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TOWN BOARD
JULY 27, 1994

A public hearing of the Town Board of the Town of Bethlehem was held on the above date at the Town Hall, 445 Delaware Avenue, Delmar, NY. The meeting was called to order by the Supervisor at 7:30 p.m.

PRESENT: Sheila Fuller, Supervisor
Frederick C. Webster, Councilman
George Lenhardt, Councilman
Freeman T. Putney, Councilman
Doris M. Davis, Councilman
Bernard Kaplowitz, Esq., Town Attorney
Kathleen A. Newkirk, Town Clerk

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SUPERVISOR FULLER: Good evening and welcome to a meeting of the Bethlehem Town Board. The first item on tonight's agenda is a public hearing and I would ask our Clerk, Kathy Newkirk, to read the call of the hearing.

TOWN CLERK NEWKIRK:

NOTICE OF PUBLIC HEARING
TOWN OF BETHLEHEM

NOTICE IS HEREBY GIVEN that a public hearing will be held by the Town Board of the Town of Bethlehem, Albany County, New York on the 27th day of July 1994 at 7:30 p.m. to consider Local Law No. 5 of 1994 Amending the Code of the Town of Bethlehem as follows:

Public
Hearing
Local Law
No. 5, 1994
Amend Vehicle
and Traffic

AMEND VEHICLE AND TRAFFIC ARTICLE VI, Section 119-33, Schedule VII, Stop Intersections, as follows:

ADD: stop sign on the eastern Wye of Bridge Street southbound at McCormack Road
and
ADD: stop sign on Bridge Street northbound at the intersection of McCormack Road.

All parties in interest and citizens will have an opportunity to be heard at the said hearing.

The Town of Bethlehem provides reasonable accommodations for the disabled. Disabled individuals who need assistance in order to participate should contact David Austin at 439-4131. Advanced notice is requested.

BY ORDER OF THE TOWN BOARD
TOWN OF BETHLEHEM
Kathleen A. Newkirk
TOWN CLERK

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State of New York)
County of Albany)

CAROL STUART of the Town of Bethlehem, being duly sworn, says that she is the Advertising Coordinator of THE SPOTLIGHT, a weekly newspaper published in the Town of Bethlehem, County of Albany, and that the notice of which the annexed is a true copy, has been regularly published in said THE SPOTLIGHT ONCE A WEEK FOR 1 WEEK consecutively, commencing on the 13th day of July 1994.

/s/ Carol Stuart

Sworn to before me this 18th
day of July 1994.
/s/ Kathryn Olsen
Notary Public, Albany County

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STATE OF NEW YORK)
COUNTY OF ALBANY) ss.:

KATHLEEN A. NEWKIRK, being duly sworn, deposes and says that she is the Town Clerk of the Town of Bethlehem, Albany County, New York and that I posted on July 13, 1994, a Notice of Public Hearing, a copy of which is hereto attached, on the sign board of the Town maintained pursuant to subdivision six of Section thirty of the Town Law.

/s/ Kathleen A. Newkirk
Town Clerk

Sworn to before me this
22nd day of July 1994.
/s/ Kenneth P. Hahn
Notary Public

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SUPERVISOR FULLER: Thank you. May I have a motion to indent the call of the hearing?

The motion was made by Mr. Lenhardt and seconded by Mr. Webster to indent the Notice of Public Hearing, Affidavit of Publication and Affidavit of Posting on the minutes of the meeting. The motion was passed by the following vote:

Ayes: Mrs. Fuller, Mr. Webster, Mr. Lenhardt, Mr. Putney,
Mrs. Davis.
Noes: None.
Absent: None.

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SUPERVISOR FULLER: Is there anyone in the audience who would like to speak in favor? There were none.

TOWN CLERK NEWKIRK: Excuse me. I don't know why it is doing this.

SUPERVISOR FULLER: All those wishing to speak in favor of the Traffic Safety Committee's recommendation, a stop sign at the eastern wye of Bridge Street, south bound on McCormack Road and a stop sign on Bridge Street, northbound at the intersection of McCormack Road. There were none.

Anyone wishing to speak in opposition? There were none.

May I have a motion to close the public hearing?

The motion was made by Mr. Webster and seconded by Mr. Lenhardt to close the public hearing at 7:35 p.m. The motion was passed by the following vote:

Ayes: Mrs. Fuller, Mr. Webster, Mr. Lenhardt, Mr. Putney,
Mrs. Davis.
Noes: None.
Absent: None.


Town Clerk

Supervisor Fuller convened the regular Town Board meeting following the public hearing.

Mrs. Fuller asked if the Town Board wished to take action on Local Law No. 5 of 1994.

The motion was made by Mr. Lenhardt and seconded by Mr. Putney to adopt Local Law No. 5 of 1994 amending the Code of the Town of Bethlehem as follows:

AMEND VEHICLE AND TRAFFIC ARTICLE VI, Section 119-33, Schedule VII, Stop Intersections, as follows:

ADD: stop sign on the eastern Wye of Bridge Street southbound at McCormack Road
and
ADD: stop sign on Bridge Street northbound at the intersection of McCormack Road.

The motion was passed by the following vote:

Ayes: Mrs. Fuller, Mr. Webster, Mr. Lenhardt, Mr. Putney,
Mrs. Davis.
Noes: None.
Absent: None.

Adopt
L.L. No.5,
1994
Amend Vehicle
and Traffic
Article VI,
Section 119-33

The following item was a request from Richard J. LaChappelle, Chief of Police, for appointment of a Police Officer.

The motion was made by Mr. Webster and seconded by Mr. Lenhardt to approve the appointment of Russell S. Hempel, Jr., P.O. Box 207, Voorheesville, New York, to the position of Police Officer, effective August 13, 1994. The motion was passed by the following vote:

Ayes: Mrs. Fuller, Mr. Webster, Mr. Lenhardt, Mr. Putney,
Mrs. Davis.
Noes: None.
Absent: None.

Appoint
Police
Officer

The following item was a request from Chief of Police, Richard J. LaChappelle, for acceptance of donations for the DARE program.

The motion was made by Mrs. Davis and seconded by Mr. Lenhardt to accept donations totaling \$300 as listed on the memorandum from Richard J. LaChappelle, Chief of Police, dated July 19, 1994, for the DARE program of the Town of Bethlehem. The motion was passed by the following vote:

Ayes: Mrs. Fuller, Mr. Webster, Mr. Lenhardt, Mr. Putney,
Mrs. Davis.
Noes: None.
Absent: None.

Accept
Donation
for DARE
Program

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Supervisor Fuller indicated all donations of individuals are appreciated.

Lead agency having been established for the Town Board, the following item was a referral of Windsor Development application to the Planning Board for review and recommendation on SEQOR determination of significance.

The motion was made by Mr. Webster and seconded by Mr. Putney to refer the application of Windsor Development for the proposed Planned Commercial Development (Price Chopper), New Scotland Road, Slingerlands, to the Planning Board for review and recommendation. The motion was passed by the following vote:

Review and
Recommendation
re: SEQOR
Windsor
Development

Ayes: Mrs. Fuller, Mr. Webster, Mr. Lenhardt, Mr. Putney,
Mrs. Davis.

Noes: None.

Absent: None.

Approve
Seasonal
Personnel
Parks & Rec.
Dept.

The next item was a request for approval of appointment of seasonal personnel for the Parks and Recreation Department.

The motion was made by Mr. Webster and seconded by Mr. Lenhardt approving the seasonal personnel as listed on the Memorandum from David Austin, Administrator of Parks and Recreation Department, dated July 27, 1994. The motion was passed by the following vote:

Ayes: Mrs. Fuller, Mr. Webster, Mr. Lenhardt, Mr. Putney,
Mrs. Davis.

Noes: None.

Absent: None.

Approve
Purchase of
Land for
S. Bethlehem
Park

The following item was a recommendation from the Administrator of Parks & Recreation Department for the approval of purchase of land for the South Bethlehem Park. Supervisor Fuller explained this is 4 acres of land adjacent to the existing park. She noted this is an excellent parcel of land and would allow for park expansion sometime in the future. The Supervisor noted funds are included in the Parks & Recreation Department budget, indicating the total amount is \$16,000.

The motion was made by Mr. Webster and seconded by Mr. Lenhardt to approve the purchase of land for the South Bethlehem Park at a purchase price of \$16,000 from Russell Hunter. The motion was passed by the following vote:

Ayes: Mrs. Fuller, Mr. Webster, Mr. Lenhardt, Mr. Putney,
Mrs. Davis.

Noes: None.

Absent: None.

Set Public
Hearing
To consider
L.L. #6, 1994
Stop Intersect.

The following item was a recommendation from Lt. Richard Vanderbilt, Chairman, Traffic Safety Committee, regarding Stop Intersections at Amsterdam Avenue, Glenmont and at Darroch Road with Huntersfield Drive, Delmar.

The motion was made by Mrs. Davis and seconded by Mr. Webster to hold a public hearing August 24, 1994 at 7:30 p.m. to consider Local Law No. 6 of 1994 amending the Code of the Town of Bethlehem, to permit stop intersections at Amsterdam Avenue, Glenmont and at Darroch Road, Delmar. The motion was passed by the following vote:

Ayes: Mrs. Fuller, Mr. Webster, Mr. Lenhardt, Mr. Putney,
Mrs. Davis.

Noes: None.

Absent: None.

Appoint
Election
Inspectors
and Poll Clerks

The following resolution was presented by Mr. Webster and seconded by Mr. Lenhardt:

RESOLVED, that pursuant to Article 3 of the Election Law, the listed persons be and they hereby are appointed Election Inspectors and Poll Clerks as recommended by the Republican and Democratic Committees to serve for the period July 15, 1994 through July 14, 1995 as indicated on the lists attached to the resolution.

The resolution was adopted by the following vote:

Ayes: Mrs. Fuller, Mr. Webster, Mr. Lenhardt, Mr. Putney,
Mrs. Davis.
Noes: None.
Absent: None.

The next item was a recommendation from Michael Cirillo,
Engineering Services Administrator, Department of Public Works, for
acceptance of deeds for easement purposes on Elsmere Avenue.

Accept
Deeds
Elsmere Ave.

The motion was made by Mrs. Davis and seconded by Mr. Lenhardt
to approve the acceptance of easements for proposed storm drainage
system at 99, 99B and 101 Elsmere Avenue, Delmar. The motion was
passed by the following vote:

Ayes: Mrs. Fuller, Mr. Webster, Mr. Lenhardt, Mr. Putney,
Mrs. Davis.
Noes: None.
Absent: None.

The Supervisor explained that the homeowner at 101 Elsmere
Avenue has requested consideration in the amount of \$850 to cover
legal and survey expenses.

The motion was made by Mr. Putney and seconded by Mr. Webster to
approve the payment of \$850 to Mrs. Ellen Biggane, 101 Elsmere
Avenue, Delmar, NY to cover legal and survey expenses with regard to
the granting of the storm drainage easement. The motion was passed
by the following vote:

Approve
Payment
re: Storm
drainage
Easement
Biggane

Ayes: Mrs. Fuller, Mr. Webster, Mr. Lenhardt, Mr. Putney,
Mrs. Davis.
Noes: None.
Absent: None.

The following item was a recommendation from Michael Cirillo,
Engineering Services Administrator, Department of Public Works, for
acceptance of deeds for proposed storm drainage system at 40
McCormack Road, Slingerlands.

Accept
Deeds
McCormack Rd.

The motion was made by Mrs. Davis and seconded by Mr. Putney to
accept two (2) deed documents for storm drainage easement purposes
from Mr. and Mrs. Daniel R. Peters, 40 McCormack Road, Slingerlands.
The motion was passed by the following vote:

Ayes: Mrs. Fuller, Mr. Webster, Mr. Lenhardt, Mr. Putney,
Mrs. Davis.
Noes: None.
Absent: None.

The next item was consideration of increase in project costs for
proposed Expansion of Water Supply Facilities. The Supervisor read
the following memorandum and letter.

MEMORANDUM

TO: Members of the Town Board
FROM: Bruce H. Secor, P.E., Commissioner of Public Works
DATE: July 20, 1994
SUBJECT: Expansion of Water Supply Facilities

Discussion
Increase in
Project Cost
Water Expansion
Facilities

This memo is a follow-up to the Public Hearing held on July 13, 1994,
to receive public comment on the proposed amendment to the Engineer's
Report to allow an increase in the total cost of the water supply
project to \$13.9 million.

Based on my review of the Engineer's Amended Report and the information provided, it is still my opinion that this is a beneficial project for the Town of Bethlehem. It is the best alternative which directly addresses our long term needs for both a source of additional water supply and strengthening the hydraulic layout of our distribution network. It is the most cost effective alternative, even with the proposed increase in costs. The net cost for the project have not changed because of the conservative approach taken in the 1991 Engineer's Report for the calculation of the amortization schedule. These calculations have been updated and presented to the Board (copies attached). We have received detailed information from numerous experts stating that the water supply is of high quality, that it does not contain contamination from fecal coliform and that there was no findings of cryptosporidium, giardia, or PCB's. This is high quality ground water which can be treated in a modern water filtration plant to provide a safe and reliable source of water for the future of the Town.

It should also be noted that there is no significant change in the project from the facts presented in the original 1991 Engineer's Report. The main elements of the project as presented in 1991 included a preliminary layout for an infiltration system with pumping stations; a raw water transmission main from Schermerhorn Island to a new water filtration plant on Clapper Road; a new finished water transmission main westerly along Clapper Road to Route 9W and then westerly along Creble Road to connect to the existing water mains in the industrial area. All of these elements are located in the same locations as presented in the 1991 Engineer's Report. The only change that occurred is a monetary one in that bids received exceeded the original Engineer's estimate. The increase in costs have been attributed to a combination of: added State and Federal requirements, a more complicated design of the internal details of the infiltration system, increasing by one size the water transmission mains, and inflation. None of these modifications will alter the environmental effects of this project such as air emissions, noise, effects on ground water, discharges, or any other environmental effects. The changes made were design details not impacting the basic project elements in a way to increase or alter environmental impacts.

The analysis that was done for the coordinated SEQRA Review with the Town Board as the Lead Agency has not changed. What is being considered here is an increase in project costs. The previously declared negative declaration for this project is unchanged by the proposed amendment increasing the project budget.

Based on all of the factual information available and the testimony of the technical experts involved in the design and review of this project, it is my recommendation that the Town Board approve the increase in the project costs and that we move forward as soon as possible to construct the facilities incorporated in this project.

Attached for your consideration are copies of the revised bond resolution as prepared by LeBoeuf, Lamb, Leiby & MacRae.

Please contact me if you have any questions or need any further information.

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July 22, 1994

Supervisor and Town Board
Town of Bethlehem
445 Delaware Avenue
Delmar, New York 12054-3098

Attn: Sheila Fuller, Supervisor

Re: Amendment to November 1991 Engineer's Report
Water District No. 1
Expansion of Water Supply Facilities

Gentlemen:

We wish to supplement our letter report of June 20, 1994 bearing the same subject as this letter, with respect to the State Environmental Quality Review Act and more specifically to the SEQOR procedure followed by the Town during the latter part of 1991 and concluded in early 1992.

The current legal proceeding to increase the maximum amount to be expended for the Expansion of Water Supply Facilities project to approximately \$13,884,000 or approximately \$3,184,000 more than that which was authorized in January of 1992, involved only the need for funding increased costs for a project which is substantially the same project which was approved in January 1992 and does not involve any changes or revisions which would affect the prior SEQOR process or its conclusions. The proposed project remains unchanged with respect to its scope and the location of the proposed facilities and there are no changes in the environmental considerations with respect to this project. There are no environmental impacts with respect to land, water, air, agriculture, transportation or any of the other items evaluated in the Full Environmental Assessment in December 1991.

It is therefore our opinion that there is no need for any additional consideration of this project under the SEQOR guidelines.

Should you have any questions regarding this matter, please do not hesitate to call.

Very truly yours,
/s/ James K Fraser, Jr.
James K. Fraser, Jr., P.E.

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Supervisor Fuller said certainly the Board will discuss this now. She noted as individual Board members, the question for the Board this evening is the additional cost for the water treatment plant. She asked if there were any questions or comments.

Councilman Webster made the following remarks:

I am the only current Board Member that was here on August 23rd, 1990 when we received a letter of cancellation from the City of Albany and also the only member here who voted along with Supervisor Ringler, Charlie Gunner, Bob Burns to go forward and look at our alternative as a result of that letter at our September 4, 1990 meeting. The Town Board publicly and openly discussed our options at a number of meetings. We looked at future needs of the Town, how to best meet those needs in a safe, reliable, cost effective way. This entire process was conducted in open meetings, reports placed on file in the public library. There was press coverage each step of the way.

Questions of water quality have been addressed by qualified experts and consulting engineers. These issues have also been reviewed by both the New York State Department of Environmental Conservation and the New York State Department of Health. They have both approved the project. They would not have written those approvals if this was not a safe drinking water supply which would meet all drinking water standards.

I, personally, have inspected the Schermerhorn Island site from the very beginning. Spoke to the engineers and water department specialists. I have listened since 1991 to public comments and expert testimony and also reviewed those written records. The water supply facilities now before us are basically the same as were proposed in 1991. Added federal and state regulatory requirements and other factors have caused the construction bid prices to come in over the original budget. However, cost analysis in the 1991 Engineer's Report was done conservatively using 8 percent bond rates. The actual bond rates available now are 4.25 percent. Both of these lower interest rates... because of these lower interest rates, there is no net change in the project annual debt costs, therefore, the cost analysis presented in 1991 has not changed. The savings to our tax payers are still there.

I personally feel we should move forward with this project. It will be safe, reliable, save our tax payers 20 to 30 million dollars over the next 15 years alone. There is no increase in cost to the residential tax payer. The residential water rate has stayed the same for the last 3 years and will not increase as a result of this project. The industrial rate will increase only 6 percent, which is much less than what would happen if we had purchased more expensive water from outside our system. We will also achieve better system hydraulics with the new water plant and larger transmission mains allowing for improved fire protection for all and extend protection to areas that are not now receiving hydrant service.

The Supervisor thanked Councilman Webster and asked if anyone else would like to speak.

Councilman Davis made the following remarks:

I first became aware of the water expansion project when newspaper articles appeared in the local newspaper several years ago. Although I was not a member of the Town Board then, the water expansion issue was featured at various times by the Times Union, and The Spotlight and I remember thinking as I read the news articles that the project seemed reasonable and had merit. I did not, I remember very clearly, feel threatened by an unsafe source of water.

My husband, my sons and I are very familiar with the Hudson River having enjoyed boating there as a family for the past 12 years. In fact, I would say our family has developed a real love affair with the Hudson. Not the river of 25 or even 15 years ago but the increasingly popular, very useable, and ever improving river that we have experienced as a family, with the numerous positive changes that it has undergone during the years that we have spent there. Swimming and water skiing are common activities of the many families that we know personally who spend much of their summers in and on the Hudson. An increasing number of fishing tournaments and the revival of the tour boats that most of you, I am sure, have seen these past years with the people who line the decks to enjoy the Hudson are other signs of a significantly improving river. My husband and I viewed the water project test site from our boat while testing was underway.

I recall having commented on the clear appearance of the water as it was directed in a rush over the bank and back into the river. I have also visited the well site on land on several occasions and I have toured the entire project's route, as well as, the proposed locations of the plant facilities.

The project was approved by the Board in 1992 at a time when I was not yet a member. In giving their approval, I believe all of those members at that time considered what was in the best interest of the Town and particularly its residents. Although I realize that we are here this evening to approve or disapprove additional monies, not the project itself, 2 aspects of the project have been under attack and I feel that I must comment to some degree on both of these.

First, the safety of the water source and second the economics of the project. In relation to safety, this water expansion plan is not novel. Neighboring communities, towns and cities on the Hudson, as well as, other area rivers and communities in other parts of New York State for years, for years have used similar and in many cases, much less sophisticated systems. Several use the Hudson and other waterways in their worst days environmentally speaking. I have listened to, I have weighed carefully the information presented by many professionals who have spoken publicly. In addition, I have sought the opinions of other professionals who have not spoken at our meetings. Professionals who have no vested interest, no conflicts, as well. I have read and I have reread and I have reread volumes of information only a part of which is represented here. I am satisfied with the professional judgement and rational of many of the people who I believe are qualified to make such judgements. Their data, their facts, logic and rational information have been much more convincing, I think, than the emotionally charged reactions of those who have been the loudest in expressing opposition to this project.

Examples of a few of these statements used regularly and publicly by the project opponents include for example, we will soon be lacing our morning coffee with Hudson River water; and I have been down to the river and visited the scene of the crime; and this is the great Hudson River cover-up; and our Town Board members simply rubber stamped a major decision on our drinking water. As a Town Board member, I believe it is my responsibility to consider and even scrutinize the qualifications of those whose voice, opinions... by considering who have voiced opinion by considering their education, their training and their experience.

The opinions presented on this issue by a significant number of qualified experts have failed to support the statements that I just quoted. I have searched the record for facts, for truths, for data, for evidence to support such charges and statements and I have found none. In considering the water safety or the safety of this water source, I have tried to be objective but I have also listened to my heart. I am a mother and I care about my children. I assume that before too long, I will be grandmother and I will care about my grandchildren. I have neighbors with young children. We have several neighbors with babies and one couple who had their first baby, a new boy, today. The blue balloons were out when I came home from my office.

