

Senanus Public Meeting September 22, 1999

VB = Von Bishop

RB/CHR = Robert Bradbury, Capital Health Region

DL = Dennis **Loen, Loen** HydrogeologyMM = Michael **Magonnegal**

RR = Rick Reeve

VB: Lots of seats down front here. [crowd noise] There's still quite a few chairs in the front here. [crowd noise] Yes please, sorry, yeah Rick, sorry. [crowd noise] Good evening, my name is Von Bishop and I'm on the engineering staff, on the district of Central Saanich, and I'm the liaison between the Municipality and the Water Advisory Task Force, and I'm also looking after the Senanus water issue. Just a quick housekeeping measure [uh] the washrooms are to the, my right, on either side of the bar if you need to. The agenda for the evening was on the table at the back, and I would like to keep to that agenda if possible, so that we can all go home at a fairly reasonable hour tonight. The first part of the evening will be a presentation of the technical and advisory bodies that includes the Capital Health Region, Low and Hydro Geology, the Water Advisory Task Force, and myself. We are going to try and keep our presentations as brief as possible, five-ten minutes, and give you a quick summary of the different reports that were prepared. Now that will allow everyone who hasn't had a chance to read those studies to get the summary of it. After the technical portions I will invite questions and answers to those technical presentations, specifically about the technical issues. We'll try and answer any questions that people might have, after the presentation. Hopefully by nine o'clock, I would like to have an opportunity for public comments, and this will be a chance for people to air their personal opinion, and to talk about the various options that are available. We're hoping to hear from as many people as we can from as many different areas throughout the community as we can. At the moment, or to date, Council has heard an awful lot from the residents of the Tsanius Point area. They're the ones with the most pressing problems, and the ones who have been before Council. This is an opportunity for those beyond that particular geographic area to be able to hear the information and to present to Council, and the rest of the community how they feel about the issue, and how it might be resolved. And as I say, I'd like to try and finish as early as we can, and certainly I would again encourage everybody, in the public presentations to try and add new information, if possible, a lot of times we've been to public meetings where people will say they feel they want to speak and they will stand up, and say I support the last five speakers that have spoken. If you have something new to offer that really is more beneficial to us as a group so we can hopefully hear some diverse views. As for my part of it [uhm] the staff report that was prepared to Council, [ah] is available at the back as well, but it was mailed out to all of those people who happen to live right along Newton crossroad and Tsnanius, and I'll get into that, as to why they were mailed out to them specifically, but the staff report tries to deal with a number of issues. It had an appendices of all the reports written by the other people, and they will be presenting theirs in a few minutes, but it talks about some specific things that Council wanted some information on. One of them was the specified area or local improvement, and that was one option, that if a water solution was to be, the solution was to be a water main, how would that be implemented? And staff was asked to look at the cost of that, and how cost would be assessed against those communities that would benefit. And again that was not an option that was chosen, it was just so that as much information as possible would be available for everybody. As the report says, a specified area or local

improvement is to be initiated by the community, by the people who would be affected by it and there has to be a two-thirds of those people have to vote in favour of it and have at least fifty percent of the assessed value of all of those properties. And so that's a fairly large endorsement required by the community. The cost of a water main is estimated at \$850,000.00. That's a fairly conservative estimate. It should be less than that but it has to be conservative at this point because there's no design again it's just done on a purely preliminary basis. The report identifies that if a water line was put in, the parcel cost for all of those properties that would benefit would be \$13,000.00, \$13,200.00 or spread over fifteen years would be about \$1390.00. An alternative way of paying for a water system would be by assessment where everybody who is assessed at different values pays different values, based on their assessment. And if it was done that way it would vary, anywhere from \$28.00 per \$1000.00 assessment, or sorry, it would be at \$28.32 per \$1000.00 per assessment so everybody's individual cost would vary. There is a table attached to my report and a copy of it in the back on the board that illustrates that more clearly so that everybody would see if they would be in that specified area how it would affect them. Council also asked for information on grants. There is a provincial government program at the moment for grants on infrastructure for either 25% or 50% depending on the severity of the problem that's being resolved. We have no indication from the provincial government on whether an application would be successful so other than that, that's really all we can say on that at the moment, that the program exists and that there are funds available. As an aside, the district did apply for an upgrading for one of our pump stations and we still haven't heard. We applied back in November last year and we still haven't heard yet. The Council also asked for a report on the planning implications and what would happen if a water main were to be a solution for the problem. And the report highlights that under the official community plan, that area is to experience limited growth, very small number of lots are expected to be created in addition to those that are already there. The water line may or may not facilitate those lots going ahead and could also, possibly be used to help agriculture. Under the land use by-law, the impact of a waterline is neutral, there used to be under the land use by-law, an ability under a particular zone, RE3, to be sub-divided to a smaller size if there was a water main available. That provision in the land use by-law was revised this year and so the RE3 Lot has certain size whether or not there's water available. So a waterline in and of itself would be neutral under that it may encourage people to try and rezone to different use but as it stands now it would be neutral. That's the essence of my particular report to the Council and as I say, the other reports that were prepared were by the Capital Health Region, by Dennis **Loen**, from **Loen** Hydrogeology, and from the Water Advisory Task Force. And I'll as Robert Bradbury from the Capital Health Region to briefly summarize the CHR reports. Robert is the Chief Environmental Health Officer for the Capital Health Region.

