to comment on some of the proposed taxing provisions. The prospect of a tax compensation for lands which are flooded and which shall become a perpetual charge against the taxpayers of the State of New Jersey strikes me as being extremely unsound. It makes a precedent which I am sure that everybody would be glad to hop on the bandwagon to follow, and as a taxpayer, I don't think I would care to vote for such a proposal.

The problem of long-range water planning is something that I've long been interested in. I might say that I am a native of the State of California where water is a perpetual problem. I might also say that the planning which was done in the 1920's, even before, is responsible

for the great growth of that State today.

Now, the Report and the proposed legislation which results from it appear to me to be a hodge-podge of short-sighted and ill-considered facts. And, gentlemen, it is only when sound, long-range planning - and we already have in New Jersey the agencies which can take care of that long-range planning - your Water Policy Commission or Council is eminently well qualified and I think has done a good job, but it has to be left alone and allowed to function, and I do not believe that the legislation as now proposed will serve the best interests of the State.

Thank you.

THE CHAIRMAN: The next and last speaker who is registered here is Senator Hand from Union County.

SENATOR KENNETH C. HAND, JR.: Mr. Chairman and members of the Committee: At the outset may I commend the Committee and my colleagues for this splendid hearing. I am sure that it has been very beneficial. I have a short statement which I would like to read:

The public hearings on Senate Bill 372 and Assembly Bill 595 have proved extremely informative. However, a number of sharp differences of opinions have been expressed concerning these measures, with the exception of one basic and fundamental point; namely, the urgent necessity for new and additional sources of plentiful water supply for residential and industrial uses.

As the Senator representing the County of Union, I deem it incumbent to impress upon the Revision and Amendment of

Laws Committees of the Senate and General Assembly that Union County stands foremost in its requirement for additional water supply. Within the past year, no less than 41 new industries have been located in our county, which fact is statistically supported by the records of the U. S. Department of Labor. Residentially, our county has gained nearly 50,000 in population since the 1950 census, so that today, as Senator, I represent 450,000 citizens. No one has disputed these facts and I am sure no one can.

The public hearings are now nearing their end and the Joint Committee must soon convene and decide upon a course of action concerning the disposition of these bills.

In my opinion, as well as that of my colleagues in the General Assembly, this issue is essentially non-partisan and should be so considered. This Joint Committee is comprised of members of both the majority and minority parties of the Legislature. The Governor represents the Democratic Party while the majority in the Legislature represents the Republican Party.

Governor Meyner has expressed recently a willingness to confer and discuss this water problem with representative legislators of both Houses.

May I therefore respectfully suggest to the Revision and Amendment of Laws Committees of both Houses that the members thereof decide to meet with Governor Meyner in an effort to solve this problem for the benefit of the citizens of our State. May I also respectfully recommend that the members of the Legislative Commission on Water Supply, together

with the President of the Senate, Speaker of the Assembly and the Majority and Minority Leaders of both Houses be included in such a conference.

This problem is too serious and too important to become a political football. It should be decided factually, meritoriously and logically for the best interests of all concerned.

Thank you.

THE CHAIRMAN: Senator, Assemblyman Stepacoff would like to ask a question.

MR. STEPACOFF: Senator, as you understand the present procedure, is it not the function of this Committee at the present time immediately to consider these two bills, A 595 and S 372, and decide whether they should be reported out of Committee? Isn't that really the function?

SENATOR HAND: That is the usual legislative procedure, yes, sir.

MR. STEPACOFF: Would you feel it would be our prerogative to ask for a session or do you think the Speaker and the President of the Senate should order that this Committee convene with the Governor and the interested parties?

SENATOR Hand: The Governor has suggested that he would be willing to meet with representatives of the Legislature. Just how that procedure should be worked out, I can't suggest further.

MR. STEPACOFF: Well, except this, that the Governor's feelings have been expressed in the newspapers but certainly

there is no official action insofar as his office is concerned. It would seem to me that the proper procedure then would be, would it not, that the Senate President and the Speaker of the House follow some protocol in order that this Committee, after its conclusions, meet with the Governor or whomever the majority party feels they should meet with.

SENATOR HAND: Yes, sir. I have suggested that they be included in such a conference if one can be arranged.

MR. STEPACOFF: Thank you very much, Senator.

THE CHAIRMAN: Senator, will you file your statement with the stenographer?

SENATOR HAND: Surely.

THE CHAIRMAN: There being no other witnesses registered and it being lunch time, I am going to permanently adjourn this meeting. I think that any other information this Committee would get would be a repetition, and we will permanently adjourn now.

(HEARING CONCLUDED)