I was a teacher for 12 years. I volunteered in our schools and I participated in such town programs as the annual bicycle rodeo to help promote safety. Many of you have read, probably, my recent point of view article in the Spotlight on the new bicycle helmet law as it relates to children's safety. I wrote that article to heighten awareness of our children's safety. Certainly, I would not support a project that I considered to be a potential health risk to my family, my friends, my neighbors and my town. The safety of our water supply is a basic, serious, serious issue. I do not take it lightly.

Our purpose for voting this evening is directly related to a second aspect of the project, the economics. We must approve or disapprove an additional \$3,183,863. The burden of this amount, as well as, the originally approved 10.7 million dollars, in other words, the cost burden of the project, its debt service, its maintenance and its operation will not be borne by our town's residents. The cost of the project will be borne by industry, a factor that I believe is significant to us all. A major portion of the additional \$3,183,863 however is the result of strong recommendations made by the State Department of Health, a very conservative agency. The ozone treatment system, for example, is now an added feature of the project. It has been approved by the Department of Health. The system was not included in the project approved by the Town Board in 1992. I am concerned about this development which is an example of the State's imposition of standards on local governments without assisting these governments by providing the necessary funding. I realize that the basis for including the ozone treatment system is to provide additional safeguards for public health and safety. Therefore, I certainly would not risk our residents safety by suggesting that the system not be incorporated. It was added at the direction of the state, however, at a very late stage of the process, well after the project's approval in 1992 and this concerns me. This development has made me pause to consider its overall effect.

As a result, I have become more certain than ever, that the state, as well as, federal mandates without funding should be reviewed. I am convinced that we must look for ways to counter such actions and I intend to work toward that end. I am concerned about the State Department of Health's late hour recommendations regarding this ozone treatment system but in considering the economics of the project, its significant that including the system will not result in a change in the project's annual debt costs.

My decision to approve or disapprove additional monies has not been an easy one. But, in assuming my post as a Town Board Member, I was aware that I would be required to make difficult, tough decisions. I am making one now. I realize that it would be politically expedient to vote no this evening. I also realize that to vote no would be the easy thing to do. I cannot and I will not

serve as a Town Board Member by what is politically expedient or by taking the easy way out. Rather, I must do what I believe is the right thing for our residents, our community, our town for today, tomorrow and beyond. I feel confident that the new water supply will be of excellent quality, will be safe, will be plentiful, will be long term, will be cost effective and will result in no increase cost to our taxpayers. I feel confident that approving the new water supply is the right thing to do for our residents, for our community, and for our town. Therefore, I vote in the affirmative, I vote yes.

The Supervisor thanked Mrs. Davis. Mrs. Davis thanked the Supervisor for the time, noting it was long, indicating she felt it was important to say everything and thanked everyone for listening.

Councilman Putney made the following comments:

I share a love of the Hudson River. I live on it, have been for the last 15 1/2 years. I see it improving in quality. I swim in it. I use the raw water from the river to water our plants and they do thrive. It is not as many people imagine the Hudson to be nor what it was 5 or 10 years ago.

I also am going to support the motion to approve the additional funding for the water source. I believe what is proposed is a safe and reliable secondary source at a lower cost than when the Albany alternative was available, what the cost was then. And, a source that will be able to serve our needs well as we seek to attract a larger industrial tax base and we guide proper residential growth over the years ahead. And, also a source which is under our own control and cannot be again the pawn of economic blackmail.

As the result of all the information that we have heard at the meetings and in the media and letters that we have received, I do have several concerns that I hope that Supervisor Fuller and her staff will be able and willing to address. First regards the negotiations with Albany. Belatedly now that the city or the water board or whomever it is who is in charge have indicated a willingness to talk. I do hope that we can reach an agreement for our mutual back-up needs. Secondly, regarding quality. I believe also that we have tested and retested and have proposed to us a system that will be of very high quality, that is safe, but there is always that question as to whether or not it will continue to do so. So far I haven't heard a shred of evidence to indicate that we are lacking anything in our testing processes nor that there is any valid reason to believe that the water is not fit for the consumption of Bethlehem residents. But, I do urge anyone, who in the future becomes aware of any frailty in our testing system or new processes which might help to ensure even better testing to make the Supervisor aware of this so that we can explore the possibility for even better safeguards than exist now. Third, in the area of the cost escalation. I remain very disappointed and upset with what I believe is the poor quality of professional services rendered to us by Mr. Fraser and his associates. While it would not have changed the outcome... the economic outcome solely because of changes in financing costs, his failure to expect this sharp increase in cost indicates in my view a lack of professional expertise for which we have contracted or sleepiness on the job or both. I trust that the Supervisor will examine our contract with Fraser and seek ways to reduce their fees to compensate our water rate payers for this neglect.

Finally, I would like to speak briefly about regionalization. We have been criticized by some for going in the wrong direction for going away from the concept of regionalization. But, I do think we are on the right track. I believe strongly in the benefits of regionalization of some municipal services and water is among them. But, I think we should think in terms of the entire Capital District as a water region which would include the Tomhanock Reservoir in Troy and the Watervliet reservoir and Guilderland's sources and the needs which are unmet by the local sources of Clifton Park and Colonie, as well as Albany. A regionalization of water sources which would be a true confederation of interests not dominated by one... or dictated by one individual municipality. And, perhaps, we could look at that sort of regionalization when we do have something important to offer to share.

The Supervisor thanked Councilman Putney.

Councilman Lenhardt made the following comments:

I feel like I am repeating a lot of things that everyone said. I made these notes. First of all, if there were an ounce of doubt that the purity of this water would be compromised or is compromised we wouldn't even be at this position... at this point in the process. I sit up here and must deal with facts and not emotions. I was elected by the citizens to make decisions that are in the best interest of the residents of the Town of Bethlehem and I feel that this decision is definitely in the best interests of the Town.

During the public hearing, a lady asked whether we had the potential of drinking fluoridated water, if Albany fluoridates its supply. I will not debate the issue of fluoridation, that has been done already. However, the question raises the issue of control of our own resources. This project returns control to our community. This project positions the Town of Bethlehem with an adequate water supply well into the 21st century and should meet all of its needs.

I am disappointed with the consultant's inaccurate estimate of costs for this project and I direct our Engineering Department to immediately personally notify me if there are any further variations in any of the numbers that have been presented to this Board.

Finally, even though this does not impact the quality of our drinking water system, I offer whatever influence I have and assistance to the Clearwater organization's efforts or any other group's efforts to make New York State upgrade the Hudson River classification to an "A" rating. Thank you.

Supervisor Fuller made the following comments:

I can't say I have saved the best for last but I felt I have lived with this since January of 1992. I was here for the public hearing. I started serving on the Town Board in June of 1991. Since becoming Supervisor in January, I can tell you from January to July 26th, this has been 24 hours a day on my mind. I have to tell you I as Supervisor, I as a school board member, I as a Town Board Member, have been an elected official. I also have to tell you what is most important to me. What is, what I view as the best to do for our community, for everyone in the community. I cannot be involved in basing every one of my decisions on how many votes I will win or how many votes I will lose. I am here to do the very best job that I can and that's all that I am trying to do. I want you to know that what everyone has said around this table is exactly how I feel. Rather than be repetitive, I have to tell you I would not jeopardize anyone in this community for anything. I assure you the concern of the safety of the water was up front on my mind. I am no longer concerned. The scientific evidence tells us there is no reason to be concerned. I also am a mother of 5 children and after serving 13 years on a school board in this community, obviously, I am concerned about everyone's child, grandchild and we as mothers, fathers, grandmothers, grandfathers, etc. I thank everyone for all the time they have put in. For all the phone conversations I have had with many of people, many a letter, the ongoing discussion of the water treatment plant. This evening's decision is not whether to continue or not, the decision is the additional cost. We are on our way to probably having the best water supply in the northeast and I am proud of it and I am proud to be Supervisor at a time when tough decisions have to be made and I am glad I am here to make them. Thank you all.

The Supervisor asked the Board to vote noting the vote would be on the resolution and order after the public hearing pertaining to the increased and improvement of facilities of Water District No. 1 in the Town of Bethlehem and the County of Albany, New York pursuant to Section 202b of the Town Law.

Councilman Putney moved that the following resolution be adopted:

A regular meeting of the Town Board of the Town of Bethlehem, in the County of Albany, New York, was held at the Town Hall, in said Town, on the 27th day of July, 1994.

PRESENT: Supervisor Sheila Fuller
Councilman Frederick C. Webster
Councilman Freeman T. Putney
Councilman George Lenhardt
Councilman Doris Davis

Resolution
Increase
and improvement
Water Supply
Facilities

In the matter of the Increase and Improvement of Facilities of Water District No. 1, in the Town of Bethlehem, in the County of Albany, New York pursuant to Section 202-b of the Town Law.

RESOLUTION AND
ORDER AFTER PUBLIC HEARING

WHEREAS, the Town Board of the Town of Bethlehem (herein called "Town") in the County of Albany, New York has heretofore caused J. Kenneth Fraser and Associates, P.C., competent engineers duly licensed by the State of New York (herein called "Engineers"), to prepare an amendment, dated June 20, 1994, to a map, plan and report dated November 1991 for the increase and improvement of facilities of Water District No. 1 (herein called "District") in the Town, consisting of the expansion of water supply facilities and transmission mains, including construction of new infiltration wells, raw water pumping station and transmission main, and construction of a new water purification plant and finished water transmission main, and also including buildings, land or rights in land, original furnishings, equipment, machinery and apparatus required therefor. Said amendment describes portions of the project for which costs are greater than the original project estimate, the reasons therefore and estimates the total cost of the project at \$13,900,000; and

WHEREAS, the Engineers completed said amendment and filed it with the Town Board, the Town Board thereafter adopted an Order describing in general terms the proposed increase and improvement of the facilities, specifying the estimated cost thereof, and stating that the Town Board would meet to hear all persons interested in said increase and improvement of facilities on July 13, 1994, at 8:00 p.m. (prevailing time) at the Town Hall, 445 Delaware Avenue, Delmar, New York, in the Town; and

WHEREAS, copies of such Order, certified by the Town Clerk, were duly published and posted pursuant to the provisions of Article 12 of the Town Law; and

WHEREAS, such public hearing was duly held by the Town Board on the 13th day of July, 1994 at 8:00 p.m. (prevailing time) at the Town Hall, 445 Delaware Avenue, Delmar, New York in the Town, and considerable discussion on the matter having been had and all persons desiring to be heard having been heard, including those in favor of and those in opposition to said increase and improvement of the facilities;

Now, therefore, on the basis of the information given at such hearing, it is hereby

DETERMINED, that it is in the public interest to increase and improve the facilities of the District as hereinabove described and referred to at the estimated additional total cost of \$3,200,000; and it is hereby

ORDERED, that the facilities of the District shall be so increased and improved at the aggregate cost of \$13,900,000, and the Engineers shall prepared definite plans and specifications and make a careful estimate of the expense, and with the assistance of the Town attorney or an attorney employed for that purpose prepare a proposed contract for the execution of the work, which definite plans, specifications, estimates and proposed contract shall be presented to the Town Board for approval as soon as they are completed; and it is hereby

ORDERED, that the Supervisor is authorized and directed to take all actions necessary to apply for and obtain an application for a water supply permit to the New York State Department of Environmental Conservation and any other permitting agencies; and it is hereby

FURTHER ORDERED, that the expense of said increase and improvement of facilities, shall be financed by the issuance of \$3,200,000 additional serial bonds of the Town, and the aggregate costs of said facilities, now estimated to be \$13,900,000. including payment of the principal of an interest on said bonds shall be paid by the assessment, levy and collection of assessments upon the several lots and parcels of land within the District on an ad valorem basis, in the same manner and at the same time as other Town charges; and it is hereby

FURTHER ORDERED, that the Town Clerk record a certified copy of this Resolution and Order After Public Hearing in the office of the Clerk of Albany County within ten (10) days after adoption thereof. Dated: July 27, 1994

TOWN BOARD OF THE TOWN OF BETHLEHEM
Sheila Fuller, Supervisor
Frederick C. Webster, Councilman
George Lenhardt, Councilman
Freeman T. Putney, Councilman
Doris Davis, Councilman.
Members of the Town Board of the
Town of Bethlehem, New York

The resolution was adopted, the following members of the Town Board voting in favor of the resolution Sheila Fuller, Frederick C. Webster, George Lenhardt, Doris Davis, Freeman T. Putney and the following members of the Town Board voting against the resolution -0-.

- - -

Following was consideration of adoption of a resolution regarding increase in bonding for the Water Supply Expansion Facilities. The following resolution was presented by Mr. Putney for adoption:

BOND RESOLUTION, DATED July 27, 1994, AUTHORIZING THE ISSUANCE OF \$3,200,000 SERIAL BONDS OF THE TOWN OF BETHLEHEM PURSUANT TO THE LOCAL FINANCE LAW, TO FINANCE THE ADDITIONAL COST OF THE INCREASE AND IMPROVEMENT OF FACILITIES OF WATER DISTRICT NO. 1 WITHIN SAID TOWN AND APPROPRIATING THE PROCEEDS TO SUCH PURPOSE.

Recital

WHEREAS, following preparation of an amendment to a map, plan and report for the increase and improvement of facilities of Water District No. 4 (herein called "District"), in the Town of Bethlehem (hereinafter called "Town"), in the County of Albany, New York, consisting of the expansion of water supply facilities and transmission mains, including construction of new infiltration wells, raw water pumping station and transmission main, and construction of a new water purification plant and finished water transmission main, and also including buildings, land or rights in land, original furnishings, equipment, hearing duly called and held, the Town Board of the Town determined, that it is in the public interest to increase and improve the facilities of the District, and ordered that such facilities be increased and improved at the estimated total cost of \$13,900,000.

NOW, THEREFORE, BE IT RESOLVED by the Town Board of the Town of Bethlehem in the County of Albany, New York (by the favorable note of not less than two-thirds of all members of said town Board), as follows:

Section 1. The Town of Bethlehem, in the County of Albany, State of New York, shall issue its serial bonds of the aggregate principal amount of \$3,200,000 pursuant to the Local Finance Law of New York, to finance the specific objects or purpose hereinafter described.

Section 2. The specific object or purpose (hereinafter referred to as "purpose") to be financed by the issuance of such series bonds is the additional cost of the increase and improvement of facilities of Water District No. 1, consisting of the expansion of water supply facilities and transmission mains, including construction of a new infiltrations wells, new water pumping station and transmission main,

and construction of a new water purification plant and finished water transmission main, and also including buildings, land or rights in land, original furnishings, equipment machinery and apparatus required therefore, all in accordance with the map and plan prepared by J. Kenneth Fraser and Associates, P.C., competent Engineers duly licensed by the State of New York, on file in the office of the Town Clerk. The proceeds of such obligations are hereby appropriated to such purposes.

Section 3. It is hereby determined and stated that the estimated maximum cost of such purpose as heretofore determined by the Town Board is \$13,900,000 and that no money has heretofore been authorized to the payment of the cost of such purpose except \$10,700,000 authorized by a bond resolution adopted by the Town Board on January 22, 1992 and the Board plans to finance the cost of such purpose entirely from funds raised by the issuance of the obligations authorized by this bond resolution and the January 22, 1992 bond resolution. The cost of such purpose including payment of the principal of and interest on such obligations herein authorized shall be paid by the assessment, levy and collection of assessments upon the several lots and parcels of land within the District on an ad valorem basis, in the same manner and at the same time as other town charges.

Section 4. It is hereby determined that the purpose described in Section 2 above is a purpose described in Subdivision 1 of Paragraph a. of Section 11.00 of the Local Finance Law, and that the period of probable usefulness of such purpose is 40 years.

Section 5. Each of the serial bonds authorized by this resolution and any bond anticipation notes issued in anticipation of the sale of said serial bonds shall contain the recital of validity as prescribed by Section 52.00 of the Local Finance Law and said serial bonds and any notes issued in anticipation of said serial bonds, shall be general obligations of the School District, payable as to both principal and interest by general tax upon all the taxable real property within the School District without limitation of rate or amount. The faith and credit of the School District are hereby irrevocably pledged to the punctual payment of the principal of and interest on said serial bonds and any notes issued in anticipation of the sale of said serial bonds and provision shall be made annually in the budget of the School District by appropriation for (a) the amortization and redemption of the serial bonds and any notes in anticipation thereof to mature in such year, and (b) the payment of interest to be due and payable in such year.

Section 6. Subject to the terms and conditions of this resolution and the Local Finance Law, and pursuant to the provisions of Sections 30.00, 50.00 and 56.00, inclusive, of the Local Finance Law the power to authorize bond anticipation notes in anticipation of the issuance of the Serial Bonds authorized by this resolution and the renewal of such notes and the power to prescribe the terms form and contents of such serial bonds and such bond anticipation notes, and the power to sell and deliver such serial bonds and any bond anticipation notes issued in anticipation of the issuance of such bonds is hereby delegated to the Chief Fiscal Officer of the town. The Supervisor is hereby authorized to sign any serial bonds, and any bond anticipation notes issued in anticipation of the issuance of said serial bonds and the Town Clerk is hereby authorized to affix the corporate seal of such town to any such serial bonds or such bond anticipation notes and to attest such seal.

Section 7. This resolution shall be published in full by the Town Clerk of the Town together with a notice in substantially the form prescribed by Section 81.00 of said Local Finance Law and such publication shall be in a newspaper having a general circulation in said and published in THE SPOTLIGHT, in the County of Albany and State of New York. The validity of such serial bonds may be contested only if such obligations are authorized for such purposes for Town is not authorized to expend money, or the provisions of law which should be complied with at the date or publication of this resolution are not substantially complied with, and an action contesting such validity, is commenced within twenty (20) days after the date of such publication, or if such obligations are authorized in violation of the provisions of the Constitution of the State of New York.

Section 8. The Town intends to issue tax-exempt or taxable obligations authorized by this resolution to finance the cost of the purpose or purposes described in Section 2 hereof. If the Town

incurs any of such cost prior to the issuance of such tax-exempt or taxable obligations, the Town expects to utilize general or special fund revenues to pay such cost and intends to reimburse itself for such expenditures with proceeds of such obligations. This declaration of intent to reimburse is made pursuant to the requirements of United States Treasury Regulations Section 1.103-18 and is intended to constitute a declaration of official intent under such regulations.

Section 9. This resolution shall take effect immediately upon its adoption.

RESOLUTION DATED July 27, 1994, AMENDING A BOND RESOLUTION DATED JANUARY 22, 1992, (the "1992 Resolution"), TO PERMIT THE ISSUANCE OF OBLIGATIONS TO FINANCE IMPROVEMENTS TO FACILITIES OF WATER DISTRICT NO. 1 WITHIN SAID TOWN FOR A PERIOD NOT EXCEEDING 40 YEARS.

Section 1. Section 4 of the 1992 Resolution is hereby amended to read as follows:

Section 2. This resolution may be published in the official newspaper of the Town with the notice prescribed by Section 81.00 of the Local Finance Law.

Section 3. This resolution shall take effect immediately upon adoption.

The foregoing resolution was adopted by the following vote:

Ayes: Mrs. Fuller, Mr. Webster, Mr. Lenhardt, Mr. Putney,
Mrs. Davis.

Noes: None.

Absent: None.

Adopt
Resolution
To permit
Issuance of
Obligations
To Finance
Improvements
To Facilities
Water Dist.1

- - -

The Supervisor indicated the next item was to award the bid for the contracts for the improvements to the water supply facilities.

The motion was made by Mr. Lenhardt and seconded by Mr. Webster to approve the award of Contract 4G, General Construction, to U.W. Marx, Troy, New York at a price of \$5,853,000. The motion was passed by the following vote:

Ayes: Mrs. Fuller, Mr. Webster, Mr. Lenhardt, Mr. Putney,
Mrs. Davis.

Noes: None.

Absent: None.

Award Bid
Contract 4G
Water Supply
Facilities
General
Construction

- - -

The motion was made by Mr. Putney and seconded by Mrs. Davis to award contract 4E, Electrical Work, to Stilsing Electric, Rensselaer, New York at a price of \$1,074,381. The motion was passed by the following vote:

Ayes: Mrs. Fuller, Mr. Webster, Mr. Lenhardt, Mr. Putney,
Mrs. Davis.

Noes: None.

Absent: None.

Award Bid
Contract 4E
Water Supply
Facilities
Electrical

- - -

The motion was made by Mr. Lenhardt and seconded by Mr. Webster to award contract 4-HVAC, Heating, to Allteck Energy Systems, Mechanicville, New York at a price of \$43,979. The motion was passed by the following vote:

Ayes: Mrs. Fuller, Mr. Webster, Mr. Lenhardt, Mr. Putney,
Mrs. Davis.

Noes: None.

Absent: None.

Award Bid
Contract
4-HVAC
Heating

- - -

Award Bid
Contract 4P
Plumbing
Water Supply
Facilities

The motion was made by Mr. Lenhardt and seconded by Mr. Webster to award contract 4P, Plumbing, to Trojan Hardware, Troy, New York, at a price of \$46,580. The motion was passed by the following vote:

Ayes: Mrs. Fuller, Mr. Webster, Mr. Lenhardt, Mr. Putney,
Mrs. Davis.