RB/CHR: Thanks Von. Is it all right if I remain seated? Is that going to offend anybody, errr? It's okay in the last day of summer to do that? All right. With me tonight from the Capital Health Region is Mr. Ming Chung Yang. Mr. Yang is our Environmental Health Officer for the Central Saanich area and he is seated over here on my right. Mr. Yang has a Masters of Science degree, and has significant experience with water quality issues and he has been involved extensively in both reports in the sampling episodes. Unable to attend this meeting tonight is our Engineer Mr. Murray Sexton. Mr. Sexton lives in the Nanimo Region and is the Public Health Engineer serving the Capital Regional District, Central Vancouver Island and Upper Vancouver Island Health Regions. He has however submitted a report dated July

7, 1999 which has been submitted to Council by us. That report should be available and in that report Mr. Sexton has some comments and recommendations. As pointed out in our original report to the Central Saanich Council, no specific regulation currently exists with respect to individual well systems within British Columbia. The terms of reference that we use with the studies that we have undertaken to date reference the Guidelines for Canadian Drinking Water Quality, the 6th edition, 1996 prepared by Health Canada. And this guideline is basically a compilation of recommended limits for substances and conditions that affect quality of drinking water and as the quote says are "...intended to apply to all drinking water supplies, public and private". This is the document right here. Uh, I think that Ming has one available and if anyone would like to have a look at it during the evening, feel free to come on up. I just want to make sure that I take it home with me when I do leave. What we have to date are two sampling episodes, taken at different times of the year and the data sets represent two snapshots in time showing the ground water quality. The data sets are indeed different but not contradictory. Neither data set disputes or discounts the other. The data sets support the concept that there is changing underground aquifer in the Senanus Drive area. One that is significantly introduced by precipitation and there's an excellent chart that Mr. **Loen** has prepared that shows the seasonal variation of that water table. There is a very pronounced affect on the aquifer relative to rainwater as evidenced by the pH tested. A pH of 6.8 to 7.2 is similar to the pH of rainwater and if you look at the data you'll see a lot of the pHs in that range. The well data for a log at 617 Senanus demonstrates that ground water level fluctuation and that information is from 1996, October to June of 1999. So we do have a couple of years of data in there that shows us what that water table is doing. The total dissolved solids or TDS show the significance of dilution and if you look at the aquifer, you'll find that as the aquifer is drawn down, the chemical constituents increase so there is a fairly uh, significant influence on dilution, by dilution of the rainwater. We had a problem and a high level with our chromium levels. Chromium can be a problem when it combines with chlorine and goes to the **trivalent** state. This is when a carcinogen is formed. Chromium as it generally occurs in the water system is fine. It is a nutrient. But when we have to chlorinate a water system that's where we have the potential for some problems. Looking at the data and the information we have it would appear that there's very little mixing action in that aquifer. That's why you'll see the water quality vary with the seasons. One of the things that we found with the last sampling episode is that Mr. **Loen** took some pH readings on site and that's always good to do. We then sent those samples to the lab where they took some pH readings. So if you're looking at the data that's provided, Dennis did a table and if you look at 680 Senanus, it'll show a pH of 7.2 that was taken on site and that was 8.26 in the laboratory. And at 651 Senanus we had a pH of 7.7 on site and that went to 8.21. So don't be alarmed that those numbers are significantly different because that's to be expected when we do work in the field with equipment that's not as good as what we have in the laboratory. I just want to point out that there is a difference in those results and if you do spot them, it's kind of to be expected. One of the things that was noted by our Public Engineer, Mr. Sexton, was that of the nine chemical analyses that were performed, this time around, only two of the sites previously sampled were resampled which does make it very difficult to compare the water quality. The observation well data as provided within the **Loen** report does indicate minimum water levels in October and maximum water levels in February as noted by our regional health engineer in his comments, "...the water quality is much poorer during late summer and early fall sampling. The poorest water quality is expected to occur in

October." Again this is corroborated by the **Loen** report uh, where Mr. **Loen** puts in his conclusions "It follows then that when aquifer water levels are high, the water quality is better and low water levels correspond to diminished quality. Then the poorest quality is expected in October and the best in February." So we've got some data that kind of represents the best and worse case scenarios of the data. The statement was made that water tested in May "is expected to be the average water quality as water levels are average at this time". I think that this might be somewhat presumptive and it is true of the water quality for that year but I'm not certain that it's true for the water quality over a period of years where we know that this particular aquifer is dependent on precipitation. So in years where we have more or less rainfall, I think that you'll see that that average may change. Umm, we've found that Mr. **Loen** and his report noted that the Capital Health Region collected 24 samples at the taps in the neighbourhood of Senanus on May 5th. Umm, which is not quite correct. We did collect 24 samples but in fact only two of those samples were at the tap and the others were collected outside the building and in many cases close to the well head. The things that we have found in both sampling episodes is there's no problem with fecal coliform organisms. We do not have any problems relating to nitrites or nitrates which would be the influence of man via agriculture, farming, or pesticides, or runoff from roads, etc. We certainly agree with the statement that Mr. **Loen** has made in the most recent report that there are no health concerns indicated for the Senanus Peninsula aquifer from our sampling program. This is very true for the sampling program that we just undertook. However we do not agree that this statement is representative of the changing aquifer that we see in the Senanus Drive region as evidenced by the original data that we provided to Council. There is still a health and safety concern over the quantity and quality of the water in this Senanus Drive area. Given the significant changes in the water quality data sampling episodes, one would anticipate the water quality to change in relation to, to the precipitation and the time of year and the sampling event when it occurred. I think we need to ask ourselves, 'Would further sampling data, make the issue more clear?' I think the answer is 'perhaps yes, and perhaps no'. What we would get is a third snapshot in time showing data collected on Day X, is it going to be meaningful at this point in time. I'm not sure it would because we have data at this end and we have data at that end and do we need more data that might fall in the middle. I'm not sure that we do. The recommendations that Mr. **Loen** has made in his report do not address any long-term solutions. We have looked at this issue uh, in terms of our original report, our last report and we believe that there is a long-term solution to this issue and the Health Protection Environmental Services of the Capital Regional District believes that the best long-term solution is the extension of the water line. That is corroborated by our original Public Health Engineer, Mr. Murray Sexton. Our main concern in this issue is the promulgation of public health and safety. That's our primary concern. Thank you.

[applause]

VB: Thanks, Robert. Uh, Dennis **Loen** is uh, a professional engineer and a professional geologist. Dennis was retained by Council and the Capital Health Region together. The Capital Health Region submitted their report in March of this year to Council and it raised some questions particularly by the Water Advisory Task Force. They questioned whether or not the sampling was rigid enough to determine whether or not the problems occurred within the original houses or not or within the aquifer itself, that means down within the bedrock water in the wells. And as a result it was decided to retain an independent consultant. Dennis was chosen, and asked to do the work. He sampled a number of wells on the Senanus

Drive area. He sampled 9 wells that in his professional opinion were representative of the ground water and he was asked to simply test that and to give us his considered opinion as to the quality of the water and what might be done about the quality issue. There was no question about quantity. So the scope of his work was quite limited and very factual. So in any event, Dennis, would you please present your report?