Noes: None.

Absent: None.

Authorize
Supervisor
To sign
Telecommunicators'
Contract

The next item on the agenda was to authorize the Supervisor to sign the Telecommunicators Local 3443 contract, effective January 1, 1994 through December 31, 1996.

The motion was made by Mr. Webster and seconded by Mrs. Davis to authorize Supervisor Fuller to sign the Telecommunicators Local 3443 Contract, effective January 1, 1994 through December 31, 1996. The motion was passed by the following vote:

Ayes: Mrs. Fuller, Mr. Webster, Mr. Lenhardt, Mr. Putney,
Mrs. Davis.

Noes: None.

Absent: None.

Consider
Variance
request for
Proposed
Capitol Wood
Recycling
Facility

The following item was to consider a variance request for proposed Capitol Wood recycling facility to be located at the Port of Albany.

Supervisor Fuller noted that the public hearing was held on June 8, 1994 in regard to this variance request. Discussion was held between the Board, Commissioner of Public Works, Bruce Secor and Attorney Michael Smith regarding the variance application and use requested. Questions were raised in regard to the significance of reclassification of this request; does the Town Board have the ability to grant a class 2 rather than a class 3 permit; and to explain the denial on the class 2 permit. Attorney Smith answered the questions and explained information regarding the burden of proof with regard to the variance procedure. Many issues were reviewed by Mr. Smith to substantiate the denial of this variance request. Question was asked regarding how many situations were anticipated by the Town Board in regard to the regulations. Attorney Smith noted he hoped they had anticipated all uses that might come before the Board.

Variance request
denied
for Proposed
Capitol Wood
Recycling
Facility

The motion was made by Mr. Putney and seconded by Mrs. Davis to deny the variance requested for the proposed wood recycling facility located at the Port of Albany, Town of Bethlehem by Capitol Wood Recycling. The motion was passed by the following vote:

Ayes: Mrs. Fuller, Mr. Webster, Mr. Lenhardt, Mr. Putney,
Mrs. Davis.

Noes: None.

Absent: None.

Approve
Contract for
Pavement
Striping
with Albany
County

The next item was a request from Gregg Sagendorph, Highway Superintendent, for approval of authorization of the Supervisor to execute the contract with Albany County regarding pavement striping.

The motion was made by Mr. Webster and seconded by Mrs. Davis to authorize the Supervisor to execute the pavement striping contract with Albany County. The motion was passed by the following vote:

Ayes: Mrs. Fuller, Mr. Webster, Mr. Lenhardt, Mr. Putney,
Mrs. Davis.

Noes: None.

Absent: None.

Following was a request from Judith Kehoe, Comptroller, for approval of transfer of funds.

The motion was made by Mr. Webster and seconded by Mr. Lenhardt to approve the transfer of funds in the amount of \$184,300 from the General Fund to the Recreation Reserve Account in anticipation of future projects including pool deck, intermediate pool remarketing, basketball courts, tennis courts 5-8, tennis courts 1-4, Selkirk courts and remarkite of the olympic and diving pools with the Department of Parks and Recreation. The motion was passed by the following vote:

Transfer of
Funds from
General Fund
To Recreation
Reserve Acct.

Ayes: Mrs. Fuller, Mr. Webster, Mr. Lenhardt, Mr. Putney,
Mrs. Davis.

Noes: None.

Absent: None.

The next item was to approve the attendance of the Comptroller and Deputy Comptroller at a seminar.

Seminar
Comptroller
and
Deputy
Comptroller

The motion was made by Mrs. Davis and seconded by Mr. Putney to approve the attendance of the Comptroller, Judith Kehoe, at 2 day seminar and Deputy Comptroller, Richard Webster, at 1 day of the seminar, Northeast Region Council Government Finance Officers Association, Inc., to be held August 17 and 18, 1994 at Clifton Park, NY with registration fee paid. The motion was passed by the following vote:

Ayes: Mrs. Fuller, Mr. Webster, Mr. Lenhardt, Mr. Putney,
Mrs. Davis.

Noes: None.

Absent: None.

The next item was to approve the Town Board minutes of June 22, 1994 and July 13, 1994.

Approve
Minutes
6/22/94
7/13/94

The motion was made by Mr. Webster and seconded by Mr. Lenhardt to approve the Town Board minutes of June 22, 1994 and July 13, 1994. The motion was passed by the following vote:

Ayes: Mrs. Fuller, Mr. Webster, Mr. Lenhardt, Mr. Putney,
Mrs. Davis.

Noes: None.

Absent: None.

The Supervisor asked if anyone wished to address the Town Board. Comments were made by Nancy Rockefeller in regard to the water expansion facilities and the fact that a public referendum is not being held. She felt that there is a lot of objection in the community and the previous election was not an approval of the water issue.

Supervisor Fuller said because this concern was presented, additional research was done. Attorney Kaplowitz gave the background regarding New York State law in regard to the referendum. It would be illegal and improper, according to Attorney Kaplowitz, indicating the sections in the Town Law. He indicated we have a democratic type of government but it is also a representative type of government, the 5 Town Board Members are elected to make these kinds of decisions. He further noted there are 3 types of financing for these projects, indicating this is under 202b. He said the bond counsel is the one who recommends the financing method. He noted this was under Article 12 of the Town Law and said there is Article 12a and 12c which are alternative methods of financing.

Mr. Ron Johnson from Selkirk again stated he was against the water issue. He noted his reason is that there was a lot of misquotes and misrepresentations as far as the information. He presented information about the Green Island aquifer system. He raised a question in regard to the failure of the proposed system.

The Supervisor responded that the door is always open between Albany and the Town of Bethlehem. She further stated she has met with Mayor Jennings and continued discussion can be held.

Mrs. Knauf spoke in regard to the water issue. She referred to some comments made by people at the meeting. She noted someone told her it was a done deal and she guesses it is.

Mrs. Shapiro spoke in regard to the water expansion project being cost effective. She said she has not heard anything about Albany's proposed charge.

Ms. Royo presented the Town Board with a petition regarding the water expansion project. She noted the signatures were collected over the last couple weeks. She mentioned information received from various State agencies including a publication by Clearwater.

Executive
Session

The motion was made by Mr. Lenhardt and seconded by Mr. Putney to hold an Executive Session following the regular Town Board meeting to discuss land acquisition. The motion was passed by the following vote:

Ayes: Mrs. Fuller, Mr. Webster, Mr. Lenhardt, Mr. Putney,
Mrs. Davis.
Noes: None.
Absent: None.

The motion was made by Mr. Webster and seconded by Mr. Lenhardt to adjourn the regular Town Board meeting at 8:50 p.m. The motion was passed by the following vote:

Ayes: Mrs. Fuller, Mr. Webster, Mr. Lenhardt, Mr. Putney,
Mrs. Davis.
Noes: None.
Absent: None.

Kathleen A. Newkirk
Town Clerk

EXECUTIVE SESSION

No action was taken at the Executive Session.

TOWN OF BETHLEHEM

ALBANY COUNTY • NEW YORK

DEPARTMENT OF PUBLIC WORKS

445 DELAWARE AVENUE

DELMAR, NEW YORK 12054



BRUCE SECOR, P.E.
COMMISSIONER

WATER DIVISION
(518) 439-2414

SEWER DIVISION
(518) 439-2125

ENGINEERING DIVISION
(518) 439-9032

MEMORANDUM

TO: Supervisor Fuller

FROM: Bruce H. Secor, P.E., Commissioner of Public Works *BSAS*

DATE: July 18, 1994

SUBJECT: Sherwood Davies' Letter of July 11, 1994

As per your request, I have reviewed Mr. Davies' letter of July 11, 1994, and have the following comments.

In the cover letter, paragraph #2, Mr. Davies refers to his letter of June 17, 1994. I responded to that letter by writing comments in the margin. That was similar to the response in the memo dated April 26, 1994, which included attachments of reference material. Most of the issues raised in that letter had been raised in previous letters or discussions and been presented to the Board. Rather than revisit all of these memo's and pages, I have attached copies of the responses previously provided.

Response to paragraph #3 of Mr. Davies' cover letter of July 11, 1994.

The proposed method of financing the water project will be paid for by an increase in the industrial rate. I do not know how to say this anymore simply. The residential water rate has not increased since 1991 (it is at \$1.07 per 1,000 gallon). The residential water rate is projected to stay at \$1.07 per 1,000 gallon even with the construction and payment for this new project. The tax rate was \$0.75/1,000 in 1993, is at \$0.75/1,000 in 1994 and is projected to go down in 1995. There is no increase in costs to residential taxpayers as a result of this project. The industrial water rates were going to have to go up whether we constructed this new project or whether we choose another alternative. This is the most cost effective approach and provides us with a project with high quality water and the least amount of increase in costs to anyone. There is no increase in costs to the residential taxpayer. There is an increase in the industrial rate. The industrial water rate will rise from \$1.14 to \$1.21 in 1995. Please refer to Exhibit #1, attached to this memo.

The following is a point by point response to the questions submitted with Mr. Davies' current letter of July 11, 1994.

1.) Referring to Mr. Davies' written questions - Water Quality.

Mr. Davies refers to chemicals and pesticides, PCB's, etc. and the use of carbon granulated filters. He asked if the Town's consultant considered this technology. The answer is yes, it was considered but not recommended. The reason it was not recommended was that by both the consultant and the NYS Health Dept. determined it was not needed. This was based on extensive independent lab tests, after 250 million gallons of pumping from the infiltration system. It was also based on information available from decades of experience at other water plants. All of the chemicals regulated by EPA and the State Health Department for water supplies were tested for. None of these chemicals were detected in the water and therefore carbon granulated filters were not recommended. The ground water quality in the aquifer that we are drawing from is of excellent quality. It is safe to drink, bacteriologically, as it comes from the infiltration system. It contains no cryptosporidium, no giardia, no coliform bacteria, no PCB's, etc. The water purification plant is designed to modern standards and includes the ability to add a variety of oxidants and coagulants to completely purify and filter the water before it goes into the system.

2.) Response to Mr. Davies Water Quality question #2.

The new water system includes a six day supply of water stored at the water purification plant. The purpose of this storage is to provide water to the purification plant in the event of an interruption of supply from the infiltration system. This could be caused by a spill on the Hudson River or a break in the pipeline connecting the infiltration system to the plant or in the event of an electrical power outage which would shut off the pumps on Schermerhorn Island. Please remember---any water source can be contaminated. A truck could turnover on Route 20 and contaminate the Watervliet Reservoir; a truck could spill in the water shed of our own Vly Creek Reservoir; or a truck could turnover on Route 32 that goes through the Alcove Reservoir and contaminate that reservoir. The 20 million gallon water storage reservoir at the new water plant is a safety factor that is being built in to provide greater reliability of service.

The infiltration system will be monitored continuously by computer for PH, turbidity, total organic carbon and dissolved oxygen. These will act as indicator values to detect a possible problem in the infiltration gallery system. The criteria for using the ground water is that it continues to be of the same high quality that it has proven to be through the extensive testing program. It should also be noted that Green Island has over 50 years of experience with a similar source and has not

experienced operational problems because of changes in the ground water available to their infiltration system.

3.) Question #3 from Mr. Davies on Water Quality.

Mr. Davies states that the base flow in the river is approximately 9 billion gallons per day. That is correct. We have run extensive testing on the ground water infiltration system and the ground water is of excellent quality. A separate Engineering Report was filed in September 1993 to document the testing and results. This report is on file in the library. In addition, there are decades of information available from both Green Island and Niskayuna and also from direct water users down river, including Port Ewing, Poughkeepsie, Hyde Park, Highland, Rhinebeck, etc. The experience at these other plants reinforces the finding from independent laboratories that this will be a high quality and reliable source of water.

The issue of glycol was addressed in a separate letter report which is on file with the Town (attached as Exhibit #2). We tested for glycol both in the river and in the infiltration gallery during two winters at times when glycol was being used at the airport and being processed through the multi-million dollar collection and treatment system which was installed at the Albany County Airport. The basis of the design of the Albany County Airport System was to control glycol, so that it is properly collected and treated and would not be at detectable levels in surface waters. Based on our testing that system is functioning properly. Our tests showed that glycol was not detectable. Again, the use of ground water is of great benefit. Glycol has not been a problem for Green Island in their years of operation. The ground water that we will be taking is of excellent quality and we do not see glycol as an issue.

4.) Mr. Davies question #4 on Water Quality.

Did Selkirk Cogen prefer the chemical characteristics of the Alcove or Hudson? Answer: They did not show a strong preference. Any water that Selkirk Cogen receives, must be treated chemically before it is put into their system. This is to prevent scaling and prevent sediment in their equipment. This is similar to someone who buys a new steam iron. You should use either deionized water or distilled water in order to protect the iron. Selkirk Cogen had to treat water no matter which source was used. This was not a consideration for the Town in selecting the infiltration gallery source. The most important consideration for the Town was to find a high quality, safe and reliable supply for our long range needs.

5.) Mr. Davies question #5 on Water Quality.

He questions the volatile organic chemical testing and other organic tests that were done. Answer: A series of tests were

done for these. One set was included in the 1993 report which is on file in the library. The other test results are on file in the Department of Public Works office. Similarly, metals and inorganics have been tested for on numerous occasions and are not a problem except for the iron which will be removed at the new water plant. He then asks, "can one conclude from a few samples on the water quality?" The answer is: you can make projections. A much more definitive response is that there are decades of information available from numerous other operating systems including Green Island and Niskayuna. These systems have many samples over many years demonstrating water quality. Over 250 million gallons was pumped through the actual infiltration system. The ground water quality was excellent. We also looked at other similar systems around us which have been in place for decades. They continue to have successful systems with high quality water available.

6.) Mr. Davies question #6 on Water Quality.

Mr. Davies again asks about river reclassification. Answer: We have responded to this on numerous occasions. Please see attachments #3 and #4, which are the determinations from both the NYS DOH and NYS DEC. Both departments ruled that reclassification is not required in this project since we are taking ground water. I reviewed the reclassification of both the Mohawk and the Susquehanna Rivers and met with NYS DEC main office staff to discuss this issue. They informed me that the SPDES permits for the plants on the Hudson River are already written to "A" Standards because of the numerous direct river intakes downstream. Even if a river reclassification was done it would not change those permit standards. Ground water from the infiltration system is free of coliform bacteria, has no PCB's, no cryptosporidium, no giardia, no heavy metals (such as; lead, mercury or cadmium). Since none of these pollutants were detected in the testing of the ground water and since there are decades of similar test results available in Green Island and Niskayuna and other systems, there is no reason to conclude that reclassification should be an issue. It should also be noted that the bacteriological standard for Class "C" was actually more stringent than for Class "A." Now they are both the same.

7.) Mr. Davies question #7 Alternatives.

The water supply project that is under consideration addresses the long term needs of the Town of Bethlehem for additional water sources. This project is based on high quality ground water and a new water purification plant which will provide both source of new supply and a significant strengthening of the hydraulic network by introducing this water through a new transmission line directly into the industrial area. Costs of this project are being paid for by an increase in the water rate for industry. There is no increase in the residential water rate and there is no increase in the tax rate. There is no reason why the Town Board should consider terminating a contract

with Cogen who will provide significant water rent revenues and tax base for the Town.

8.) Mr. Davies question #8 Alternatives.

The Town Board is looking at a project which meets the long range needs of the entire Town of Bethlehem, not just one customer. The discussion by the Town Board to consider the additional cost for the project is a Town Board decision and is not something that has to be approved by Selkirk Cogen. It is a Town Board decision for a facility to meet our long term needs.

9.) Mr. Davies question #9 Costs, Financing, Rates.

The original engineer's estimate provided money for legal, engineering, administration and also construction contingencies. A separate item was not shown for acquisition of right-of-way since it represented less than 1% of the project cost. Most of the pipeline will be constructed within state, county or town right-of-ways. To date, we have purchased the 29 acre site for the water plant at a cost of approximate \$130,000.

10.) Mr. Davies question #10 Costs, Financing, Rates.

The 1991 consulting engineer's estimate did not include a plant laboratory. It was anticipated at that time, that the laboratory work would continue to be done at the main water plant at the Vly Creek Reservoir. During the final plant design, it was decided to add a laboratory area which was a minor cost increase. This would allow for on-site testing for process control and to keep documentation for reporting forms necessary for the State Health Dept. The laboratory at both the Vly Creek Reservoir and at the new water plant are maintained for the purpose of process control and operator use. All of the licensed water plant operators must be certified to conduct routine laboratory analysis for process control. We do not maintain a certified lab. Certified laboratory work is done by outside independent laboratories. This is a more cost effective alternative than maintaining our own certified lab due to the continuously changing requirements of both the State and Federal Governments. Sampling will be done in accordance with the requirements set forth by State and Federal Governments. The sampling procedure and frequency will be set by NYS DOH. The response time will depend on the independent lab analysis. We will meet or exceed all drinking water standards at the new water plant.

11.) Mr. Davies question #11 Costs, Financing, Rates.

Mr. Davies refers to the Engineer's Report of 1991 which talks about additional in-system water storage. (See pages #9, 10, 11 of Report - attached as Exhibit #5.) This report was intended to be a long range report examining a wide range of facilities

that may be needed for long range water source, distribution and storage. The report recommends that consideration be given to an additional water storage tank. Such a future water storage tank would be advantageous under any of the alternatives. Under the Albany Alternative, numerous additional pump storage tanks would have been constructed in addition to this tank. The new water filtration plant will have a 2 million gallon water storage tank in addition to 20 million gallon stand-by supply reservoir. The necessity of building another elevated storage tank to augment system storage redundancy will have to be reviewed after this project is completed and after we have operated the new system for a number of years. It is not part of this project. It is a separate issue, of distribution and storage as we look at system requirements into the future. Fire flows will be maintained through the existing water system storage tanks. The hydraulic network of the entire system will be strengthened by the construction of the new water transmission main directly into the industrial area. Delmar-Elsmere residents will not face low water pressure. The possible funding of additional distribution and storage improvements was included in my analysis of overall budget costs and expenditures. This 20 year projection and summary was presented to the Town Board at the time of the original report and since been updated and distributed (see Exhibit #6). Mr. Davies already has a copy of this spread sheet. It would not be appropriate to try to add in to this water supply project every cost that could ever be required for upgrading of our distribution and storage system. The purpose of this project is the expansion of water supply. This will include new system storage at the new water plant and dramatic hydraulic strengthening of our system with the construction of the new transmission line on Creble Road directly into the industrial area. The possibility of some future costs of redundant water storage facilities within the system is not included in this project and should not have been. On-going maintenance of existing tanks; cleaning, painting, etc. and considerations for system redundancy and distribution improvements should certainly be reviewed periodically after the new system has been operating for a number of years. This should not be included as part of the expansion of water supply project.

12.) Mr. Davies question #12 Costs, Financing, Rates.

The question of Water District Tax. This question has been asked and answered on many occasions. Please refer to Exhibit 1, which shows that the property tax for the Water District was \$0.75/1,000 in 1993, is at \$0.75/1,000 in 1994 and is projected to go down in 1995. The residential water rate is \$1.07/1,000 gallons and that is projected to stay the same. The only rate that is being increased is the industrial water rate going from \$1.07/1,000 in 1993 to \$1.14/1,000 in 1994 and projected to go to \$1.21/1,000 in 1995. As I stated before, the industrial rate was going to have to go up under any scenario. This project is the most cost effective solution and allows for the smallest

increase in the industrial rate and no increase in the residential rate. The rationale for the current system is based on the fact that we maintain over 150 miles of pipeline and thousands and thousands of individual water services for which we have the responsibility of operation and maintenance of the water service line and the meter inside the home. The unit cost of water to residents was originally higher than to industry (see Exhibits #6, columns I and J). Over the years, rates have been changed to reflect the cost of developing new water sources. The rate structure in place was set by the Town Board after considering numerous options. I do not agree that there are inequities in the current water rate system or in the projected future water rates as presented to the Town Board. These rates reflect the reality of costs for development of new water sources and delivery of those services. The new project is a very cost effective solution to meet our long term water supply needs.

13.) Mr. Davies paragraph #13 Costs, Financing, Rates.

At the January 8, 1992, Public Hearing it was stated that industry would pay for the new system. That is correct. The statement that one industrial customer would pay a majority of the cost is also correct. There is no discrepancy in those statements, they supplement each other. There is no increase in residential water rate, there is no increase in the property tax. The only increase is in the industrial water rate. The Selkirk Cogen Contract is at \$1.69/1,000 plus taxes and the other industrial rate going up 6% from \$1.14 to \$1.21. There is no deception here, this is the simple truth and it is a simple bottom line which we have presenting ever since the project was presented to the Town Board. Mr. Davies continues to develop his own statistics, but they are inconsistent with the facts of this project.

The second portion of paragraph #13 talks about unit cost. This is a manipulated statistic which does not in any way reflect the actual costs that are incurred by the Water District to provide service to an individual residential customer. This question has been addressed on a number of occasions. Mr. Davies continues to raise it. To supply water to residents, the Town must maintain over 150 miles of pipeline and related services including the water service and water meter in the individual home. For this, an individual resident may pay as little as \$11.20 for four months of water. Compare that to an industrial account who pays hundreds of thousands of dollars in water bills and who maintains their own service and own meter at no expense to the Town. It takes thousands of individual customers to generate the same revenues as one industrial account. Creating a unit cost by adding advalorem and water purchase does not provide in itself a fair comparison of the expense of providing the service to the individual homeowner. (Everyone pays the same tax rate (\$0.75 per 1,000 assessed value. Industry pays a higher rate for water consumed.)

14.) Mr. Davies paragraph #14 Costs, Financing, Rates.

The agreement with Selkirk Cogen has a guaranteed minimum amount of water purchase which will generate over \$1 million of revenue per year. In addition, Selkirk Cogen will pay Water District Taxes in excess of \$70,000 a year. The new water supply project is being paid for by an increase in the industrial rate. The first step of that goes from \$1.14 in 1994 to \$1.21 in 1995. Attached as Exhibit #7, 8, 9 and 10, are two spread sheets and two graphs, showing projected revenues, expenses and water rates for the entire water system. This includes all of the overhead and maintenance for both the new plant and the existing plant along with expenses for distribution and storage. As you can see from the tabulations, in column marked "special industrial use" if you compare an average use which we have projected at 2.1 million gallons per day versus the minimum use of 1.6 million gallons per day, the difference in annual revenue could be adjusted by simply adjusting the industrial water rate by a few pennies to make up the difference. Please remember these are all projected estimates. The budgets that are projected on these sheets take into account all of the expenses for the existing water system plus the expenses for the new system. They were tabulated to provide an analysis for projection of water rates and taxes. In both of these scenarios, the tax rate will stay the same or go down. The residential water rate will not increase as a result of this project. The only rate being adjusted upward is the industrial rate. (Approximately 6% increase the first couple of years.) It is still a far more cost effective approach and a far cheaper alternative than buying water from Albany.

15.) Mr. Davies paragraph #15 Costs, Financing, Rates.

As part of the consideration in reviewing the alternatives available to the Town Board.

16.) Mr. Davies paragraph #16 Costs, Financing, Rates.

The Consulting Engineer's Report from 1991 was comparing alternatives not overall system analysis and finances. Total costs were provided on the spread sheets shown in Exhibits #7, 8, 9, and 10. This type of analysis was presented to the Town Board in 1991 and 1992 (shown in Exhibit #6). They have been updated and are attached here showing the analysis of rates and overall budgets (Exhibits 7, 8, 9, and 10). The Engineer's Report looked at the expenses involved with each option. For example, with the new water supply the cost of operation and maintenance, including electricity, chemicals, etc. and that is all shown on the spread sheet for that option (see Exhibit #11). For the purchase of Albany water, it looked at the purchase price from Albany plus pumping costs plus the cost of building major storage tanks and facilities, so that we would have a reliable source of supply (see Exhibit #12). The whole purpose of the Engineer's Report was to compare apples and

apples. The overall analysis (Exhibits #7, 8, 9 and 10) looked at the entire costs of the system. This included existing debts, existing expenses for operation and maintenance and combine that with the recommended option of the new water supply. I have also run a parallel analysis sheets for the Albany water purchase. Those are attached as Exhibit #13A, 13B, 13C and 14 (graph). As you can see from the graphs and analysis sheets done, the purchase from Albany, the industrial rate would raise to \$2.99/1,000, the residential rate would raise to \$2.34. Whereas, in either scenario of Cogen minimum purchase for Cogen at an average purchase the industrial rate will only go to \$2.00/1,000 and the residential rate at only \$1.51/1,000. It is a substantial difference in price. The proposed project is by far and away the more economical alternative and the most cost effective approach to look for our future. The cumulative totals accompanying these options (Exhibit 11, column 9 and Exhibit 12, column 10) project cost savings of more than \$90 million over the planning period - and that is assuming only 2% price increase from Albany. We have not underestimated one thing and overestimated another. These are based on reasonable cost analysis.

17.) Mr. Davies paragraph #17 Costs, Financing, Rates.

This is a restatement of the question asked in an earlier section. Please see the response to paragraph #13 and the attachments that go with that. Using Mr. Davies own numbers, look at G.E. Selkirk. They pay \$357,000/year to the Water District. The average customer that Mr. Davies is talking about spends \$135/year. It would take 2,705 average users, (for whom we must maintain their services and meters) to equal the bill that G.E. pays. We have no maintenance responsibility for the G.E. water service or meters.

Please contact me if you have any questions or need any further information.

BHS/s

Attachments

c: File

NO INCREASE IN COSTS TO RESIDENTS

YEAR	RESIDENTIAL WATER RATE PER 1,000 GAL.	INDUSTRIAL WATER RATE PER 1,000 GAL.	WATER DISTRICT PROPERTY TAX RATE
1993	\$1.07	\$1.07	\$0.75
1994	\$1.07	\$1.14	\$0.75
1995	\$1.07	\$1.21	\$0.74
1996	\$1.07	\$1.25	\$0.74

J. KENNETH FRASER AND ASSOCIATES, PE, LS, LA, P.C.
Consulting Engineers
Land Surveyors
Landscape Architects & Planners

received
1/13/94

January 12, 1994

Mr. John M. Dunn, P.E.
Chief Design Section
Bureau of Public Water Supply Protection
New York State Department of Health
2 University Place
1215 Western Avenue, Room 406
Albany, New York 12203-3399

Re: Water Supply Application No. 8800
Town of Bethlehem, New York

Dear Mr. Dunn:

Pursuant to our agreement during November 1993 concerning the potential for the presence of glycol in the Hudson River, we have recently completed a period of full scale pumping of the groundwater infiltration system during which water samples were obtained and analyzed for the presence of glycol. The following is a brief report of our procedures, findings and conclusions.

Full scale test pumping of the groundwater infiltration system was commenced on December 07, 1993 and continued essentially uninterrupted through December 22, 1993. Pumping was accomplished utilizing submersible water pumps installed in each of the two infiltration wells, powered by an electrical generator. This temporary pumping equipment allowed the withdrawal of groundwater from the filtration system at a rate of approximately 2 mgd (million gallons per day) which is a rate comparable to that expected to be withdrawn during typical operation of this portion of the system in the future. Drawdown of the groundwater level in the formation was approximately 17 feet below the normal groundwater level and generally confirmed previous yield and drawdown findings during the initial long term pump test which was the subject of our September 1993 Engineer's Report.

During the period of pumping, we were in continuous contact with representatives of the Albany County Sewer District in order to monitor activities with regard to release of glycol into the

Mr. John M. Dunn, P.E.
Chief Design Section
Bureau of Public Water Supply Protection
New York State Department of Health
January 12, 1994

Page 2

Albany County sewer system by the Albany County Airport. During December, the Albany County Airport pumped glycol into the sewer system during the first three days of December and again from the 9th of December past the termination of test pumping of the infiltration system on December 22, 1993.

It was decided to obtain four sets of water samples for glycol testing. Parallel samples were obtained from the Hudson River, adjacent to the infiltration system, as well as the pump discharge from the infiltration system. Three sets of samples were obtained on three consecutive days during the period when glycol was being released through the North Albany sewage treatment plant. These samples, collected on December 14, 15, and 16 were sent to an outside laboratory for analysis, the results of which are attached to this letter report. A fourth set of "split" samples was obtained on December 22, the last day of pumping and was analyzed for glycol content by two outside laboratories. The laboratory reports are appended hereto. As you will observe, all of the results are less than 0.05 milligrams per liter which is the practical detection limit for the laboratory test utilized, with one exception, a reported level of 0.12 mg/l in one of the split samples for groundwater obtained on December 22.

It had been decided to split the sample of December 22 in order to determine if both of the two outside laboratories would agree on their findings. As can be observed, they did not agree. The finding of a higher level in the ground water, during a period of time when all tests in the river water were found to be below the practical quantification limit, cannot be justified as reasonable, is believed to be an anomaly (false positive result) and can be discarded. Based on discussions with several experienced laboratory technicians and/or directors during the course of testing, we have found that the lab test for glycol requires exceptional efforts by both sample takers and lab technicians in an attempt to provide accurate and consistent results. Even with such efforts, occasional inconsistencies such as false positive indications can and do occur.

The MCL (Maximum Contaminant Level) for glycol which has been established by New York State (there is no established Federal MCL) is 0.10 mg/l total. Both the current test results obtained during

Mr. John M. Dunn, P.E.
Chief Design Section
Bureau of Public Water Supply Protection
New York State Department of Health
January 12, 1994

Page 3

December 1993 and the results from tests performed on the river water a year ago during the winter months of December 1992 through March 1993, show glycol levels in the river and in the ground water to be below the New York State MCL for all tests performed. In 15 out of 18 tests which have been performed to date, glycol was not detected at or above the practical quantification limit of 0.05 mg/l. A copy of our transmittal letter and summary of last years test results is enclosed for your information.

We wish to point out that the glycol control system in operation at the Albany Airport is operated to control the amount of glycol released into the County sewer system where it is transported to the North Plant Facility and is treated to reduce the glycol concentration to less than 500 parts per billion prior to discharge into the Hudson River. Further dilution by the average river flow of 8,832 mgd should result in concentrations which are undetectable (less than 10 parts per billion).

We also wish to point out that the proposed design for the Town of Bethlehem water treatment system employs a 20+ million gallon raw water holding reservoir between the ground water infiltration system and the water treatment plant. This basin has been provided to allow the infiltration system to be "off line" for several days or more during any unforeseen event which might cause temporary contamination of the River. The basin can also be utilized to provide dilution of the raw water if and when desired.

In summary, we believe that we have now provided the required further verification that glycol levels in the Hudson River are now and will be well within the established MCL for this item. Furthermore, we believe that the disposal practice which has been established and is being followed by the Albany County Sewer District will insure that glycol levels in the River adjacent to the Town of Bethlehem will continue to be well within the established MCL.

There are no remaining parameters at this time which need to be resolved. Our studies have shown that the proposed infiltration system will provide a source of good quality raw water which will

Mr. John M. Dunn, P.E.
Chief Design Section
Bureau of Public Water Supply Protection
New York State Department of Health
January 12, 1994

Page 4

receive further treatment (to surface water treatment standards) in the proposed Town of Bethlehem water treatment facility. We therefore see no reason why the water supply permit requested by the Town of Bethlehem should not be issued at this time.

Very truly yours,

J. KENNETH FRASER & ASSOCIATES, PE,LS,LA,P.C.

By: 
James K. Fraser, Jr., P.E.

JKF,Jr./ljs:Enclosures

CC w/encl.: Mr. Bruce Secor, P.E. ✓
Mr. John Feltman (NYSDEC)
Mr. Frederick Sievers (NYSDEC)
Mr. Gordon Behn (NYSDEC)
Mr. Clifford Forando, P.E. (ACHD)

Town of Bethlehem
Expansion of Water Supply Facilities
January 11, 1994

GLYCOL SAMPLING AND TESTING RESULTS

<u>Date of Sample Collection</u>	<u>Results (mg/l.)</u>		<u>Lab. I.D.</u>
	<u>River</u>	<u>G.W. Well</u>	
12-14-93	< 0.05	< 0.05	J.H.
12-15-93	< 0.05	< 0.05	J.H.
12-16-93	< 0.05	< 0.05	J.H.
12-22-93 (split	< 0.05	0.12	J.H.
12-22-93 sample)	ND	ND	C.T.M.

J.H. = J.H. Consultants (used Adirondack)
C.T.M. = CTM Analytical Laboratories
ND = Not detected at or above the Practical
Quantitation Limit (0.05)

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

REGION 4 HEADQUARTERS
2176 GUILDERLAND AVE.
SCHEWECTADY, NEW YORK 12306
(518) 382-0680
(518) 382-1065 (FAX)



LANGDON MARSH
ACTING COMMISSIONER

EXHIBIT #3

March 21, 1994

William J. Greene, P.E.
County of Albany Sewer District
P.O. Box 4187
Albany, New York 12204

RE: DEC No. 4-0122-16/1-0
Water District No. 1
(T)Bethlehem, Albany County

Dear Mr. Greene:

Previously, you had written to the Department expressing concern over the proposal by the Town of Bethlehem to develop a water supply from the Hudson River.

Since that time the Town has been working with this Department and the State Health department to develop a water supply. In considering alternatives the Town undertook a pilot study of infiltration galleries adjacent to the Hudson River on Schemerhorn Island. The galleries were not connected to the Hudson River as had previously been proposed.

Results from this pilot study indicate that the water quality from the galleries is such that the Department considers this a ground water source and will not require the reclassification of the Hudson River.

Any future proposal or request to reclassify the Hudson River in this area will be subject to the normal reclassification procedures. This would include consideration of impacts associated with a reclassification and public hearing and review process.

The Department has made a determination to approve the Town of Bethlehem project, since there will be no impacts to your operations without the reclassification without the reclassification of the Hudson River. I have enclosed a copy of the permit for your information.

Should you have any questions please contact me at the above number.

Sincerely Yours,

John H. Feltman
Deputy Permit Administrator
Region 4



STATE OF NEW YORK DEPARTMENT OF HEALTH

EXHIBIT #4

Center for Environmental Health

2 University Place

Albany, New York 12203-3399

Mark R. Chassin, M.D., M.P.P., M.P.H.
Commissioner

Paula Wilson
Executive Deputy Commissioner

November 29, 1993

OFFICE OF PUBLIC HEALTH

Lloyd F. Novick, M.D., M.P.H.
Director

Diana Jones Miller
Executive Deputy Director

William M. Staskuk, P.E., Ph.D.
Center Director

Mr. Fred Sievers
New York State Department of
Environmental Conservation
2176 Guilderland Avenue
Schenectady, NY 12306

RE: WSA No. 8800
Hudson River Infiltration Gallery
Bethlehem Water District #1
(T) Bethlehem, Albany County

Dear Mr. Sievers:

This is a follow-up to our recent discussion regarding the issues of "groundwater under the influence" versus surface water and whether stream reclassification is required for this project.

Both of our Departments approach the conceptual approval of a proposed drinking water source with a multi-barrier protection philosophy in mind. Our Department relies on good raw water quality, disinfection and filtration (as dictated by source type). Your department relies also on source quality but also stream protection via discharge prohibitions/limitations and wastewater treatment (both dictated by stream classification).

In this particular project proposal the multi-barrier approach is again satisfied. In addition to disinfection and filtration, the infiltration gallery itself will provide significant quality protection/enhancement. The water quality data gathered during the recent demonstration study confirms this, as exemplified by the turbidity, coliform and particulate analyses. Furthermore, the hydrogeological analysis performed by Dunn Geoscience indicates that the avenue of travel is vertically through the river bottom and then horizontally via a sand/gravel formation for several yards which also supports this barrier concept.

In summary, we believe river reclassification is unwarranted. A much more effective water quality improvement will be achieved via this gallery followed by complete filtration and satisfactory disinfection. If you have any questions, feel free to contact me at (518) 458-6756.

Sincerely,


John M. Dunn, P.E.
Chief, Design Section
Bureau of Public Water Supply Protection

JD/hs/93333PRO0404

cc: Albany County Health Department, Attn: Mr. Frankio
Fraser & Associates
Mr. Burke
Field Coordination Section

RECEIVED

DEC 01 1993

J. KENNETH FRASER
AND ASSOCIATES, P.C.

**WATER DISTRICT NO. 1
TOWN OF BETHLEHEM
ALBANY COUNTY, NEW YORK**

Copy pages
9, 10, and 11
from Report

**PROPOSED
EXPANSION OF WATER SUPPLY FACILITIES**

ENGINEER'S REPORT

November 1991

Prepared By:

J. Kenneth Fraser and Associates, P.C.

Consulting Engineers

22 High Street

Rensselaer, New York

reservoir at the Elm Avenue site as well as a second 5.75 million gallon service reservoir in the Town of New Scotland. These facilities have not yet been authorized and may not be needed in the immediate future depending upon the nature of the project authorized by the Town to provide a major supplemental supply of water for the water district.

SYSTEM DISTRIBUTION AND STORAGE CONSIDERATIONS

It is necessary to consider the implications of adopting a new source of supply along the Hudson River in lieu of a long-term arrangement with the City of Albany. Water use projections show that by 2040 a mean use of 9.2 mgd, a peak day mean use of over 13 mgd and a peak hourly rate of over 18 mgd will exist. Since the existing Vly Creek source is limited to supplying about 3.8, 4.3 and 5.0 mgd for these categories respectively, it is clear that the Hudson River source will have to be able to supply and deliver a mean of at least 5.4 mgd with peak days of nearly 9 million gallons by 2040. Peak hourly rates of at least 13 mgd will need to be distributed from this source in combination with distribution storage. Therefore, it is apparent that by 2040 this source must have a mean treatment capacity of nearly 9 mgd and it will be desirable to be able to pump peak rates into the system in excess of 10 mgd.

A primary consideration for this long-range plan to be met is that the new transmission mains from the source to the point of distribution be adequately sized at the outset for these extremely large rates since they will otherwise need to be replaced or augmented later. Treatment plant expansion capacity should be planned and can be incorporated later modularly. In its initial 1995 phase, and for many years thereafter, water produced from the Hudson River supply can be consumed almost entirely by the co-generation project, General Electric and industrial users in this area.

A second phase of storage projects which had been intended to be performed relatively soon includes a second duplicate storage reservoir along the New Scotland Road transmission main and a second duplicate storage reservoir at the Park Pumping Station. Both projects are needed within 5 to 10 years in order to provide the originally intended redundancy to allow removal of the existing tanks from service for maintenance. The Park pumped storage tank(s) provide water crucial in meeting peak hourly rates of demand in the distribution system and provide several million gallons of backup for outages of either source. Providing additional storage at the Park tank is a less critical short-term need as the Hudson River supply replaces Albany as the Town's supplemental source. The New Scotland Road transmission main storage tank provides pressure stabilization for the Vly Reservoir water treatment plant discharge pumps and provides backup for water plant or pumping outages. Added storage along the New Scotland Road transmission main is also not considered critical for short-term needs but both will be needed by approximately 1996-2000 for redundancy.

Additional system pumped storage will be provided as part of the new Hudson River supply at the new water treatment plant. A very liberal amount of expandable clearwell storage should be provided along with a high capacity pumping facility. This pumped storage facility would be similar in operation to the existing Park pumping station in that usage peaks can be met from clearwell storage by varying the pumping rates.

Elevated distribution system storage is provided by the 3 million gallon Elm Avenue standpipe and Kenwood Avenue tank, but the capacity of the Kenwood tank is extremely small (.25 million gallons). With the removal of the pumped Albany interconnection at Kenwood Avenue, it will become increasingly difficult to sustain pressure stability in this region of the system because of its remoteness from either source. Additional elevated storage in the

system to augment the 3 million gallon Elm Avenue standpipe would be desirable for additional pressure stabilization and to provide some redundancy to enable the existing tank to be removed from service for maintenance. This standpipe has been on line since 1979 and cannot easily be removed from the system without pressure instability during periods of high demand variation. Since the standpipe will likely be in need of maintenance within five years, it is recommended that planning be initiated immediately for additional elevated storage in the distribution system. Finding and acquiring an appropriate site for an additional standpipe which can be well connected to the system should be done right away since very few sites would qualify.

As stated previously, liberal storage and pumping capacity at the proposed new treatment plant is extremely important in meeting future maximum days and peak rates. Redundancy in New Scotland Road transmission main storage, Park pumping station storage, and distribution system elevated storage will all be needed to enable maintenance of existing tanks and functionality of the system.

Additional pipe lines in the distribution system will also be necessary in the future to help distribute flows between sources, storage and users. Most notable is the closing of the loop between the Elm Avenue Standpipe and Route 9-W. Many loop closures should be completed as development along these routes takes place, but there is no immediate pressure to initiate special action in this area.

WATER QUALITY

A pilot study was required by the New York State Department of Health (NYSDOH) to demonstrate that the proposed package treatment plant technology can satisfactorily treat water taken directly from the Hudson River source. The study was conducted from June 24 through July 02 and from July 08 through July 19, 1991. The report

REVENUE/EXPENSE
PROJECTIONS
Rev.Future
July 94
trial RDS

PROJ COST \$13,900.