DL: Yes. Thanks, Von. The objective of my study was to determine the water quality of the Senanus Drive Aquifer and to recommend uh, remediation options if necessary. The method we used was to sample nine representative wells at the well head and uh, yes?

Audience: Would you mind using the microphone?

DL: Uh, yes.

VB: That helps to record it as well. And I'm going to ask during the public presentations as well that you use the microphone as well just so that we can get names and addresses and everybody has a chance to hear what people have to say. Thanks.

DL: We chose the representative wells by their arial distribution in the area, well depth, well yield, and sampling history to get a representative cross-section of wells, like we selected some wells because they were deeper wells, some wells because they were shallow wells, higher yielding wells, and lower yielding wells to get a good cross-section of wells that were in that area. And the red circles here show the houses that were sampled. The sampling methodology was uh, sample as close to the well as possible and uh, at an outside tap or right at the well head. We tried to avoid house plumbing and cisterns as much as possible. So we pumped the wells for as much as 15 minutes and as much as one hour to get a fresh water supply coming straight from the aquifer and not coming from storage. The results of our testing umm as showed in my report uh, show that according to the Guidelines for Canadian Drinking Water Quality, there's no concerns related to health. None were identified in the parameters that we tested. Some uh, aesthetic objectives from the Guidelines for Canadian Drinking Water Quality, were exceeded for some of the wells. Aesthetic objectives is for umm, certain parameters in the water may, may cause the water to be corrosive, deposit forming, or unpalatable. These are given a separate category because they are not a health concern but they are a concern. Uh, total dissolved solids, that is one measure of water quality uh, 4 out of 9 wells exceeded that parameter; turbidity, 1 of 9 wells exceeded that; aluminum, 1 out of 9 wells; iron, 2 out of 9 wells; manganese, 4 out of 9 wells; zinc, 1 of 9 wells. For all of the bacteriological testing done, no wells were found to be unacceptable. All of the bacterial, bacteriological results were acceptable. The conclusions were that no health concerns can be identified, were identified from this testing. The aesthetic objective concerns uh, can be treated with in-home treatment systems and previous bacteriological testing likely originate with uh, the bacteria likely originates in the home plumbing. If, if we find that we treat a bunch of wells at the well head and there's no bacteria but people are finding bacteria inside their house then that indicates that they may have a cistern or their house plumbing has bacteria in it. These results are, uh, we feel average of the water quality that you would get in these nine wells because it's water level was at it's average during the, that time of year when we did the testing. We have a monitoring well at 617 Senanus Drive and there's 2 years of water levels taken at that well and they show the peak of the water levels and the troughs and they show that water levels would be, would be average at the end of April or the beginning of May. We think this indicates we had an average quality that we sampled from these wells. Umm, as far as the recommendation goes we only had one in there and that is we noted one obvious, and say the initial or the cheapest option, and that was

the option for in-home treatment for the exceedences of aesthetic objectives. And that was the total of the, uh, my little report.

VB: Thank you, Dennis. The Water Advisory Task Force was formed by Council by asking the citizens of the community who had an interest in helping Council with water problems. The Task Force met, or has been meeting for about a year and one of the issues they were asked to resolve or to try to resolve was the Senanus Drive water problem. Umm, did a lot of work on it. Tried to get as much information as possible. There was a very detailed questionnaire sent out to the whole of Newton Valley and particularly used to look at the Senanus Drive area. The Water Advisory Task Force was not able to come up with a consensus as to the extent of the problem and the solutions that should be considered. There were in fact two reports prepared. I called them the Majority and Minority Report only because one of them was prepared by four members of the Task Force and the other of them was prepared by three members of the Task Force. There's, we've never classified them as the Majority as the big heavy one, and the other one not as valid. They've both been considered equally in reports to Council. So Michael **Magonnegal** is the current Chairman of the Water Advisory Task Force. He's going to speak about the report done as a Majority Report, what I've called the Majority Report, and Rick Reeve will be talking about the other report, Minority Report. Both are residents of the area. Michael lives on the Mount Newton slopes and Rick is a resident of Senanus Drive. So, Michael.

MM: Thank you Von. Umm, I'm going to go through two reports, uh, the interim report and the final report of the uh, Majority Report of the Water Advisory Task Force. But before I do, just a bit of introduction about the, uh, from my perspective on the Task Force. Umm, this as you all know has been a very controversial and political issue and seven of us were invited by the Council to sit on the Water Advisory Task Force. Part of the uh, agenda of setting up the Water Advisory Task Force was to deal with Senanus but also it was to begin to attempt to develop sort of new planning for the whole, for the whole of Central Saanich recognizing that water and the scarcity of water was a serious concern for everybody. So we all engaged in this in good faith and it has been a very long and uh, difficult, uh, process, uh, I might say. Uh, three members of the Majority Report are in the audience. Uh, Ed Carmack who lives on Mount Newton, and umm, Nevil Garner who also lives on Mount Newton, and a fourth member of the Majority, Peter **Kitterich** unfortunately is on holidays and cannot be here tonight. We all live along the routes. And in the beginning of the Water Advisory Task Force, one of the things we tried to do was come up with guiding principles of our own assessment of various problems. And we talked about things like full costs, making sure that uh, all of the alternatives were really, took into account the full costs and who got more of those costs, that were really sought to have efficiency in water uses was an important one, and to come up with integrated solutions. So we had sort of guiding principles for the Majority and these uh, principals were not always shared by, were not shared by everyone in the, umm, Task Force. After a year and many, many hundreds of hours, we produced an interim report, which is a very lengthy interim report, that really has one simple recommendation. And it was: "It is the recommendation of this report that additional information be gathered with respect to the chemical and bacteriological characteristics of the underlying aquifer through the random testing of at least eight wells by a professional hydrologist." Is that report, that's recommendation, the only recommendation we made to Council that led to Mr. **Loen**'s assessment and for the first time beginning to get facts on the aquifer rather than the previous, uh, umm, information that Mr. Loen, uh, Mr. Bradley was