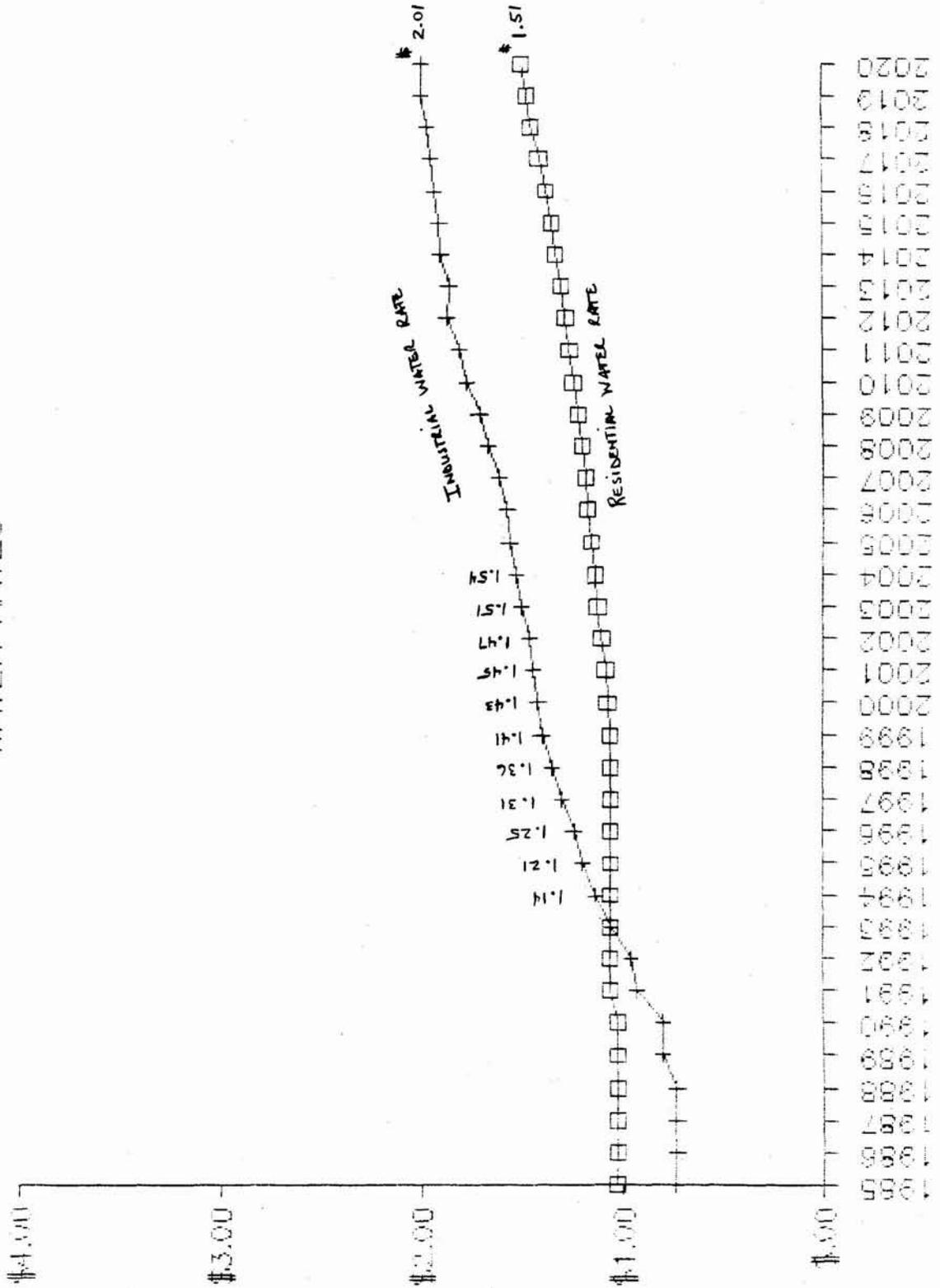
YEAR	WD #1	RESIDWTL	RES USE	INDRSTY	IND USE	SPCL.IND	TOT USE	IND RATE	RES RATE	SPCL.REV	W RENT	AD VAL	TX RT	WD TAX.	BUDGT.	FUND.	TOTAL.	EXPENSE	PURCHASE	DBT SRV	SPCL.	DBT SRV	TOTAL.	
POPULATN	GPCD.	NGD.	GPCD.	NGD.	USE.		NGD \$	per MG	\$ per MG	W.RENT	REVENUE	(mill.)	PER MILL.	REVENUE	MSC.REV.	BAL.	REVENUE.	O & N.	ALB.	WTR	EXISTING	PROJ'S.	NEW PROJ	EXPENSE.
14	1980	24000	85	2.04	52	1.24	0	3.28	.535	.802	\$693	60123	6.23	\$373	\$405	\$0	\$1,471	\$817	\$36	\$231	\$0	\$0	\$1,350	
15	1981	24336	85	2.07	50	1.22	0	3.29	.535	.802	\$740	63123	7.13	\$441	\$384	\$6	\$1,565	\$910	\$103	\$331	\$0	\$0	\$1,571	
16	1982	24677	85	2.10	56	1.37	0	3.47	.535	.802	\$727	65123	7.35	\$471	\$352	\$0	\$1,550	\$838	\$116	\$357	\$0	\$0	\$1,539	
17	1983	25022	85	2.13	62	1.54	0	3.67	.668	.802	\$865	66123	7.52	\$491	\$527	\$0	\$1,883	\$866	\$95	\$344	\$0	\$0	\$1,608	
18	1984	25372	85	2.16	68	1.73	0	3.89	.668	.802	\$906	69123	7.92	\$532	\$716	\$0	\$2,154	\$1,099	\$140	\$497	\$0	\$0	\$2,154	
19	1985	25728	85	2.19	55	1.41	0	3.60	.735	1.029	\$1,080	71250	8.42	\$600	\$689	\$0	\$2,369	\$990	\$243	\$867	\$0	\$0	\$2,369	
20	1986	26088	85	2.22	59	1.54	0	3.76	.735	1.029	\$1,122	74520	8.76	\$653	\$1,047	\$0	\$2,822	\$1,545	\$243	\$1,073	\$0	\$0	\$2,862	
21	1987	26453	85	2.25	59	1.57	0	3.82	.735	1.029	\$1,139	76820	9.09	\$698	\$769	\$0	\$2,607	\$1,682	\$243	\$754	\$0	\$0	\$2,679	
22	1988	26823	85	2.28	59	1.57	0	3.85	.735	1.029	\$1,150	82103	9.22	\$757	\$670	\$0	\$2,577	\$1,664	\$243	\$734	\$0	\$0	\$2,641	
23	1989	27199	85	2.31	34	.94	0	3.25	.802	1.029	\$1,337	86204	9.44	\$814	\$390	\$76	\$2,541	\$1,529	\$243	\$690	\$3	\$0	\$2,465	
24	1990	27580	85	2.34	39	1.09	0	3.43	.802	1.029	\$1,461	90123	10.16	\$916	\$399	\$94	\$2,775	\$1,752	\$254	\$675	\$0	\$0	\$2,681	
25	1991	27966	85	2.38	58	1.62	0	4.00	.936	1.07	\$0	\$1,593	91530	10.34	\$946	\$385	\$27	\$2,924	\$1,948	\$263	\$648	\$38	\$0	\$2,897
26	1992	28357	86	2.43	76	2.17	0	4.60	.961	1.07	\$0	\$1,666	92990	10.53	\$979	\$362	\$-1	\$3,007	\$1,988	\$368	\$653	\$0	\$0	\$3,009
27	1993	28754	87	2.49	75	2.16	.7	4.65	1.07	1.07	\$0	\$1,801	1589326	.75	\$1,187	\$248	\$-2	\$3,236	\$2,100	\$500	\$558	\$0	\$80	\$3,238
28	1994	29157	87	2.55	104	3.03	.7	5.58	1.14	1.07	\$0	\$2,020	1678263	.75	\$1,259	\$374	\$10	\$3,652	\$2,273	\$614	\$555	\$0	\$200	\$3,642
29	1995	29565	88	2.61	130	3.83	2.1	6.44	1.21	1.07	\$368	\$3,079	1728611	.74	\$1,279	\$273	\$43	\$4,631	\$2,388	\$1,100	\$550	\$150	\$400	\$4,588
30	1996	29982	89	2.64	131	3.86	2.1	6.50	1.25	1.07	\$337	\$3,379	1780469	.74	\$1,318	\$281	\$63	\$4,728	\$2,950	\$0	\$520	\$175	\$1,020	\$4,665
31	1997	30139	90	2.71	128	3.85	2.1	6.56	1.31	1.07	\$291	\$3,190	1833883	.73	\$1,339	\$290	\$56	\$4,819	\$3,098	\$0	\$490	\$155	\$1,020	\$4,763
32	1998	30426	91	2.77	127	3.85	2.4	6.62	1.36	1.07	\$289	\$3,283	1888900	.72	\$1,360	\$290	\$64	\$4,941	\$3,252	\$0	\$450	\$155	\$1,020	\$4,877
33	1999	30713	92	2.82	126	3.86	2.4	6.68	1.41	1.07	\$245	\$3,333	1945567	.72	\$1,401	\$307	\$63	\$5,042	\$3,415	\$0	\$400	\$145	\$1,020	\$4,980
34	2000	31000	93	2.87	125	3.87	2.4	6.74	1.43	1.08	\$228	\$3,379	2003934	.73	\$1,463	\$316	\$47	\$5,158	\$3,586	\$0	\$350	\$155	\$1,020	\$5,111
35	2001	31250	94	2.92	124	3.88	2.4	6.80	1.45	1.09	\$210	\$3,425	2064052	.73	\$1,507	\$326	\$38	\$5,258	\$3,765	\$0	\$300	\$135	\$1,020	\$5,220
36	2002	31500	94	2.97	123	3.89	2.4	6.86	1.47	1.11	\$193	\$3,483	2125973	.74	\$1,573	\$336	\$58	\$5,392	\$3,953	\$0	\$275	\$85	\$1,020	\$5,333
37	2003	31750	95	3.03	123	3.90	2.4	6.93	1.51	1.13	\$158	\$3,557	2189753	.75	\$1,642	\$346	\$60	\$5,546	\$4,151	\$0	\$250	\$65	\$1,020	\$5,486
38	2004	32000	96	3.08	122	3.91	2.4	6.99	1.54	1.14	\$131	\$3,611	2255445	.78	\$1,759	\$356	\$58	\$5,736	\$4,358	\$0	\$225	\$65	\$1,020	\$5,669
39	2005	32250	97	3.13	121	3.92	2.4	7.05	1.57	1.16	\$105	\$3,676	2323108	.81	\$1,882	\$367	\$63	\$5,925	\$4,576	\$0	\$200	\$65	\$1,020	\$5,861
40	2006	32500	98	3.19	121	3.92	2.4	7.11	1.58	1.18	\$96	\$3,731	2392802	.85	\$2,034	\$378	\$78	\$6,143	\$4,805	\$0	\$175	\$65	\$1,020	\$6,065
41	2007	32750	99	3.24	120	3.93	2.4	7.17	1.62	1.19	\$61	\$3,792	2464586	.87	\$2,144	\$389	\$45	\$6,325	\$5,046	\$0	\$150	\$65	\$1,020	\$6,281
42	2008	33000	100	3.30	119	3.94	2.4	7.24	1.68	1.21	\$9	\$3,882	2538523	.89	\$2,259	\$401	\$35	\$6,542	\$5,298	\$0	\$125	\$65	\$1,020	\$6,508
43	2009	33250	101	3.36	119	3.94	2.4	7.30	1.72	1.23	\$0	\$3,983	2614679	.91	\$2,379	\$413	\$47	\$6,775	\$5,563	\$0	\$100	\$45	\$1,020	\$6,728
44	2010	33500	102	3.41	118	3.95	2.4	7.36	1.78	1.25	\$0	\$4,121	2693119	.91	\$2,451	\$425	\$47	\$6,997	\$5,841	\$0	\$75	\$15	\$1,020	\$6,951
45	2011	33750	103	3.47	116	3.93	2.4	7.40	1.82	1.27	\$0	\$4,219	2773913	.93	\$2,580	\$438	\$69	\$7,236	\$6,133	\$0	\$0	\$15	\$1,020	\$7,168
46	2012	34000	104	3.53	117	3.97	2.4	7.50	1.88	1.29	\$0	\$4,386	2857130	.95	\$2,714	\$451	\$87	\$7,551	\$6,439	\$0	\$0	\$5	\$1,020	\$7,464
47	2013	34250	105	3.59	117	4.01	2.4	7.60	1.87	1.31	\$0	\$4,453	2942844	.98	\$2,884	\$465	\$15	\$7,802	\$6,761	\$0	\$0	\$5	\$1,020	\$7,786
48	2014	34500	106	3.65	116	4.00	2.4	7.65	1.91	1.34	\$0	\$4,573	3031130	1.02	\$3,092	\$479	\$19	\$8,144	\$7,100	\$0	\$0	\$5	\$1,020	\$8,125
49	2015	34750	107	3.71	115	3.99	2.4	7.70	1.92	1.36	\$0	\$4,637	3122064	1.08	\$3,372	\$493	\$22	\$8,502	\$7,455	\$0	\$0	\$5	\$1,020	\$8,480
50	2016	35000	108	3.78	113	3.97	2.4	7.75	1.94	1.39	\$0	\$4,729	3215725	1.13	\$3,634	\$508	\$19	\$8,871	\$7,827	\$0	\$0	\$5	\$1,020	\$8,852
51	2017	35250	109	3.84	112	3.96	2.4	7.80	1.96	1.42	\$0	\$4,823	3312197	1.18	\$3,908	\$523	\$11	\$9,255	\$8,219	\$0	\$0	\$5	\$1,020	\$9,244
52	2018	35500	110	3.91	111	3.94	2.4	7.85	1.98	1.46	\$0	\$4,932	3411563	1.23	\$4,196	\$539	\$12	\$9,667	\$8,630	\$0	\$0	\$5	\$1,020	\$9,655
53	2019	35750	111	3.97	110	3.93	2.4	7.90	2.01	1.48	\$0	\$5,028	3513910	1.29	\$4,533	\$555	\$30	\$10,116	\$9,061	\$0	\$0	\$5	\$1,020	\$10,086
54	2020	36000	112	4.04	109	3.91	2.4	7.95	2.01	1.51	\$0	\$5,096	3619327	1.35	\$4,886	\$572	\$14	\$10,553	\$9,514	\$0	\$0	\$5	\$1,020	\$10,539

Assume Ave Purchase rate for Co Gen.

56	ITEM	ASSUMPTION
57		
58	INTEREST SCDL	POR BONDS
59	TEAN YRS	30 YEARS
60	WATER RATES	0 .5
61	RATE PROJECTIONS E.W.S.	4 1

EXHIBIT #7

TOWN OF BETHLEHEM WATER DIST. #1 WATER RATES



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TOWN OF BETHLEHEM WATER DIST. #1
WATER CONSUMPTION PROJECTIONS
REVENUE PROJECTIONS
(EWS-CGM)

REVENUE/EXPENSE
PROJECTIONS
Rev. future
July 94
trial CGMIn

PROJ COST \$13,900.

YEAR	WD #1	RESIDENTL POPULATH	RES USE GPCD	INDSTRY GPCD	IND USE GPCD	SPL.IND USE	TOT USE GPCD	IND RATE per NG	RES RATE per NG	SPL. REV W.RENT	W.RENT REVENUE	AD VAL (mil.)	TX RT PER WILL	NO TAX. REVENUE	BUDGT. NSC.REV.	FUND. BAL.	TOTAL REVENUE	EXPENSE O & N.	PURCHASE ALB.	DBT SRV WTR EXISTING	SPL. PROJ'S	DBT SRV NEW PROJ	TOTAL EXPENSE
1980	24000	85	2.04	52	1.24	0	3.28	.535	.802	\$693	60123	6.23	\$373	\$405	\$0	\$1,471	\$817	\$36	\$231	\$0	\$0	\$1,350	
1981	24336	85	2.07	50	1.22	0	3.29	.535	.802	\$740	63123	7.13	\$441	\$384	\$6	\$1,565	\$910	\$103	\$331	\$0	\$0	\$1,571	
1982	24677	85	2.10	56	1.37	0	3.47	.535	.802	\$727	65123	7.35	\$471	\$352	\$0	\$1,550	\$838	\$116	\$357	\$0	\$0	\$1,539	
1983	25022	85	2.13	62	1.54	0	3.67	.668	.802	\$865	66123	7.52	\$491	\$527	\$0	\$1,883	\$866	\$95	\$344	\$0	\$0	\$1,608	
1984	25372	85	2.16	68	1.73	0	3.89	.668	.802	\$906	69123	7.92	\$532	\$716	\$0	\$2,154	\$1,099	\$140	\$497	\$0	\$0	\$2,154	
1985	25728	85	2.19	55	1.41	0	3.60	.735	1.029	\$1,080	71250	8.42	\$600	\$689	\$0	\$2,369	\$990	\$243	\$867	\$0	\$0	\$2,369	
1986	26088	85	2.22	59	1.54	0	3.76	.735	1.029	\$1,122	74520	8.76	\$653	\$1,047	\$0	\$2,822	\$1,545	\$243	\$1,073	\$0	\$0	\$2,862	
1987	26453	85	2.25	59	1.57	0	3.82	.735	1.029	\$1,139	76820	9.09	\$698	\$769	\$0	\$2,607	\$1,682	\$243	\$754	\$0	\$0	\$2,679	
1988	26813	85	2.28	59	1.57	0	3.85	.735	1.029	\$1,150	82103	9.22	\$757	\$670	\$0	\$2,577	\$1,664	\$243	\$734	\$0	\$0	\$2,641	
1989	27199	85	2.31	34	.94	0	3.25	.802	1.029	\$1,337	86204	9.44	\$814	\$390	\$76	\$2,541	\$1,529	\$243	\$690	\$3	\$0	\$2,465	
1990	27580	85	2.34	39	1.09	0	3.43	.802	1.029	\$1,461	90123	10.16	\$916	\$399	\$94	\$2,775	\$1,752	\$254	\$675	\$0	\$0	\$2,681	
1991	27966	85	2.38	58	1.62	0	4.00	.936	1.07	\$0	\$1,593	91530	10.34	\$946	\$385	\$27	\$2,924	\$1,948	\$263	\$648	\$38	\$0	\$2,897
1992	28357	86	2.43	76	2.17	0	4.60	.961	1.07	\$0	\$1,666	92990	10.53	\$979	\$362	\$-1	\$3,007	\$1,988	\$368	\$653	\$0	\$0	\$3,009
1993	28754	87	2.49	75	2.16	.7	4.65	1.07	1.07	\$0	\$1,801	1589326	.75	\$1,187	\$248	\$-2	\$3,236	\$2,100	\$500	\$558	\$0	\$80	\$3,238
1994	29157	87	2.55	104	3.03	.7	5.58	1.14	1.07	\$0	\$2,020	1678263	.75	\$1,259	\$374	\$10	\$3,652	\$2,273	\$614	\$555	\$0	\$200	\$3,642
1995	29565	88	2.61	130	3.83	1.6	6.44	1.22	1.07	\$274	\$2,999	1728611	.74	\$1,279	\$273	\$3	\$4,551	\$2,388	\$1,100	\$550	\$110	\$400	\$4,548
1996	29982	89	2.64	131	3.86	1.6	6.50	1.27	1.07	\$245	\$3,066	1780469	.74	\$1,318	\$281	\$0	\$4,665	\$2,950	\$0	\$520	\$175	\$1,020	\$4,665
1997	30139	90	2.71	128	3.85	1.6	6.56	1.32	1.07	\$216	\$3,129	1833883	.73	\$1,339	\$290	\$-5	\$4,757	\$3,098	\$0	\$490	\$155	\$1,020	\$4,763
1998	30426	91	2.77	127	3.85	1.6	6.62	1.39	1.07	\$175	\$3,211	1888980	.72	\$1,360	\$290	\$-8	\$4,869	\$3,252	\$0	\$450	\$155	\$1,020	\$4,877
1999	30713	92	2.82	126	3.86	1.6	6.68	1.43	1.07	\$152	\$3,268	1945567	.72	\$1,401	\$307	\$-4	\$4,976	\$3,415	\$0	\$400	\$145	\$1,020	\$4,980
2000	31000	93	2.87	125	3.87	1.6	6.74	1.47	1.08	\$128	\$3,336	2003934	.73	\$1,463	\$316	\$5	\$5,115	\$3,586	\$0	\$350	\$155	\$1,020	\$5,111
2001	31250	94	2.92	124	3.88	1.6	6.80	1.49	1.09	\$117	\$3,388	2064052	.73	\$1,507	\$326	\$0	\$5,221	\$3,765	\$0	\$300	\$135	\$1,020	\$5,220
2002	31506	94	2.97	123	3.89	1.6	6.86	1.49	1.11	\$117	\$3,435	2125973	.74	\$1,573	\$336	\$11	\$5,344	\$3,953	\$0	\$275	\$85	\$1,020	\$5,333
2003	31750	95	3.03	123	3.90	1.6	6.93	1.51	1.13	\$105	\$3,505	2189753	.75	\$1,642	\$346	\$7	\$5,493	\$4,151	\$0	\$250	\$65	\$1,020	\$5,486
2004	32006	96	3.08	122	3.91	1.6	6.99	1.54	1.14	\$88	\$3,567	2255445	.78	\$1,759	\$356	\$14	\$5,682	\$4,358	\$0	\$225	\$65	\$1,020	\$5,669
2005	32250	97	3.13	121	3.92	1.6	7.05	1.57	1.16	\$70	\$3,641	2323108	.81	\$1,882	\$367	\$28	\$5,890	\$4,576	\$0	\$200	\$65	\$1,020	\$5,861
2006	32506	98	3.19	121	3.92	1.6	7.11	1.58	1.18	\$64	\$3,699	2392802	.85	\$2,034	\$378	\$46	\$6,111	\$4,805	\$0	\$175	\$65	\$1,020	\$6,065
2007	32750	99	3.24	120	3.93	1.6	7.17	1.62	1.19	\$41	\$3,771	2464586	.87	\$2,144	\$389	\$24	\$6,305	\$5,046	\$0	\$150	\$65	\$1,020	\$6,281
2008	33000	100	3.30	119	3.94	1.6	7.24	1.68	1.21	\$6	\$3,879	2538523	.89	\$2,259	\$401	\$32	\$6,540	\$5,298	\$0	\$125	\$65	\$1,020	\$6,508
2009	33250	101	3.36	119	3.94	1.6	7.30	1.72	1.23	\$0	\$3,983	2614679	.91	\$2,379	\$413	\$47	\$6,775	\$5,563	\$0	\$100	\$45	\$1,020	\$6,728
2010	33500	102	3.41	118	3.95	1.6	7.36	1.78	1.25	\$0	\$4,121	2693119	.91	\$2,451	\$425	\$47	\$6,997	\$5,841	\$0	\$75	\$15	\$1,020	\$6,951
2011	33750	103	3.47	116	3.93	1.6	7.40	1.82	1.27	\$0	\$4,219	2773913	.93	\$2,580	\$438	\$69	\$7,236	\$6,133	\$0	\$0	\$15	\$1,020	\$7,168
2012	34000	104	3.53	117	3.97	1.6	7.50	1.88	1.29	\$0	\$4,386	2857130	.95	\$2,714	\$451	\$87	\$7,551	\$6,439	\$0	\$0	\$5	\$1,020	\$7,464
2013	34250	105	3.59	117	4.01	1.6	7.60	1.87	1.31	\$0	\$4,453	2942844	.98	\$2,884	\$465	\$15	\$7,802	\$6,761	\$0	\$0	\$5	\$1,020	\$7,786
2014	34500	106	3.65	116	4.00	1.6	7.65	1.91	1.34	\$0	\$4,573	3031130	1.02	\$3,092	\$479	\$19	\$8,144	\$7,100	\$0	\$0	\$5	\$1,020	\$8,125
2015	34750	107	3.71	115	3.99	1.6	7.70	1.92	1.36	\$0	\$4,637	3122064	1.08	\$3,372	\$493	\$22	\$8,502	\$7,455	\$0	\$0	\$5	\$1,020	\$8,480
2016	35000	108	3.78	113	3.97	1.6	7.75	1.94	1.39	\$0	\$4,729	3215725	1.13	\$3,634	\$508	\$19	\$8,871	\$7,827	\$0	\$0	\$5	\$1,020	\$8,852
2017	35250	109	3.84	112	3.96	1.6	7.80	1.96	1.42	\$0	\$4,823	3312197	1.18	\$3,908	\$523	\$11	\$9,255	\$8,219	\$0	\$0	\$5	\$1,020	\$9,244
2018	35500	110	3.91	111	3.94	1.6	7.85	1.98	1.46	\$0	\$4,932	3411563	1.23	\$4,196	\$539	\$12	\$9,667	\$8,630	\$0	\$0	\$5	\$1,020	\$9,655
2019	35750	111	3.97	110	3.93	1.6	7.90	2.01	1.48	\$0	\$5,028	3513910	1.29	\$4,533	\$555	\$30	\$10,116	\$9,061	\$0	\$0	\$5	\$1,020	\$10,086
2020	36000	112	4.04	109	3.91	1.6	7.95	2.01	1.51	\$0	\$5,096	3619327	1.35	\$4,886	\$572	\$14	\$10,553	\$9,514	\$0	\$0	\$5	\$1,020	\$10,539

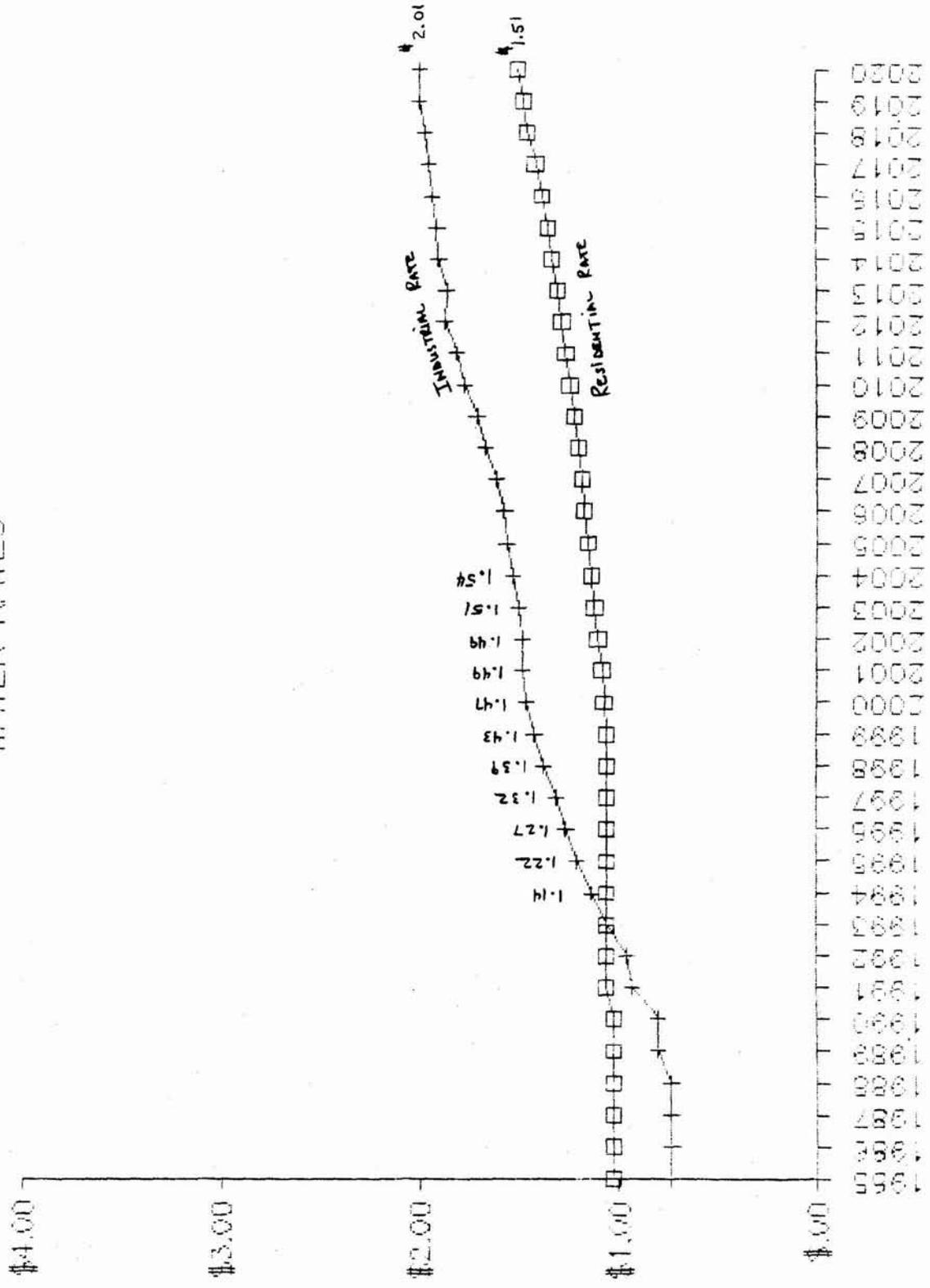
CoGen Minimum

ITEM	ASSUMPTION		
58	INTEREST SCDL	FOR BONDS	
59	TERM YRS	30 YEARS	0
60	WATER RATES		0 .5
61	RATE PROJECTIONS E.W.S.		4 3

EXHIBIT #9

TOWN OF BETHLEHEM WATER DIST. #1

WATER RATES



Carbon Minimum Purchase

BWPUMP

TOWN OF BETHLEHEM-WATER STUDY

GROUNDWATER INFILTRATION OPTION

PRINT RANGE: A1..174

6/11/91 Rev:11/27/91

EST 'USE EST BY YR' BY : Y = EST ANNUAL USE = MX + B

M-SLOPE OF LINE = 0.061 +/-

X=DATE (YEAR)

B= Y INTERCEPT OR USE IN 1989 = 3.79 MGD

SAFE YIELD BETH (MGD) = 4.02 MGD; REVISED TO 3.84 MGD IN '83
REPORT

EXHIBIT #10

YEAR	NO. YEARS	B	USE EST BY YR	CK VS ORIG EST	BETH WATER DEFICIT MGD (+)	TOTAL WATER DEF MG/YR	COST PER 1000 GAL	TOTAL ANNUAL COSTS	PRESENT WORTH	CHEM COSTS	SALARIES	ELECT & FUEL	ANNUAL MAINT	PUMP COSTS	AMORT SCHEDULE \$10.7 MIL
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1990	0	3.79	3.79	3.79	-0.05										30 yrs
1991	1	3.79	3.85		0.01										0 8 1
1992	2	3.79	3.91		0.07										
1993	3	3.79	3.97		0.13										
1994	4	3.79	4.03		0.19										
1995	5	3.79	4.10	4.08	3.00	1095.00	1.35	\$1,478,518	\$1,291,397	\$55,241	\$60,000	\$20,000	\$10,000	\$191,277	1142000
1996	6	3.79	4.16		3.00	1095.00	1.34	\$1,463,995	\$1,195,059	\$56,899	\$61,800	\$20,600	\$10,300	\$191,277	1123120
1997	7	3.79	4.22		3.00	1095.00	1.32	\$1,450,283	\$1,106,421	\$58,605	\$63,654	\$21,218	\$10,609	\$191,277	1104920
1998	8	3.79	4.28		3.00	1095.00	1.32	\$1,444,759	\$1,010,098	\$60,364	\$65,564	\$21,855	\$10,927	\$199,730	1086320
1999	9	3.79	4.34		3.00	1095.00	1.31	\$1,430,520	\$953,211	\$62,175	\$67,531	\$22,510	\$11,255	\$199,730	1067320
2000	10	3.79	4.40	4.38	3.00	1095.00	1.29	\$1,416,024	\$881,829	\$64,040	\$69,556	\$23,185	\$11,593	\$199,730	1047920
2001	11	3.79	4.46		3.00	1095.00	1.28	\$1,401,275	\$815,556	\$65,961	\$71,643	\$23,881	\$11,941	\$199,730	1028120
2002	12	3.79	4.52		3.00	1095.00	1.27	\$1,386,278	\$754,038	\$67,940	\$73,792	\$24,597	\$12,299	\$199,730	1007920
2003	13	3.79	4.58		3.00	1095.00	1.26	\$1,381,023	\$702,043	\$69,978	\$76,006	\$25,335	\$12,668	\$209,716	987320
2004	14	3.79	4.64		3.00	1095.00	1.25	\$1,365,543	\$648,756	\$72,077	\$78,286	\$26,095	\$13,048	\$209,716	966320
2005	15	3.79	4.71	4.73	3.00	1095.00	1.23	\$1,349,828	\$599,337	\$74,240	\$80,635	\$26,878	\$13,439	\$209,716	944920
2006	16	3.79	4.77		3.00	1095.00	1.22	\$1,332,884	\$553,093	\$76,467	\$83,054	\$27,685	\$13,842	\$209,716	922120
2007	17	3.79	4.83		3.00	1095.00	1.20	\$1,316,795	\$510,680	\$78,761	\$85,546	\$28,515	\$14,258	\$209,716	900000
2008	18	3.79	4.89		3.00	1095.00	1.20	\$1,310,973	\$475,162	\$81,124	\$88,112	\$29,371	\$14,685	\$220,202	877480
2009	19	3.79	4.95		3.00	1095.00	1.18	\$1,294,452	\$438,470	\$83,557	\$90,755	\$30,252	\$15,126	\$220,202	854560
2010	20	3.79	5.01	5.00	3.00	1095.00	1.17	\$1,277,723	\$404,489	\$86,064	\$93,478	\$31,159	\$15,580	\$220,202	831240
2011	21	3.79	5.07		3.00	1095.00	1.15	\$1,260,791	\$373,018	\$88,646	\$96,282	\$32,094	\$16,047	\$220,202	807520
2012	22	3.79	5.13		3.00	1095.00	1.14	\$1,243,663	\$343,885	\$91,305	\$99,171	\$33,057	\$16,528	\$220,202	783400
2013	23	3.79	5.19		3.00	1095.00	1.13	\$1,237,355	\$319,757	\$94,045	\$102,146	\$34,049	\$17,024	\$231,212	758880
2014	24	3.79	5.25		3.00	1095.00	1.11	\$1,219,853	\$294,607	\$96,866	\$105,210	\$35,070	\$17,535	\$231,212	733960
2015	25	3.79	5.32	5.30	3.00	1095.00	1.10	\$1,202,174	\$271,343	\$99,772	\$108,367	\$36,122	\$18,061	\$231,212	708640
2016	26	3.79	5.38		3.00	1095.00	1.08	\$1,184,323	\$249,833	\$102,765	\$111,618	\$37,206	\$18,603	\$231,212	682920
2017	27	3.79	5.44		3.00	1095.00	1.07	\$1,166,309	\$229,938	\$105,848	\$114,966	\$38,322	\$19,161	\$231,212	656800
2018	28	3.79	5.50		3.00	1095.00	1.06	\$1,158,699	\$213,490	\$109,023	\$118,415	\$39,472	\$19,736	\$242,772	629280
2019	29	3.79	5.56		3.00	1095.00	1.04	\$1,140,458	\$196,387	\$112,294	\$121,968	\$40,656	\$20,328	\$242,772	602440
2020	30	3.79	5.62	5.59	3.00	1095.00	1.02	\$1,122,075	\$180,576	\$115,663	\$125,627	\$41,876	\$20,938	\$242,772	575200
2021	31	3.79	5.68		3.00	1095.00	1.01	\$1,103,559	\$165,975	\$119,133	\$129,395	\$43,132	\$21,566	\$242,772	547560
2022	32	3.79	5.74		3.00	1095.00	0.99	\$1,084,915	\$152,496	\$122,707	\$133,277	\$44,426	\$22,213	\$242,772	519520
2023	33	3.79	5.80		3.00	1095.00	0.98	\$1,078,293	\$141,655	\$126,388	\$137,276	\$45,759	\$22,879	\$254,911	491080
2024	34	3.79	5.86		3.00	1095.00	0.97	\$1,059,422	\$130,065	\$130,180	\$141,394	\$47,131	\$23,566	\$254,911	462240
2025	35	3.79	5.93	5.94	3.00	1095.00	0.55	\$607,450	\$69,699	\$134,085	\$145,636	\$48,545	\$24,273	\$254,911	\$0
2026	36	3.79	5.99		3.00	1095.00	0.56	\$618,026	\$66,271	\$138,108	\$150,005	\$50,002	\$25,001	\$254,911	\$0
2027	37	3.79	6.05		3.00	1095.00	0.57	\$628,919	\$63,030	\$142,251	\$154,505	\$51,502	\$25,751	\$254,911	\$0
2028	38	3.79	6.11		3.00	1095.00	0.78	\$858,248	\$80,384	\$146,518	\$159,140	\$53,047	\$26,523	\$473,020	\$0
2029	39	3.79	6.17		3.00	1095.00	0.79	\$869,805	\$76,143	\$150,914	\$163,914	\$54,638	\$27,319	\$473,020	\$0
2030	40	3.79	6.23	6.23	3.00	1095.00	0.81	\$881,709	\$72,133	\$155,441	\$168,832	\$56,277	\$28,139	\$473,020	\$0
2031	41	3.79	6.29		3.00	1095.00	0.82	\$893,970	\$68,353	\$160,105	\$173,897	\$57,966	\$28,983	\$473,020	\$0
2032	42	3.79	6.35		3.00	1095.00	0.83	\$906,598	\$64,785	\$164,908	\$179,114	\$59,705	\$29,852	\$473,020	\$0
2033	43	3.79	6.41		3.00	1095.00	0.86	\$943,256	\$62,991	\$169,855	\$184,487	\$61,496	\$30,748	\$496,671	\$0
2034	44	3.79	6.47		3.00	1095.00	0.87	\$956,654	\$59,705	\$174,951	\$190,022	\$63,341	\$31,670	\$496,671	\$0
2035	45	3.79	6.54		3.00	1095.00	0.89	\$970,453	\$56,607	\$180,199	\$195,722	\$65,241	\$32,620	\$496,671	\$0
2036	46	3.79	6.60		3.00	1095.00	0.90	\$984,667	\$53,674	\$185,605	\$201,594	\$67,198	\$33,599	\$496,671	\$0
2037	47	3.79	6.66		3.00	1095.00	0.91	\$999,307	\$50,915	\$191,173	\$207,642	\$69,214	\$34,607	\$496,671	\$0
2038	48	3.79	6.72		3.00	1095.00	0.95	\$1,039,219	\$49,477	\$196,908	\$213,871	\$71,290	\$35,645	\$521,504	\$0
2039	49	3.79	6.78		3.00	1095.00	0.96	\$1,054,751	\$46,936	\$202,816	\$220,287	\$73,429	\$36,715	\$521,504	\$0
2040	50	3.79	6.84		3.00	1095.00	0.98	\$1,070,748	\$44,532	\$208,900	\$226,896	\$75,632	\$37,816	\$521,504	\$0
TOTALS:								\$52,646,546	\$16,608,301	5330864	5790087	1930029	965015	13779511	18860000

EXHIBIT #11

TOWN OF BETHLEHEM WATER STUDY ALBANY OPTION
 (see file 3-for starting in 1993)
 PRINT RANGE: Al..174 REV:
 EST 'USE EST BY YR' BY : Y = EST ANNUAL USE - MX + B
 M-SLOPE OF LINE = 0.061 +/-
 X=DATE (YEAR)
 B= Y INTERCEPT OR USE IN 1989 = 3.79 MGD
 (sum Present worth @ end of spreadsheet)
 SAFE YIELD BETH (MGD) = 4.02 MGD; REVISED TO 3.84 MGD IN '83 REPORT