talking about which is really facts about individual wells based on individual well systems. We also in that report, umm, looked at a hierarchy of solutions from individual to a community-based solution to a pipeline, or what, uhh, you'd call a regional, regionally-based solution. And then, umm, we provided alternatives as to what types of individual home umm, uh, options may be available depending on the nature of the problem. After the assessment by, uh, Mr. Loen came in and you've heard his conclusions on it, on the, uh, on the, uh, data which changed, really we have to remember this, which changed very dramatically the terms of the discussion a few months ago we were being told that there was chemical poisoning going on in Senanus, and I think that some people were saying we should shu-, I think it was Mr. Bradley, suggesting that they should be notified immediately and per-told not to drink the water. Umm, now the facts have, the nature of the data set has expanded. Our suggestion, our conclusions in the final report and recommendations to Council were as follows. Uh, "number one, a systematic problem of groundwater supply in the Senanus area has not been identified instead solutions to problems both quantity and quality can be provided on an individual basis. In this light Council may wish to provide individual home owners with technical design advice as to the nature of each individually designed solution." So this is not preferred as an interim solution saying that applying this solution to the problems that have been identified is actually in most cases, actually in all cases really, uh, a workable solution. Umm, and we will obviously discuss this after 9:00. Umm, second "it is anticipated this approach will solve the Senanus water issue in possibly every case." However at the end of a case by case household assessment where we actually look at solutions and Council facilitate people to , to, do their own, to, as Mr. uhh, uh, uh Loen has said, to do solve problems individually uh, then we should do assessment after that and this, at the end of the case by case assessment would be done, and this approach be reviewed based on the full and complete assessment of each residence. We are trying to base our recommendations as it's come forward. We talked about some future, tential directions in particular uh, investigating the more alternative community based water supply. Umm, just, I just want to add, umm let's, I just want to add that's a summary of our report. I'd just like to add a few things as to how we might consider understanding and making decisions about this. A pipeline assessment is by miles the most expensive option and it may not be solving the problem by bringing in new water when to a great extent the problem is uh, made, is uhh, individual wells. Umm and the individual solutions overall much more cost effective. We are not, the Task Force I stress, is trying to solve the problems and recognizing the implications we have for the future and trying to solve the problems that we have. Secondly, we are here at the, the, what is the urban/rural conflict. I mean there is no question. We are sitting right on the border of rural and urban choices. And if you look at an arial map, for example, of the Saanich Peninsula over many years, you'll see that gradual encroachment and expansion of umm, uhh, umm, suburban development. The infrastructure and we did in fact do a study of, of this, for the Task Force. Infrastructure and provision of infrastructure plays an important role in that expansion. We noticed as well that the OCP in the area, going back to the seventies and onwards talks about providing limited service in these areas because of population diffusion and the maintenance of the rural character. The definition of the rural zoning is limited infrastructure. So people who moved to this area, including all of us on the Task Force, comes. come knowing that the community decision, the community status quo is one of providing lesser than the normal residential level of service in order to be cost effective and in order to maintain the qual-, rural qual-, rural character of,

of, of the environment. And I think that it's important, and this is a discussion that we can have at that, that the, the, the, that we recognize that our decisions do have an impact. Do we want to choose innovative solutions that will both provide answers to problems at, uhh, an individual level, and on a cost effective basis and in the process look at the long-term character of this community. Clearly the most important rural and agriculturally based uhh, community on the Saanich Peninsula. Uhh, when we had our meeting before Council, the very next day, or that week the Peninsula News came out and I brought this because to me it is a classic snapshot of what we face on the Peninsula. On the one, one hand Senanus reports in quoting the Capital Health Region uh, as seems is their mandate supports the expansion of the pipeline. On the other side sceptor, or septic or sewer for North Saanich similar to Capital Health Region supporting an extension now of sewer. Water and sewer which is, which pro-, the perfect infrastructure for subdivision and in then middle, Trader Vic's in hot water where we have an, an uh, situation where the concern for the neighborhood, the concern for quality of life, the concern for uh bi-, uh, bidding by rules and regulations uh, seems uh, not to be uh much in evidence. So I think that is the perfect snapshot of what we face here. In this light, I think it's very important in our, and our report has done this, to begin to, uh, to be open to discussing alternatives. We are a very privileged and fortunate community in the number one place to live on this place, planet. And if we cannot consider alternatives in a rational fashion then I don't know who can. There's a very serious concern for a long-term supply of water in the capital regional district, uh, umm, uh, changes in, in umm, climate and so on. It's very important that we develop infrastructure that is umm, umm efficient. So we have a lot of sense of that discussion in our report. Umm, and on that, uh, just out of interest, there's uh, umm, uh a little brochure here 'Smart Development and Storm Water Management'. Uh, something uhh, a meeting is happening in Sechelt on the Sunshine Coast. There is a sweeping movement in North America to what is called 'Smart Growth' and there's lots of municipalities that are taking that lead. We suggest that it's, this is a classic case where if you consider the alternatives and there has really been very little discussion on alternatives, it's either a pipeline or there isn't a pipeline, rather than that there are a lot of solutions out there that we have not rationally discussed as a community that we need to uh, that we should pay attention to those. Uh and I should, point out that the infrastructure grant that uh, is mentioned by Von and that people have been talking about stresses in several places that infrastructure grants will be preferred where the uhh, uhh, projects that encourages the adoption of water conservation practices and the management of on-site water management systems. There's a whole range of preferences in here for communities and municipalities that really do develop new infrastructure not simply an extension of old forms of infrastructure. So in conclusion, the Task Force's Report which has provoked controversy, is we feel based, on the best evidence that we have now been able to attain as a result of the deliber- request of the Task Force. That there are interesting solutions, cost-effective solutions out there that meet commu-, individual needs and community needs and that a part of that, we should move from this into a much larger discussion about how we as a community can be at the leading edge of uh, uh, rural urban planning that both meets the needs of residents in residential areas and also protects the rural characteristics of this uh, uh, wonderful municipality. Thank you.