ALBANY Option
 2% cost increase

EXHIBIT #12

YEAR	NO. O YEARS	B	USE EST BY YR	CK VSDEFICIT ORIG EST	BETH WATER MGD (+)	ANNUAL WATER DEF MGD/YR	ASSUMED S/THOU GAL @ 2%/YR	COST PER 1000 GAL	TOTAL ANNUAL COST	PRESENT WORTH	ANNUAL MAINT	PURCHASE FROM ALBANY	TOTAL PUMP'G COST	AMORT SCHEDULE 30 yrs, @ 8 16
1	2	3	4	5	6	7	8	9	10	11	12	14	15	16
1990	0	3.79	3.79	3.79	-0.05									
1991	1	3.79	3.85		0.01			1.50						
1992	2	3.79	3.91		0.07			1.53						
1993	3	3.79	3.97		0.13			1.56						
1994	4	3.79	4.03		0.19			1.59						
1995	5	3.79	4.10	4.08	3.00	1095.00	1.62	1.85	\$2,025,539	\$1,769,186	\$5,000	\$1,777,895	\$28,644	\$214,000
1996	6	3.79	4.16		3.00	1095.00	1.66	1.88	\$2,058,359	\$1,680,238	\$5,150	\$1,813,453	\$30,076	\$209,680
1997	7	3.79	4.22		3.00	1095.00	1.69	1.91	\$2,092,966	\$1,596,724	\$5,305	\$1,849,722	\$31,580	\$206,360
1998	8	3.79	4.28		3.00	1095.00	1.72	1.94	\$2,128,299	\$1,517,456	\$5,464	\$1,886,716	\$33,159	\$202,960
1999	9	3.79	4.34		3.00	1095.00	1.76	1.98	\$2,164,375	\$1,442,210	\$5,628	\$1,924,451	\$34,817	\$199,480
2000	10	3.79	4.40	4.38	3.00	1095.00	1.79	2.01	\$2,201,213	\$1,370,806	\$5,796	\$1,962,940	\$36,558	\$195,920
2001	11	3.79	4.46		3.00	1095.00	1.83	2.04	\$2,238,834	\$1,303,024	\$5,970	\$2,002,198	\$38,185	\$192,280
2002	12	3.79	4.52		3.00	1095.00	1.87	2.08	\$2,277,256	\$1,238,668	\$6,149	\$2,042,242	\$40,305	\$188,560
2003	13	3.79	4.58		3.00	1095.00	1.90	2.12	\$2,316,501	\$1,177,593	\$6,334	\$2,083,087	\$42,320	\$184,760
2004	14	3.79	4.64		3.00	1095.00	1.94	2.15	\$2,356,589	\$1,119,592	\$6,524	\$2,124,749	\$44,436	\$180,880
2005	15	3.79	4.71	4.73	3.00	1095.00	1.98	2.19	\$2,397,541	\$1,064,532	\$6,720	\$2,167,244	\$46,658	\$176,920
2006	16	3.79	4.77		3.00	1095.00	2.02	2.23	\$2,438,381	\$1,011,830	\$6,921	\$2,210,589	\$48,991	\$171,880
2007	17	3.79	4.83		3.00	1095.00	2.06	2.27	\$2,481,210	\$962,263	\$7,129	\$2,254,801	\$51,440	\$167,840
2008	18	3.79	4.89		3.00	1095.00	2.10	2.31	\$2,524,971	\$915,176	\$7,343	\$2,299,897	\$54,012	\$163,720
2009	19	3.79	4.95		3.00	1095.00	2.14	2.35	\$2,569,690	\$870,431	\$7,563	\$2,345,894	\$56,713	\$159,520
2010	20	3.79	5.01	5.00	3.00	1095.00	2.19	2.39	\$2,615,391	\$827,954	\$7,790	\$2,392,812	\$59,548	\$155,240
2011	21	3.79	5.07		3.00	1095.00	2.23	2.43	\$2,662,098	\$787,608	\$8,024	\$2,440,669	\$62,526	\$150,880
2012	22	3.79	5.13		3.00	1095.00	2.27	2.47	\$2,709,838	\$749,297	\$8,264	\$2,489,482	\$65,652	\$146,440
2013	23	3.79	5.19		3.00	1095.00	2.32	2.52	\$2,758,639	\$712,887	\$8,512	\$2,539,272	\$68,935	\$141,920
2014	24	3.79	5.25		3.00	1095.00	2.37	2.56	\$2,808,526	\$678,287	\$8,768	\$2,590,057	\$72,382	\$137,320
2015	25	3.79	5.32	5.30	3.00	1095.00	2.41	2.61	\$2,859,529	\$645,424	\$9,031	\$2,641,858	\$76,001	\$132,640
2016	26	3.79	5.38		3.00	1095.00	2.46	2.66	\$2,911,677	\$614,218	\$9,301	\$2,694,695	\$79,801	\$127,880
2017	27	3.79	5.44		3.00	1095.00	2.51	2.71	\$2,965,000	\$584,550	\$9,581	\$2,748,589	\$83,791	\$123,040
2018	28	3.79	5.50		3.00	1095.00	2.56	2.76	\$3,018,529	\$556,164	\$9,868	\$2,803,561	\$87,980	\$117,120
2019	29	3.79	5.56		3.00	1095.00	2.61	2.81	\$3,074,375	\$529,407	\$10,164	\$2,859,632	\$92,379	\$112,200
2020	30	3.79	5.62	5.59	3.00	1095.00	2.66	2.86	\$3,131,492	\$503,951	\$10,469	\$2,916,825	\$96,998	\$107,200
2021	31	3.79	5.68		3.00	1095.00	2.72	2.91	\$3,189,912	\$479,763	\$10,783	\$2,975,161	\$101,848	\$102,120
2022	32	3.79	5.74		3.00	1095.00	2.77	2.97	\$3,249,672	\$456,774	\$11,106	\$3,034,665	\$106,940	\$96,960
2023	33	3.79	5.80		3.00	1095.00	2.83	3.02	\$3,310,805	\$434,940	\$11,440	\$3,095,358	\$112,287	\$91,720
2024	34	3.79	5.86		3.00	1095.00	2.88	3.08	\$3,373,350	\$414,146	\$11,783	\$3,157,265	\$117,902	\$86,400
2025	35	3.79	5.93	5.94	3.00	1095.00	2.94	3.07	\$3,356,344	\$385,107	\$12,136	\$3,220,410	\$123,797	\$81,000
2026	36	3.79	5.99		3.00	1095.00	3.00	3.13	\$3,427,306	\$367,510	\$12,500	\$3,284,819	\$129,987	\$75,000
2027	37	3.79	6.05		3.00	1095.00	3.06	3.20	\$3,499,877	\$350,758	\$12,875	\$3,350,515	\$136,486	\$69,000
2028	38	3.79	6.11		3.00	1095.00	3.12	3.26	\$3,574,097	\$334,750	\$13,262	\$3,417,525	\$143,310	\$63,000
2029	39	3.79	6.17		3.00	1095.00	3.18	3.33	\$3,650,011	\$319,522	\$13,660	\$3,485,876	\$150,476	\$57,000
2030	40	3.79	6.23	6.23	3.00	1095.00	3.25	3.40	\$3,727,662	\$304,960	\$14,069	\$3,555,593	\$158,000	\$51,000
2031	41	3.79	6.29		3.00	1095.00	3.31	3.48	\$3,807,096	\$291,091	\$14,491	\$3,626,705	\$165,900	\$45,000
2032	42	3.79	6.35		3.00	1095.00	3.38	3.55	\$3,888,360	\$277,862	\$14,926	\$3,699,239	\$174,195	\$39,000
2033	43	3.79	6.41		3.00	1095.00	3.45	3.63	\$3,971,502	\$265,217	\$15,374	\$3,773,224	\$182,904	\$33,000
2034	44	3.79	6.47		3.00	1095.00	3.51	3.70	\$4,056,573	\$253,171	\$15,835	\$3,848,689	\$192,050	\$27,000
2035	45	3.79	6.54		3.00	1095.00	3.59	3.78	\$4,143,625	\$241,698	\$16,310	\$3,925,662	\$201,652	\$21,000
2036	46	3.79	6.60		3.00	1095.00	3.66	3.87	\$4,232,710	\$230,725	\$16,799	\$4,004,176	\$211,735	\$15,000
2037	47	3.79	6.66		3.00	1095.00	3.73	3.95	\$4,323,884	\$220,302	\$17,303	\$4,084,259	\$222,322	\$9,000
2038	48	3.79	6.72		3.00	1095.00	3.80	4.03	\$4,417,204	\$210,303	\$17,823	\$4,165,944	\$233,438	\$3,000
2039	49	3.79	6.78		3.00	1095.00	3.88	4.12	\$4,512,730	\$200,816	\$18,357	\$4,249,263	\$245,110	\$0
2040	50	3.79	6.84		3.00	1095.00	3.96	4.21	\$4,610,521	\$191,752	\$18,908	\$4,334,248	\$257,365	\$0

TOTALS: \$142,110,061 \$12,460,644 \$132,151,926 \$4,831,788 \$4,643,840

EXHIBIT #12

TOWN OF BETHLEHEM WATER DIST. # 1
 WATER CONSUMPTION PROJECTIONS ALBANY PURCHASE (VARIABLE)
 COST/REVENUE PROJECTIONS
 RATE PROJECTIONS (ALBANY PURCHASE)

REVENUE/EXPENSE
 PROJECTIONS
 June 94
 ALBPUR-RC(3.5 & 1

PROJ COST \$7,000,000

YEAR	WD #1	RESIDWTL	RES USE	INDSTRY	IND USE	SPL. IND	TOT USE	IND RATE	RES RATE	SPL. REV	W RENT	AD VAL	TX RT	WD TAX.	BUDGT.	FUND	TOTAL	EXPENSE	ALB.WTR.	ALB.WTR.	PURCHASE	DBT SRV	PROJS &	DBT SRV	TOTAL	
12	13	POPULATN	GPCD	MGD	GPCD	MGD	USE	MGD \$ per MG	MG \$ per MG	W.RENT	REVENUE	(X1000)	PER MILL	REVENUE	MSC.REV.	BAL.	REVENUE	O & M.	MGD	RATE	ALB. WTR	EXISTING	MJR	MNT.	Alb. Impv	EXPENSE.
14	1980	24000	85	2.04	52	1.24	0	3.28	.535	.802	\$693	60123	6.23	\$373	\$405	\$0	\$1,471	\$817	.25	\$1.00	\$36	\$231	\$265	\$1,350		
15	1981	24316	85	2.07	50	1.22	0	3.29	.535	.802	\$740	63123	7.13	\$441	\$384	\$6	\$1,565	\$910	.25	\$1.00	\$103	\$331	\$227	\$1,571		
16	1982	24677	85	2.10	56	1.37	0	3.47	.535	.802	\$727	65123	7.35	\$471	\$352	\$0	\$1,550	\$838	.25	\$1.00	\$116	\$357	\$229	\$1,539		
17	1983	25022	85	2.13	62	1.54	0	3.67	.668	.802	\$865	66123	7.52	\$491	\$527	\$0	\$1,883	\$866	.25	\$1.00	\$95	\$344	\$303	\$1,608		
18	1984	25372	85	2.16	68	1.73	0	3.89	.668	.802	\$906	69123	7.92	\$532	\$716	\$0	\$2,154	\$1,099	.25	\$1.33	\$140	\$497	\$418	\$0	\$2,154	
19	1985	25728	85	2.19	55	1.41	0	3.60	.735	1.029	\$1,080	71250	8.42	\$600	\$689	\$0	\$2,369	\$990	.55	\$1.33	\$243	\$867	\$269	\$0	\$2,369	
20	1986	26088	85	2.22	59	1.54	0	3.76	.735	1.029	\$1,122	74520	8.76	\$653	\$1,088	\$0	\$2,863	\$1,545	.55	\$1.33	\$243	\$1,073	\$1	\$0	\$2,862	
21	1987	26453	85	2.25	59	1.57	0	3.82	.735	1.029	\$1,139	76820	9.09	\$698	\$765	\$0	\$2,603	\$1,682	.55	\$1.33	\$243	\$754	\$0	\$0	\$2,679	
22	1988	26823	85	2.28	59	1.57	0	3.85	.735	1.029	\$1,150	82103	9.22	\$757	\$692	\$0	\$2,599	\$1,664	.55	\$1.33	\$243	\$734	\$0	\$0	\$2,641	
23	1989	27199	85	2.31	34	.94	0	3.25	.802	1.029	\$1,337	86204	9.44	\$814	\$315	\$1	\$2,466	\$1,529	.55	\$1.33	\$243	\$690	\$3	\$0	\$2,465	
24	1990	27580	85	2.34	39	1.09	0	3.43	.802	1.029	\$1,461	90123	10.16	\$916	\$331	\$26	\$2,707	\$1,752	.55	\$1.43	\$254	\$675	\$0	\$0	\$2,681	
25	1991	27966	85	2.38	58	1.62	0	4.00	.936	1.07	\$0	\$1,593	91530	10.34	\$946	\$382	\$25	\$2,921	\$1,947	.55	\$1.50	\$301	\$648	\$0	\$0	\$2,896
26	1992	28357	86	2.43	76	2.17	0	4.60	.961	1.07	\$0	\$1,627	92990	10.53	\$979	\$342	\$-60	\$2,948	\$1,988	.64	\$1.57	\$367	\$653	\$0	\$0	\$3,008
27	1993	28754	87	2.49	75	2.16	0	4.65	1.07	1.07	\$0	\$1,816	1589326	.75	\$1,192	\$352	\$2	\$3,360	\$2,100	1.01	\$1.65	\$609	\$558	\$91	\$0	\$3,350
28	1994	29157	87	2.55	82	2.38	.4	4.93	1.14	1.07	\$80	\$2,067	1678263	.75	\$1,259	\$362	\$47	\$3,688	\$2,273	1.02	\$1.65	\$614	\$555	\$198	\$0	\$3,640
29	1995	29565	88	2.61	130	3.83	2.1	6.44	1.738982	1.11	\$0	\$3,490	1728611	.75	\$1,296	\$373	\$0	\$5,159	\$2,388	2.6	\$1.68	\$1,594	\$550	\$20	\$607	\$5,159
30	1996	29582	89	2.64	131	3.86	2.4	6.50	1.829777	1.15	\$0	\$3,686	1780469	.75	\$1,335	\$385	\$0	\$5,406	\$2,543	2.66	\$1.75	\$1,699	\$520	\$45	\$599	\$5,406
31	1997	30139	90	2.71	128	3.85	2.4	6.56	1.924145	1.19	\$0	\$3,880	1833883	.72	\$1,320	\$396	\$0	\$5,597	\$2,683	2.72	\$1.81	\$1,798	\$490	\$35	\$590	\$5,597
32	1998	30426	91	2.77	127	3.85	2.4	6.62	1.964213	1.23	\$0	\$4,005	1888900	.72	\$1,360	\$408	\$0	\$5,773	\$2,831	2.78	\$1.85	\$1,875	\$450	\$35	\$583	\$5,773
33	1999	30713	92	2.82	126	3.86	2.4	6.68	2.003790	1.2669	\$0	\$4,128	1945567	.72	\$1,401	\$420	\$0	\$5,949	\$2,986	2.84	\$1.88	\$1,953	\$400	\$35	\$574	\$5,949
34	2000	31000	93	2.87	125	3.87	2.4	6.74	2.038993	1.304907	\$0	\$4,235	2003934	.73	\$1,463	\$433	\$0	\$6,131	\$3,151	2.9	\$1.92	\$2,035	\$350	\$40	\$556	\$6,131
35	2001	31250	94	2.92	124	3.88	2.4	6.80	2.078901	1.344054	\$0	\$4,376	2064052	.73	\$1,507	\$446	\$0	\$6,329	\$3,324	2.96	\$1.96	\$2,118	\$300	\$40	\$546	\$6,329
36	2002	31500	94	2.97	123	3.89	2.4	6.86	2.120424	1.384376	\$0	\$4,510	2125973	.75	\$1,594	\$459	\$0	\$6,564	\$3,507	3.02	\$2.00	\$2,204	\$275	\$40	\$538	\$6,564
37	2003	31750	95	3.03	123	3.90	2.4	6.93	2.164574	1.425907	\$0	\$4,659	2189753	.77	\$1,686	\$473	\$0	\$6,818	\$3,700	3.09	\$2.04	\$2,301	\$250	\$40	\$528	\$6,818
38	2004	32000	96	3.08	122	3.91	2.4	6.99	2.206887	1.468684	\$0	\$4,801	2266394	.79	\$1,790	\$487	\$0	\$7,078	\$3,903	3.15	\$2.08	\$2,392	\$225	\$40	\$518	\$7,078
39	2005	32250	97	3.13	121	3.92	2.4	7.05	2.236254	1.512745	\$0	\$4,927	2345718	.82	\$1,923	\$502	\$0	\$7,352	\$4,118	3.21	\$2.12	\$2,486	\$200	\$40	\$508	\$7,352
40	2006	32500	98	3.19	121	3.92	2.4	7.11	2.268189	1.558127	\$0	\$5,060	2427818	.85	\$2,064	\$517	\$0	\$7,640	\$4,344	3.27	\$2.16	\$2,584	\$175	\$40	\$498	\$7,640
41	2007	32750	99	3.24	120	3.93	2.4	7.17	2.323873	1.604871	\$0	\$5,230	2512792	.87	\$2,186	\$532	\$0	\$7,949	\$4,583	3.33	\$2.21	\$2,684	\$150	\$40	\$487	\$7,949
42	2008	33000	100	3.30	119	3.94	2.4	7.24	2.389523	1.653017	\$0	\$5,415	2600740	.89	\$2,315	\$548	\$0	\$8,278	\$4,835	3.4	\$2.25	\$2,795	\$125	\$45	\$478	\$8,278
43	2009	33250	101	3.36	119	3.94	2.4	7.30	2.441068	1.702608	\$0	\$5,599	2691766	.91	\$2,450	\$565	\$0	\$8,614	\$5,101	3.46	\$2.30	\$2,901	\$100	\$45	\$467	\$8,614
44	2010	33500	102	3.41	118	3.95	2.4	7.36	2.544916	1.753686	\$0	\$5,851	2785977	.91	\$2,535	\$582	\$0	\$8,988	\$5,382	3.52	\$2.34	\$3,010	\$75	\$45	\$456	\$8,988
45	2011	33750	103	3.47	116	3.93	2.4	7.40	2.586083	1.806296	\$0	\$5,997	2883487	.93	\$2,682	\$599	\$0	\$9,277	\$5,678	3.56	\$2.39	\$3,105	\$0	\$50	\$444	\$9,277
46	2012	34000	104	3.53	117	3.97	2.4	7.50	2.677920	1.860485	\$0	\$6,277	2984409	.95	\$2,835	\$617	\$0	\$9,729	\$5,990	3.66	\$2.44	\$3,257	\$0	\$50	\$433	\$9,729
47	2013	34250	105	3.59	117	4.01	2.4	7.60	2.754003	1.916300	\$0	\$6,541	3088863	.98	\$3,027	\$636	\$0	\$10,204	\$6,319	3.76	\$2.49	\$3,412	\$0	\$50	\$422	\$10,204
48	2014	34500	106	3.65	116	4.00	2.4	7.65	2.793128	1.973789	\$0	\$6,707	3196973	1.03	\$3,293	\$655	\$0	\$10,654	\$6,667	3.81	\$2.54	\$3,527	\$0	\$50	\$410	\$10,654
49	2015	34750	107	3.71	115	3.99	2.4	7.70	2.852265	2.013265	\$0	\$6,879	3308867	1.08	\$3,574	\$674	\$0	\$11,127	\$7,034	3.86	\$2.59	\$3,645	\$0	\$50	\$398	\$11,127
50	2016	35000	108	3.78	113	3.97	2.4	7.75	2.877076	2.073663	\$0	\$7,031	3424677	1.13	\$3,870	\$695	\$0	\$11,595	\$7,420	3.91	\$2.64	\$3,766	\$0	\$50	\$359	\$11,595
51	2017	35250	109	3.84	112	3.96	2.4	7.80	2.945263	2.135873	\$0	\$7,250	3544541	1.18	\$4,183	\$715	\$0	\$12,148	\$7,829	3.96	\$2.69	\$3,890	\$0	\$55	\$375	\$12,148
52	2018	35500	110	3.91	111	3.94	2.4	7.85	2.992816	2.199949	\$0	\$7,445	3668800	1.23	\$4,512	\$737	\$0	\$12,694	\$8,259	4.01	\$2.75	\$4,018	\$0	\$55	\$362	\$12,694
53	2019	35750	111	3.97	110	3.93	2.4	7.90	2.987146	2.265947	\$0	\$7,568	3797001	1.30	\$4,940	\$759	\$0	\$13,267	\$8,713	4.06	\$2.80	\$4,150	\$0	\$55	\$349	\$13,267
54	2020	36000	112	4.04	109	3.91	2.4	7.95	2.985215	2.333926	\$0	\$7,703	3929896	1.37	\$5,384	\$782	\$0	\$13,868	\$9,193	4.11	\$2.86	\$4,285	\$0	\$55	\$336	\$13,868

ITEM	ASSUMPTION
56	INTEREST @ 6% FOR BONDS
57	TERM YRS 30 YEARS
58	Assume Albany price @
59	.50 0
60	.00 0
61	3.00 3
62	1.04
63	

Industrial Residential

Albany Water Purchase

EXHIBIT 13A

ALB-T&RRC
 Tax & Res. Rate
 Compare to EWS

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

TOWN OF BETHLEHEM WATER DIST. # 1
 WATER CONSUMPTION PROJECTIONS ALBANY PURCHASE (VARIABLE)
 COST/REVENUE PROJECTIONS
 RATE PROJECTIONS (ALBANY PURCHASE)