VB: Thank you Michael. As I say, Rick Reeve will be talking about the Minority Report prepared by the Water Advisory Task Force. Thank you, Rick.

RR: Thank you, Von. And thanks also for clarifying why we call it a Minority Report. Uh, I wanted to point out that in the very beginning, umm we felt that we were doing quite well as a group of 7 and uh, about a year after this, 3 of us felt very strongly that uh, umm, uhh, that the change of the direction of the Task force was not to our liking and, consid- in parallel with the original mandate and uh, so we decided to resign and we resigned out of protest and uh, to the Council, and we are on record as to why we did that, and uh, upon the urging of the Council, uh, they asked us to uh, take back our resignation so that we could at least produce a report. So, uh, 2 of the 3 decided to do that, which is why there are only 2 names on the report, but really it reflects the thoughts of 3, which is really only one less than 4. [laughter] I've been lecturing all day, I've been lecturing all day, there's the first four pages done. Umm, what I'd like to do is just to quickly summarize what, uh, the points that we came up with in the Minority Report. Uh and then I'd uh, like to take just a few minutes to address just a few issues relating to the quality water that was alluded to in Mr. **Loen's** report, address the quantity issues, uh the quantity analysis that was done in Mr. **Magonnegal's** report and then sit down and shut up. The approach that the 3 of us took for the Minority Rep-, Minority Report is that we first of all based our assessment of the degree of the problem on Senanus Drive from predominantly testimonial evidence directly from the residents and from that information things like when they have a party and there's more than 5 toilet flushes, uh, they have to wait for the rest of the weekend before they can get water, that kind of hard evidence. And from that we felt that about 14 residences, which is roughly two-thirds, were unable to get water equal to the amount that the Capital Region District or the Greater Victoria District feels is appropriate for a home which is 250 gallons a day. So based on that assumption that there was a quantity issue, we then went and looked at the various options that did in fact address the greater issue of what are some other options than just extending the pipeline. And I'll just very quickly run through them. Uh, rainwater storage, deeper wells, **decellination**, after all the point is surrounded on three sides with water, probably four sides if you consider underneath, uh recycled waste water, individual cisterns uh, for storage, uh either from a well or delivered from a truck, umm a community cistern that was large enough to supply all of the homes on the point but supplied wells and lastly the extension of the municipality pipeline. Umm the Report goes through each of the uh, options that I just discussed and we felt that under the unique character of Senanus Drive, or ultimately called Henderson Point, uh, some of these were impractical. Such as umm, rainwater storage, it doesn't rain all year long so in order to have water for extended periods of summer, you're going to have, to have a very, very large tank and some of the properties just aren't large enough to have that. Uh, deeper wells, again if you look at the, the map of the area, you'll see that we are surrounded by salt water enough and you will hit salt water. **Decellination** this is very expensive and it's plagued with problems with a lot of maintenance, we figured that was perhaps an expensive option. Recycled waste water, there are companies, even local companies that have technology that can do recycling waste water, but in order for waste water, recycled waste to be useful, you have to have water in the first place and as I said earlier, about two-thirds of the homes do not have enough water to recycle in the first place. That brought us down to two options that we thought were serious enough to consider so we looked at them more closely. One of them was the community cistern, which would have a large, several hundred thousand gallon tank, up near somewhere near the intersection of umm, here of the map, somewhere near the intersection of West Saanich and Mount Newton Cross Road. So it was high enough that it would provide gravity feed to the homes and

hopefully would have near enough good aquifer that would fill this. We looked at this and given the fact that, that umm, it's construction would have to conform to engineering standards, umm, summing up the known costs meant that this was roughly in the same ballpark as extending the pipeline. The unknown costs are who's going to provide the land, it's all private land umm, are there enough, is there enough water in the aquifer to drill two or three high volume wells that could provide the cistern. We don't know. Certainly it's not a long-term solution because the area is ringed with agricultural reserve and there are people right now who are waiting to uh, to increase the amount of umm, irrigation because perhaps they want to put in uh, wineries. I don't even want to use the word 'Trader Vic'. [laughter] The other issue which was strong, and I forgot to mention this in the beginning and it's a very strong umm, indication from the residents, that because they're isolated from the point of land that is very exposed and I agree that we agreed to live there. Nonetheless, we are not happy with the current fire protection, we would like to have more fire protection, better fire protection than we have from hydrants. Uh, having a cistern would work, gravity fed, it would have to be large because the fire officials indicate that you need lots of, many, many gallons, I think it's 800, per minute to adequately fight a fire. The large, a significant percentage of the cost of extending a pipeline, and in all the time that we were considering these alternatives, we had to bear in mind that there was a pipeline just done the road from Senanus Point that is connected to what we've been told is more than enough water to, uh, uh irrigate the entire, what we call the 'White Sector'. It is the Northwest component of Central Saanich [gap in tape] that does not have any water. So water supply is not a problem. Bearing that in mind, we realized that uh, construction people, uh that the majority, uh, the biggest percentage of the cost of putting down the pipeline is actually putting the pipeline under the ground from West Saanich Road towards the Point, the end of Senanus Road. So whether we put in a community pipeline or whether we put in a cistern, the costs would be the same in terms of, uh, digging up a very rocky terrain to put the pipe low enough in the ground so it wouldn't freeze. So we felt that when all of the dollars were in, the community cistern and the extended pipeline were very similar in cost and if you were being asked to invest in something what would you prefer? Something that might last 5 years or something that you know is going to last for a long time. So that was the recommendation that we made. In view of the fact that there seems to be sufficient room for interpretation, some say there is no qual- quality problem, some say there are. We think there is enough room for interpretation and our recommendation for Council was to go ahead and umm, let these residents, whether they do it with their own money or get some infrastructure grants to go ahead and get this extension done. Umm, we felt also, keeping our mind's eye on the official community plan, uh, there are some other factors involved here for example, one was a recommendation in **Magonnegal's** report to truck in water. A truck at best, can carry in a 3-4 week supply and if there's half of the homes needing trucked water uh, then we recommend that there be a truck delivery just about every day of the month. And that does not make sense if you think about a pipeline that stops 8 or 9 kilometres done the way and then if you bring the water from the pipeline to the homes by a truck, we can do better than that. In fact one of the things in the OCP is to reduce vehicular traffic. And, and that is inconsistent with bringing a diesel truck down a narrow road just about every day of the week. One of the comments that I want to make about quality on Mr. **Loen's** report is that I was relieved to find out that the aquifer was not contaminated

[end of Tape 1, Side A]

RR: [continued beginning of Tape 1, Side B]= some real data that did. Umm, some of the solutions that umm, you recommend are impractical. For example, using a Brita filter umm, it is, is certainly a very small volume solution and uh would not be sufficient if you were worried about some of these ions affecting your dishwasher for example. Umm, on the issue of water hardness, you've all, I am sure, heard of water softeners. These work using what's called an ion exchange and what it does is take every calcium ion, and calcium ions are responsible for hardness of water, every calcium ion that goes into your ion exchange means two sodium ions are, come out the other end. So it's a two for one swap. So you're not really removing anything, you're exchanging calcium for sodium. And umm, I felt, I don't know whether the data can support this, but I felt at the time when I looked at it, that there were some homes whose water quality, where the water was so hard that if you tried to solve it using a water softener, you would end up getting sodium levels that were too high. The second comment was, umm you say that aluminum and iron levels were associated with silt in the water and in fact this is true but to say that could be solved by filtering the water is speculation. Because I know that s-, the water analysis was done but samples that were analyzed were analyzed on the whole sample. In other words, the water analysts took the water and the silt and did the analysis and that's how they determined how much aluminum and how much iron was present. And as a result, you don't know how much iron and aluminum was present, was present from the silt or from the water. And until you know those two, you can't say that removing the silt will remove all of the aluminum or the iron. Uh, next the quantity issue from the Majority Report. The report says itself that the analysis is done from the well logs of the area. Well logs, as you probably know are, what the well driller reports when they hit water. And assumption in the report is made that those water volumes are accurate, they assume that they uh, that the well will run at that capacity all year long and that they will run at that capacity for eternity. Well, all of those assumptions are false. So if you're basing your analysis on false data I think that puts to great speculation uh the analysis itself. They say that there's no quantity problem and they're quoting, for example, simple math if say, you have 0.2 gallons per minute in a 24-hour period, you'll generate enough water for a household. Well, 0.2 gallons per minute is a very, very small amount and uh there are neighbours around us that have 10 times that flow according to their well logs and they still have uh shortages throughout the year. So the other problem is well pumps are not designed to run 24 hours a day and last for very long. One of the presentations that I don't think we'll hear from tonight is the cost. Uh, we have a 380 foot well, and our well pump is about 3 or \$4000.00 to replace and I would not want that to be running 24 hours a day. So what is a more realistic well volume in order to have year round supply of water and I would suggest at least 5 gallons a minute. And if you look at their results they, their analysis shows tat about, I think it's a third of the homes on the street have well volumes in excess of 5 gallons per minute. So I question their statement that there is not a quantity problem. The last thing that I wanted to say was, I wanted to ask a question directly to Mr. **Magonnegal**. Um, in your report, you make some references to recycled waste water. And that you say that there is a local company that has the technology to uh, recycle waste water. This company we know is called Hydroxel Systems, and as I said they're out by the airport. This is a local company. This is great news but at the end of one of the Water Advisory Task Force meetings, um, those of us that were there heard Mr. **Magonnegal** say that he has an investment interest in this company, owns stock, a block of shares, however he described it. Um, and it seems to me that that might just possibly buy us his assessment of the area and

perhaps even put himself into a conflict of interest so I would be interested to know if that is still the case. Thank you.

VB: Uh, Michael I'd, Rick I am sorry but I am going to censor you a little bit here. I was hoping that we wouldn't get into a mud-slinging match here or get into that sort of thing here. So I would ask Michael not necessarily to respond to that.

RR: Well, okay, I'll withdraw the question.

VB: What we're trying to do here, Rick, is present to the audience and to all of the residents, the information that we have gathered and that we have prepared and to have a reasonable and rational discussion back and forth over it so I don't want to get into, I was hoping not to get into picking things apart. I mean anybody's report, whether it's mine yours, anybody's, can always be picked apart and we will always find somebody who will find faults with it and I would prefer *not* to do that. What I'd really like to do is to know have questions asked of the technical presentations and the Advisory Boards specifically relating to those reports that were given or the information that's been given to you. For example, I summarized mine in about five or ten minutes that some people may have some questions about it and want some more clarification about it. So at this point I would ask if you have a specific question about one of the reports that was presented would you please come to the mike and address it to whichever person gave it and again I'd like to keep it just to those points. For the record would you please give your name and address as well.

Bolt: Yeah, Clarence Bolt, uh 1082 Newton Crossroad.

VB: Thanks Mr. Bolt:

Bolt: Just, uh, the report mentions the 6, uh or an 8" pipeline to Senanus and then a 6" pipeline=

VB: =yes=

Bolt: =what capacity are uh, you looking at in terms of population levels that can be met and uh, obviously agriculture is an issue there too. So what are you dealing with? Why that size as opposed to a 2" or 4"? I'm just curious as to what, uh information. I'd just like to know what the difference is.

VB: That's a good question. The line was sized to provide residential flows and a bare minimum fire flow. Between 500 and 800 gallons a minute sustain flow for a fire anywhere along that line. This would be the bare minimum that we would recommend to be installed under good engineering practice. If, you were to try and provide water for agriculture you would have to increase the size of the new line and you would have to also increase the size of the line that runs along Mount Newton Crossroad from Saanichton from Wallace Drive all the way down past the school where it exists now. It's only an 8" line as well. So the line that is proposed at the moment is simply an extension of that system for residential and fire flow purposes. So, if that water main were to be approved we, as staff would take it forward a recommendation to Council to at least consider upgrading that for agricultural purposes and to pay the increased cost for it. But yet again that would be uh, uh, a secondary step well after a lot of other things had taken place. Have I answered your question?