REVENUE/EXPENSE
 PROJECTIONS
 June 94
 ALB-T&RRC

PROJ COST \$7,000,000

YEAR	WD #1	RES/DWTL	RES USE	INDRSTY	IND USE	SPLC.IND	TOT USE	IND RATE	RES RATE	SPLC.RVY	W.RENT	AD VAL	TX RT	WD TAX.	BODGT.	FUND.	TOTAL.	EXPENSE	ALB.WTR.	ALB.WTR.	PURCHASE	DBY SRV	PROJS &	DBY SRV	TOTAL.
POPULATN	GPCD.	MGD.	GPCD.	MGD.	USE		MGD \$ per MG	\$ per MG	W.RENT	REVENUE	(X1000)	PER MILL	REVENUE	MSC.REV.	BAL.	REVENUE.	O & M.	MGD.	RATE.	ALB. WTR	EXISTING	MJR	INT.	Alb. Impv	EXPENSE.
14	1980	24000	85	2.04	52	1.24	0	3.28	.535	.802	\$693	60123	6.23	\$373	\$405	\$0	\$1,471	\$817	.25	\$1.00	\$36	\$231	\$265	\$1,350	
15	1981	24336	85	2.07	50	1.22	0	3.29	.535	.802	\$740	63123	7.13	\$441	\$384	\$6	\$1,565	\$910	.25	\$1.00	\$103	\$331	\$227	\$1,571	
16	1982	24677	85	2.10	56	1.37	0	3.47	.535	.802	\$727	65123	7.35	\$471	\$352	\$0	\$1,550	\$838	.25	\$1.00	\$116	\$357	\$229	\$1,539	
17	1983	25022	85	2.13	62	1.54	0	3.67	.668	.802	\$865	66123	7.52	\$491	\$527	\$0	\$1,883	\$866	.25	\$1.00	\$95	\$344	\$303	\$1,608	
18	1984	25372	85	2.16	68	1.73	0	3.89	.668	.802	\$906	69123	7.92	\$532	\$715	\$0	\$2,154	\$1,099	.25	\$1.33	\$140	\$497	\$418	\$0	
19	1985	25728	85	2.19	55	1.41	0	3.60	.735	1.029	\$1,080	71250	8.42	\$600	\$689	\$0	\$2,369	\$990	.55	\$1.33	\$243	\$867	\$269	\$0	
20	1986	26088	85	2.22	59	1.54	0	3.76	.735	1.029	\$1,122	74520	8.76	\$653	\$1,088	\$0	\$2,863	\$1,545	.55	\$1.33	\$243	\$1,073	\$1	\$0	
21	1987	26453	85	2.25	59	1.57	0	3.82	.735	1.029	\$1,139	76820	9.09	\$698	\$765	\$0	\$2,603	\$1,682	.55	\$1.33	\$243	\$754	\$0	\$0	
22	1988	26823	85	2.28	59	1.57	0	3.85	.735	1.029	\$1,150	82103	9.22	\$757	\$692	\$0	\$2,599	\$1,664	.55	\$1.33	\$243	\$734	\$0	\$0	
23	1989	27199	85	2.31	34	.94	0	3.25	.802	1.029	\$1,337	86204	9.44	\$814	\$315	\$1	\$2,466	\$1,529	.55	\$1.33	\$243	\$690	\$3	\$0	
24	1990	27580	85	2.34	39	1.09	0	3.43	.802	1.029	\$1,461	90123	10.16	\$916	\$331	\$26	\$2,707	\$1,752	.55	\$1.43	\$254	\$675	\$0	\$0	
25	1991	27966	85	2.38	58	1.62	0	4.00	.936	1.07	\$0	\$1,593	91530	10.34	\$946	\$382	\$25	\$2,921	\$1,947	.55	\$1.50	\$301	\$648	\$0	\$0
26	1992	28357	86	2.43	76	2.17	0	4.60	.961	1.07	\$0	\$1,627	92990	10.53	\$979	\$342	\$-60	\$2,948	\$1,988	.64	\$1.57	\$367	\$653	\$0	\$0
27	1993	28754	87	2.49	75	2.16	0	4.65	1.07	1.07	\$0	\$1,816	1589326	.75	\$1,192	\$352	\$2	\$3,360	\$2,100	1.01	\$1.65	\$609	\$558	\$91	\$0
28	1994	29157	87	2.55	82	2.38	.4	4.93	1.14	1.07	\$80	\$2,067	1678263	.75	\$1,259	\$362	\$47	\$3,688	\$2,273	1.02	\$1.65	\$614	\$555	\$198	\$0
29	1995	29565	88	2.61	130	3.83	2.1	6.44	1.767167	1.07	\$0	\$3,490	1728611	.75	\$1,296	\$373	\$0	\$5,159	\$2,388	2.6	\$1.68	\$1,594	\$550	\$20	\$607
30	1996	29982	89	2.64	131	3.86	2.4	6.50	1.884005	1.07	\$0	\$3,686	1780469	.75	\$1,335	\$385	\$0	\$5,406	\$2,543	2.66	\$1.75	\$1,699	\$520	\$45	\$599
31	1997	30139	90	2.71	128	3.85	2.4	6.56	2.008770	1.07	\$0	\$3,880	1833883	.72	\$1,320	\$396	\$0	\$5,597	\$2,683	2.72	\$1.81	\$1,798	\$490	\$35	\$590
32	1998	30426	91	2.77	127	3.85	2.4	6.62	2.078980	1.07	\$0	\$4,005	1888900	.72	\$1,360	\$408	\$0	\$5,773	\$2,831	2.78	\$1.85	\$1,875	\$450	\$35	\$583
33	1999	30713	92	2.82	126	3.86	2.4	6.68	2.147460	1.07	\$0	\$4,128	1945567	.72	\$1,401	\$420	\$0	\$5,949	\$2,986	2.84	\$1.88	\$1,953	\$400	\$35	\$574
34	2000	31000	93	2.87	125	3.87	2.4	6.74	2.190424	1.09	\$0	\$4,235	2003934	.73	\$1,463	\$433	\$0	\$6,131	\$3,151	2.9	\$1.92	\$2,035	\$350	\$40	\$556
35	2001	31250	94	2.92	124	3.88	2.4	6.80	2.255315	1.11	\$0	\$4,376	2064052	.73	\$1,507	\$446	\$0	\$6,329	\$3,324	2.96	\$1.96	\$2,118	\$300	\$40	\$546
36	2002	31500	94	2.97	123	3.89	2.4	6.86	2.322779	1.12	\$0	\$4,510	2125973	.75	\$1,594	\$459	\$0	\$6,564	\$3,507	3.02	\$2.00	\$2,204	\$275	\$40	\$538
37	2003	31750	95	3.03	123	3.90	2.4	6.93	2.394013	1.13	\$0	\$4,659	2189753	.77	\$1,686	\$473	\$0	\$6,818	\$3,700	3.09	\$2.04	\$2,301	\$250	\$40	\$528
38	2004	32000	96	3.08	122	3.91	2.4	6.99	2.465757	1.14	\$0	\$4,801	2266394	.79	\$1,790	\$487	\$0	\$7,078	\$3,903	3.15	\$2.08	\$2,392	\$225	\$40	\$518
39	2005	32250	97	3.13	121	3.92	2.4	7.05	2.518488	1.16	\$0	\$4,927	2345718	.82	\$1,923	\$502	\$0	\$7,352	\$4,118	3.21	\$2.12	\$2,486	\$200	\$40	\$508
40	2006	32500	98	3.19	121	3.92	2.4	7.11	2.575581	1.18	\$0	\$5,060	2427818	.85	\$2,064	\$517	\$0	\$7,640	\$4,344	3.27	\$2.16	\$2,584	\$175	\$40	\$498
41	2007	32750	99	3.24	120	3.93	2.4	7.17	2.665587	1.19	\$0	\$5,230	2512792	.87	\$2,186	\$532	\$0	\$7,949	\$4,583	3.33	\$2.21	\$2,684	\$150	\$45	\$487
42	2008	33000	100	3.30	119	3.94	2.4	7.24	2.751512	1.21	\$0	\$5,415	2600740	.89	\$2,315	\$548	\$0	\$8,278	\$4,835	3.4	\$2.25	\$2,795	\$125	\$45	\$478
43	2009	33250	101	3.36	119	3.94	2.4	7.30	2.843348	1.23	\$0	\$5,599	2691766	.91	\$2,450	\$565	\$0	\$8,614	\$5,101	3.46	\$2.30	\$2,901	\$100	\$45	\$467
44	2010	33500	102	3.41	118	3.95	2.4	7.36	2.980765	1.25	\$0	\$5,851	2785977	.91	\$2,535	\$582	\$0	\$8,968	\$5,382	3.52	\$2.34	\$3,010	\$75	\$45	\$456
45	2011	33750	103	3.47	116	3.93	2.4	7.40	3.060326	1.27	\$0	\$5,997	2883487	.93	\$2,682	\$599	\$0	\$9,277	\$5,678	3.56	\$2.39	\$3,105	\$0	\$50	\$444
46	2012	34000	104	3.53	117	3.97	2.4	7.50	3.185750	1.29	\$0	\$6,277	2984409	.95	\$2,835	\$617	\$0	\$9,729	\$5,990	3.66	\$2.44	\$3,257	\$0	\$50	\$433
47	2013	34250	105	3.59	117	4.01	2.4	7.60	3.297442	1.31	\$0	\$6,541	3088863	.98	\$3,027	\$636	\$0	\$10,204	\$6,319	3.76	\$2.49	\$3,412	\$0	\$50	\$422
48	2014	34500	106	3.65	116	4.00	2.4	7.65	3.372430	1.34	\$0	\$6,707	3196973	1.03	\$3,293	\$655	\$0	\$10,654	\$6,667	3.81	\$2.54	\$3,527	\$0	\$50	\$410
49	2015	34750	107	3.71	115	3.99	2.4	7.70	3.442622	1.38	\$0	\$6,879	3308867	1.08	\$3,574	\$674	\$0	\$11,127	\$7,034	3.86	\$2.59	\$3,645	\$0	\$50	\$398
50	2016	35000	108	3.78	113	3.97	2.4	7.75	3.508207	1.41	\$0	\$7,031	3424677	1.13	\$3,870	\$695	\$0	\$11,595	\$7,420	3.91	\$2.64	\$3,766	\$0	\$50	\$375
51	2017	35250	109	3.84	112	3.96	2.4	7.80	3.610743	1.45	\$0	\$7,250	3544541	1.18	\$4,183	\$715	\$0	\$12,148	\$7,829	3.96	\$2.69	\$3,890	\$0	\$55	\$375
52	2018	35500	110	3.91	111	3.94	2.4	7.85	3.715557	1.47	\$0	\$7,445	3668600	1.23	\$4,512	\$737	\$0	\$12,694	\$8,259	4.01	\$2.75	\$4,018	\$0	\$55	\$362
53	2019	35750	111	3.97	110	3.93	2.4	7.90	3.781409	1.48	\$0	\$7,568	3797001	1.30	\$4,940	\$759	\$0	\$13,267	\$8,713	4.06	\$2.80	\$4,150	\$0	\$55	\$349
54	2020	36000	112	4.04	109	3.91	2.4	7.95	3.835224	1.51	\$0	\$7,703	3929896	1.37	\$5,384	\$782	\$0	\$13,868	\$9,193	4.11	\$2.86	\$4,285	\$0	\$55	\$336

EXHIBIT 13 B

ITEM ASSUMPTION

INTEREST # 6%	FOR BONDS		
TERM YRS	30 YEARS		
Assume Albany price @		.50	0
		.00	0
		3.00	3
		1.04	4

Industrial water rate
 hold residential water rate equal to other option
 Project ALBANY water purchase

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TOWN OF BETHLEHEM WATER DIST. # 1
WATER CONSUMPTION PROJECTIONS ALBANY PURCHASE (VARIABLE)
COST/REVENUE PROJECTIONS
RATE PROJECTIONS (ALBANY PURCHASE)

REVENUE/EXPENSE PROJECTIONS
June 94
ALB-EqEWS

PROJ COST \$7,000,000

YEAR	WD #1	RESIDNTL POPULATN	RES USE GPCD	INDRSTY GPCD	IND USE GPCD	SPLCL IND USE	TOT USE MGD	IND RATE \$ per MG	RES RATE \$ per MG	SPLCL REV \$ per MG	W.RENT REVENUE	AD VAL (X1000)	TY RT PER MILL	WD TAX REVENUE	BUDGT MSC REV.	FUND BAL.	TOTAL REVENUE	EXPENSE O & M.	ALB.WTR. MGD	ALB.WTR. RATE	PURCHASE ALB. WTR.	DBT SRV EXISTING	PROJS DBT SRV MNT.	DBT SRV ALB. WTR.	TOTAL EXPENSE
1980	24000	85	2.04	52	1.24	0	3.28	.535	.802		\$693	60123	6.23	\$373	\$405	\$0	\$1,471	\$817	.25	\$1.00	\$36	\$231	\$265	\$1,350	
1981	24336	85	2.07	50	1.22	0	3.29	.535	.802		\$740	63123	7.13	\$441	\$384	\$6	\$1,565	\$910	.25	\$1.00	\$103	\$331	\$227	\$1,571	
1982	24677	85	2.10	56	1.37	0	3.47	.535	.802		\$727	65123	7.35	\$471	\$352	\$0	\$1,550	\$838	.25	\$1.00	\$116	\$357	\$229	\$1,539	
1983	25022	85	2.13	62	1.54	0	3.67	.668	.802		\$865	66123	7.52	\$491	\$527	\$0	\$1,883	\$866	.25	\$1.00	\$95	\$344	\$303	\$1,608	
1984	25372	85	2.16	68	1.73	0	3.89	.668	.802		\$906	69123	7.92	\$532	\$716	\$0	\$2,154	\$1,099	.25	\$1.33	\$140	\$497	\$418	\$2,154	
1985	25728	85	2.19	55	1.41	0	3.60	.735	1.029		\$1,080	71250	8.42	\$600	\$689	\$0	\$2,369	\$990	.55	\$1.33	\$243	\$867	\$269	\$2,369	
1986	26088	85	2.22	59	1.54	0	3.76	.735	1.029		\$1,122	74520	8.76	\$653	\$1,088	\$0	\$2,863	\$1,545	.55	\$1.33	\$243	\$1,073	\$1	\$2,862	
1987	26453	85	2.25	59	1.57	0	3.82	.735	1.029		\$1,139	76820	9.09	\$698	\$765	\$0	\$2,603	\$1,682	.55	\$1.33	\$243	\$754	\$0	\$2,679	
1988	26823	85	2.28	59	1.57	0	3.85	.735	1.029		\$1,150	82103	9.22	\$757	\$692	\$0	\$2,599	\$1,664	.55	\$1.33	\$243	\$734	\$0	\$2,641	
1989	27199	85	2.31	34	.94	0	3.25	.802	1.029		\$1,337	86204	9.44	\$814	\$315	\$1	\$2,466	\$1,529	.55	\$1.33	\$243	\$690	\$3	\$2,465	
1990	27580	85	2.34	39	1.09	0	3.43	.802	1.029		\$1,461	90123	10.16	\$916	\$331	\$26	\$2,707	\$1,752	.55	\$1.43	\$254	\$675	\$0	\$2,681	
1991	27966	85	2.38	58	1.62	0	4.00	.936	1.07	\$0	\$1,593	91530	10.34	\$946	\$382	\$25	\$2,921	\$1,947	.55	\$1.50	\$301	\$648	\$0	\$2,896	
1992	28357	86	2.43	76	2.17	0	4.60	.961	1.07	\$0	\$1,627	92990	10.53	\$979	\$342	-\$60	\$2,948	\$1,988	.64	\$1.57	\$367	\$653	\$0	\$3,008	
1993	28754	87	2.49	75	2.16	0	4.65	1.07	1.07	\$0	\$1,816	1589326	.75	\$1,192	\$352	\$2	\$3,360	\$2,100	1.01	\$1.65	\$609	\$558	\$91	\$3,358	
1994	29157	87	2.55	82	2.38	.4	4.93	1.14	1.07	\$80	\$2,067	1678263	.75	\$1,259	\$362	\$48	\$3,688	\$2,273	1.02	\$1.65	\$614	\$555	\$198	\$3,640	
1995	29565	88	2.61	130	3.83	2.1	6.44	1.308294	1.07	\$0	\$2,848	1728611	.75	\$1,296	\$373	\$0	\$4,518	\$2,388	2.6	(\$1.03)	\$973	\$550	\$20	\$607	\$4,518
1996	29982	89	2.64	131	3.86	2.4	6.50	1.373242	1.07	\$0	\$2,966	1780469	.75	\$1,335	\$385	\$0	\$4,686	\$2,543	2.66	\$1.05	\$1,024	\$520	\$45	\$599	\$4,686
1997	30139	90	2.71	128	-3.85	2.4	6.56	1.430000	1.07	\$0	\$3,068	1833883	.72	\$1,320	\$396	\$0	\$4,784	\$2,683	2.72	\$1.03	\$1,021	\$490	\$35	\$590	\$4,784
1998	30426	91	2.77	127	3.85	2.4	6.62	1.457033	1.07	\$0	\$3,130	1888960	.72	\$1,360	\$408	\$0	\$4,898	\$2,831	2.78	\$1.02	\$1,035	\$450	\$35	\$583	\$4,898
1999	30713	92	2.82	126	3.86	2.4	6.68	1.475138	1.07	\$0	\$3,180	1945567	.72	\$1,401	\$420	\$0	\$5,001	\$2,986	2.84	\$1.00	\$1,041	\$400	\$35	\$574	\$5,001
2000	31000	93	2.87	125	3.87	2.4	6.74	1.482924	1.09	\$0	\$3,236	2003934	.73	\$1,463	\$433	\$0	\$5,132	\$3,151	2.9	\$1.02	\$1,076	\$350	\$40	\$556	\$5,132
2001	31250	94	2.92	124	3.88	2.4	6.80	1.486898	1.11	\$0	\$3,288	2064052	.73	\$1,507	\$446	\$0	\$5,241	\$3,324	2.96	\$0.99	\$1,071	\$300	\$40	\$546	\$5,241
2002	31500	94	2.97	123	3.89	2.4	6.86	1.463344	1.12	\$0	\$3,291	2125973	.75	\$1,594	\$459	\$0	\$5,345	\$3,507	3.02	\$0.93	\$1,025	\$275	\$40	\$538	\$5,345
2003	31750	95	3.03	123	3.90	2.4	6.93	1.472274	1.13	\$0	\$3,346	2189753	.77	\$1,686	\$473	\$0	\$5,505	\$3,700	3.09	\$0.91	\$1,027	\$250	\$40	\$528	\$5,505
2004	32000	96	3.08	122	3.91	2.4	6.99	1.490926	1.14	\$0	\$3,409	2266394	.79	\$1,790	\$487	\$0	\$5,687	\$3,903	3.15	\$0.91	\$1,041	\$225	\$40	\$518	\$5,687
2005	32250	97	3.13	121	3.92	2.4	7.05	1.487233	1.16	\$0	\$3,453	2345718	.82	\$1,923	\$502	\$0	\$5,878	\$4,118	3.21	\$0.90	\$1,052	\$200	\$40	\$508	\$5,878
2006	32500	98	3.19	121	3.92	2.4	7.11	1.488259	1.18	\$0	\$3,504	2427818	.85	\$2,064	\$517	\$0	\$6,084	\$4,344	3.27	\$0.89	\$1,057	\$175	\$40	\$498	\$6,084
2007	32750	99	3.24	120	3.93	2.4	7.17	1.515339	1.19	\$0	\$3,581	2512792	.87	\$2,186	\$532	\$0	\$6,299	\$4,583	3.33	\$0.89	\$1,079	\$150	\$45	\$487	\$6,299
2008	33000	100	3.30	119	3.94	2.4	7.24	1.533669	1.21	\$0	\$3,663	2600740	.89	\$2,315	\$548	\$0	\$6,526	\$4,835	3.4	\$0.88	\$1,088	\$125	\$45	\$478	\$6,526
2009	33250	101	3.36	119	3.94	2.4	7.30	1.545713	1.23	\$0	\$3,732	2691766	.91	\$2,450	\$565	\$0	\$6,746	\$5,101	3.46	\$0.85	\$1,078	\$100	\$45	\$467	\$6,746
2010	33500	102	3.41	118	3.95	2.4	7.36	1.593068	1.25	\$0	\$3,852	2785977	.91	\$2,535	\$582	\$0	\$6,969	\$5,382	3.52	\$0.82	\$1,057	\$75	\$45	\$456	\$6,969
2011	33750	103	3.47	116	3.93	2.4	7.40	1.601343	1.27	\$0	\$3,905	2883487	.93	\$2,682	\$599	\$0	\$7,186	\$5,678	3.56	\$0.82	\$1,064	\$0	\$50	\$444	\$7,186
2012	34000	104	3.53	117	3.97	2.4	7.50	1.634776	1.29	\$0	\$4,031	2984409	.95	\$2,835	\$617	\$0	\$7,483	\$5,990	3.66	\$0.79	\$1,060	\$0	\$50	\$433	\$7,483
2013	34250	105	3.59	117	4.01	2.4	7.60	1.655464	1.31	\$0	\$4,139	3088863	.98	\$3,027	\$636	\$0	\$7,802	\$6,319	3.76	\$0.77	\$1,060	\$0	\$50	\$422	\$7,802
2014	34500	106	3.65	116	4.00	2.4	7.65	1.649711	1.34	\$0	\$4,193	3196973	1.03	\$3,293	\$655	\$0	\$8,141	\$6,667	3.81	\$0.76	\$1,064	\$0	\$50	\$410	\$8,141
2015	34750	107	3.71	115	3.99	2.4	7.70	1.684795	1.38	\$0	\$4,249	3308867	1.08	\$3,574	\$674	\$0	\$8,497	\$7,034	3.86	\$0.76	\$1,065	\$0	\$50	\$398	\$8,497
2016	35000	108	3.78	113	3.97	2.4	7.75	1.627958	1.41	\$0	\$4,305	3424677	1.13	\$3,870	\$695	\$0	\$8,869	\$7,420	3.91	\$0.76	\$1,090	\$0	\$50	\$359	\$8,869
2017	35250	109	3.84	112	3.96	2.4	7.80	1.612561	1.45	\$0	\$4,363	3544541	1.18	\$4,183	\$715	\$0	\$9,262	\$7,829	3.96	\$0.73	\$1,058	\$0	\$55	\$375	\$9,261
2018	35500	110	3.91	111	3.94	2.4	7.85	1.616450	1.47	\$0	\$4,423	3668600	1.23	\$4,512	\$737	\$0	\$9,671	\$8,259	4.01	\$0.72	\$1,051	\$0	\$55	\$362	\$9,672
2019	35750	111	3.97	110	3.93	2.4	7.90	1.575220	1.48	\$0	\$4,484	3797001	1.30	\$4,940	\$759	\$0	\$10,103	\$8,713	4.06	\$0.70	\$1,041	\$0	\$55	\$349	\$10,103
2020	36000	112	4.04	109	3.91	2.4	7.95	1.681161	1.51	\$0	\$4,626	3929896	1.31	\$5,148	\$782	\$0	\$10,556	\$9,193	4.11	\$0.68	\$1,027	\$0	\$55	\$336	\$10,556

(1995)

EXHIBIT 13c

ITEM	ASSUMPTION
INTEREST #	FOR BONDS
TERM YRS	30 YEARS
Assume Albany price #	.50 0
	.00 0
	3.00 3
	1.04 4

← Compute Alb. Rate To compare to EWS
← EWS Total Costs

TOWN OF BETHLEHEM WATER DIST. # 1
 RATE PROJECTIONS (ALBANY PURCHASE)