Bolt: No you haven't.

VB: I'm sorry.

Bolt: My question was, what population would serve=

VB: =ohp, I'm sorry, population. The existing population could be served quite readily.

Residential flow is really quite small by comparison to fire flow so my concern would be the fire flows. But I can't give you off the top of my head what would be a residential number but at least probably twice the amount of people that are there now could easily be supported

by that from the residential point and still have a fire flow capability. Fire flow capability is always the governing thing in a water main system design. Are there any other questions of a technical nature? I've got one fellow coming here and=

Hayden: Yes uhh, John Hayden. 601 and 605 Senanus. Uh, you took water samples from our property. Now, uh, I was told that you let the water run, Dr. **Loen** is it?

DL: Mr., Mr. **Loen**.

Hayden: Mr. **Loen**. Uh, the problem is first of all at any source you get is coming out of a cistern that is 2 or 3000 gallons. It's had a chance to settle out, number 1. Number 2, the water you've gotten has been mitigated through a water softener. Number 3, it has been mitigated under a UV system to kill bacteria. How can you say we can mitigate our water? I mean much more mitigation can we do?

VB: Dennis, can you? Do you know about that particular well, whether you tested it right at the well head or whether it was through the system?

DL: I don't know of any well that we tested that had any kind of treatment. We went, we went to the cistern to get the water but we went, we went to where the water came into the cistern from the well. We didn't, uh I think there might have been one well that we tested from the cistern 'cause there was no other way to test it but all the others were uh before the cistern, and before any kind of treatment.

Hayden: Are you sure of that?

DL: Umm, as sure as I can be. We went to the pump house and we asked the owners of the property if, 'does this outside tap go through any treatment?' and we were assured that we were getting water from as close to the well as possible.

Hayden: Okay. Well, I'm just saying that there's a chance that you didn't uh, it's a very, very good chance=

DL: =is that at one property that you're talking about?

Hayden: Yes. 601 Senanus. And we have, an in-ground, basically a septic tank. We have a very low water flow and it has to go into a septic tank and from there uh, unless you went through a lot of blackberry bushes, which I didn't really see them disturbed, uh, you'd have to go through quite a bit of bramble to get to it, comes out of there, goes through the pump house, goes through a UV filter and goes out from there to the taps. And I assume it was taken from the taps. So it's gone through a UV filter to kill bacteria because we have water levels that are near septic fields. It's gone through a water softener and a through a filter and it's still reading pretty nasty high levels. So I don't, I don't personally feel that mitigation means much to me since we're already mitigating the hell out of the water as it is.

VB: Thank y=

DL: =yeah if that sample was treated before we got it that would mean that one of the samples isn't exactly what we thought it was. But it wouldn't change the conclusions of my report.

Hepburn: Uh, Dave Hepburn from 680 Mount Newton. A question for Mr. **Loen** on the TDS values here which exceed in 50% of the cases, the MAC. Do you, given that the commonest cause of TDS is sodium chloride, do you see, what's your prognosis with respect to draw down on the brackish pod of water that likely is encroaching on the aquifer now? Do you see this, in the future, I mean I can see that these point of view systems that may be useful now but 2 or 3 years from now what's the TDS's going to reflect with respect to the draw down through that pod?

DL: Yeah, I don't think that in 2 to 3 years, the water quality would change much from what it is now. I don't know, I don't see any evidence from historical sampling that it's going downhill

rapidly now or anything like that. These values that we got were similar to previous ones with respect to chloride and, chloride and alkalinity are actually the two big ones there in the TDS. Alkalinity is quite high as well as the chloride, the sodium and the chloride. And uh, I did look at some historical water testing data and I don't see any, uh, I don't see a definite trend that the water is getting a lot worse or faster. And, and the state that the water is in now may be a steady state. You know, it may have been getting worse as all new houses were drilled out from the area and more water was taken from the aquifer. But uh, it may well be a steady state condition that you've reached now with that system. And I don't have any evidence to say or any indication that the water quality is going to get worse over time than it is now. As long as the consumption stays the way it is and as long as the rainfall average, rainfall stays the same as we have now.

Hepburn: If there was an increase, do you see further encroachment on that uh, salt water? Is that what you feel the main component of the TDS is the salt water?

DL: The main component is alkalinity and the chloride yeah the mixing with the brackish waters in the aquifer. Those are the main ones.

Hepburn: Thanks.

Naught: My name is for Mr. **Loen** as well, or some of them.

VB: Could you give your name and address as well please sir?

Naught: Uh, it's Tony **Naught** 629 Senanus. Um, Mr. **Loen**, how do you feel about your results now that you've heard the um, uh now that you've heard the Ministry of Health, or the person from the Ministry of Health describe what he feels is uh, uh could affect the readings. You seem to rely very heavily on the readings that you took. Okay, which seems to be explained by the difference in rainfall. Now are you going to uh, are you in agreement for example uh that uh the aquifer and the water coming from the wells is largely result of rainfall?

DL: That's right. It's *all* the result of rainfall.

Naught: Okay=

DL: =not largely.

Naught: To m- okay, well there's a buffering affect, there's an immediate affect. I mean, well I shouldn't say that there's an immediate affect, a slower affect, one that occurs as a result of a longer period of time. We'll say, we'll say the predominantly 2, 3-5 months?

DL: All the water that got, all the fresh water that got in the aquifer came from rainwater=

Naught: =yeah=

DL: =originally=

Naught: =yeah, but=

DL: =some may have been in the ground longer than others, a longer period of time=

Naught: =precisely. And, and=

DL: =and water that has been in the ground for a longer period of time can have a higher mineralization because it has a higher mineralization because it absorbs minerals from the rocks=

Naught: =of course. And, and, and what we have umm, can you tell me the years that you have charted here, what years were those uh, the log years for?

DL: Yeah. The, the observation well has been in service since 1979 but I can see here, and that's from October '97 and we had data up to June of 1999.

Naught: Okay, so um, so, so uh, what is your understanding of what happened last fall and this spring with respect to uh, to uh, the water amounts of rainfall? Was this a heavy period or a normal period?

DL: I know that it was a record period per rainfall but it's not reflected in water levels in the area because the peak water levels in the aquifer in 1988 were higher than in the winter levels in 1999.

Naught: Just a minute. You just said that it was a direct result of water and we've just had a record rainfall and it doesn't affect it? Well, there's something missing here.

DL: That means that only a certain amount of the rainfall can get into the aquifer being the heavy rains are running off. That's my interpretation.

Naught: Well, it could also=

DL: =there's a limiting factor as to how much can get down into the=

Naught: =well, well, it's, okay this is true but the thing is, is that what we've experienced is, rainfall in the order of 522% on average uh as far as monthly averages are concerned increase over the summer months. In other words what we've got through the winter period, through the 5 months previously preceding the, the your test results, there was uh, if you took that and compared that to an average summer month, a month through that period, it is, there's uh, there were 522% more. Now, it would seem to me that we're probably not dealing on an average result with your tests, we're probably dealing on the hydrostatic head feeding that aquifer up in the higher, very much higher ends, so that the readings that you're getting are very much diluted.

DL: The um hydrograph that we have shows that uh the water levels are average in late April, early May and I put the average water level on the hydrograph here and the uh=

Naught: =could it be an error? Could you be in error here?

DL: Well, I don't take the water level readings=

Naught: =no, no, no, but I mean=

DL: =but I take the Ministry of Environment=

Naught: =well, you mean to say that on these particular aquifers out in Senanus that they're taking the readings? And, and=

DL: = the Ministry of Environment produced these readings.

Naught: And could there be an error? Could they be for example, relevant for some=

VB: =I'm not, I'm really, I really don't want to get into, I hate to cut you off=

Naught: =right, right=

VB: =but what I would like to do=

Naught: =okay=

VB: =Dennis' report deals with a specific time that he took the samples. We recognize already through Mr. RB/CHRbury's comments on their original testing that there are differences in the quality of the water throughout the time. I don't think that you're going to find a smoking gun one way or the other. You may be able to pick apart on specific instances but in general, um I don't want to as I say, get into a slug-fest over particular pieces of the report. Dennis is not here to defend every little bit of it=

Naught: =kay=

VB: =I don't, I really would like to move on with it and carry on with the meeting.

Naught: Oh, um. Treatment of downstream water. Are you, are you, is that when, is that your area of familiarity and expertise?

DL: I've worked with groundwater and water treatment for over 25 years.

Naught: So, so you, so you would consider yourself an expert in that area?

DL: Not in all aspects. An environmental engineer who's an expert in water treatment would know more about it than I do.

Naught: Would, do you know, for example whether chromium can be treated?

DL: Yes, yes I do.

Naught: Successfully?

DL: Yes, it can with ion exchange filtrate, a filter.

Naught: 'kay.

DL: I phoned the manufacturers of certain systems and they assured me that that can be done.

Naught: And that's good enough for you?

DL: Well, I read it in publications as well.

Naught: Oh, there's a publication that we have here that says it has, that says there is no commercial uh treatment for chromium.

VB: Well, again Mr. **Naught**=

DL: =again there wasn't any concern for chromium identified. So I'm not sure what point you're making.

Naught: Well it seems to me that the report uh is relying, Mr. **Magonnegal's** report is relying on very heavily on your information which would suggest that it doesn't matter what the problem is with water, it can be treated and uh, and uh, and uh I would beg to differ on that because I think that when you do something to the water, you affect it regardless of what the treatment and where the treatment. And uh, that it affects the water in another fashion. And uh, and uh, so therefore this business of treating water is only a, only uh, uh with, a marginal thing with respect to water qualities.

VB: We are straying sort of into the area of public opinion and your comments=

Naught: =he's an expert he just told us=

VB: =well=

Magonnegal: =well, I'd like to make one comment on this=

Naught: =I'm addressing, I'm addressing=

VB: =yes=

Magonnegal: =you're looking for technical, this is supposed to be a technical discussion and I think=

Naught: =no I'm talking to Mr. **Loen**. I'm *not* talking to you, I don't think=

Audience: =yeah, we wanna hear.

VB: Mr. **Naught**, I'm sorry but you're really not. If we can keep to a specific question you certainly able to ask questions if we're going somewhere with it but I don't want to get in to a detailed bit by bit tearing something apart. Um=

Naught: =why? I mean=

VB: =because=

Naught: =I'm asking=

VB: =because=

Naught: =*this is our only chance to talk to this man who has made a report that influences our lives.*

VB: Yeah but, it doesn't directly influence your life to the extent that everything is going to hinge on his report. It's merely one bit of information and we've got lots of information back and forth=

Naught: =well, I'm not=

VB: =other people are presenting as well=

Naught: =well, I disagree with you. Um=

VB: =can I ask, sorry. Can I ask you if there is a specific question that you wish to ask of Dennis specifically?

Naught: Well, I'll ask him another question.

VB: 'kay.

Naught: Is it a good policy to treat water on an intermittent, on an inter-, intermittent um methods? In other words, downstream treating of water after a cistern, okay where you're pumping on only on occasion, isn't it true that water treatment in that fact is less effective then if you're uh, uh, going to treat something that is moving on a continuous basis at a constant flow?

DL: When the water is being treated and moving through the treatment system, it is coming through at a constant flow. Yeah, I don't know what point you're making.

Naught: Well, it isn't really, well, it's puzzling=

DL: Most systems are, you know, with a fl-, a certain flow through them.

Naught: Yeah, but they start and they stop, they start and they stop. And that kind of a treatment is less than, less than effective then on a treatment system that is working on a constant basis.

DL: Yeah, I didn't compare treatment systems all I know that the treatment system, any treatment system that I recommended has been tried and proven effective over many years.

Magonnagal: would like to make a comment on that, on his discussion because I think that as Mr. **Loen** is being questioned, cross-examined as it were, it should be pointed out that Mr. **Loen**'s report is the first systematic assessment of the aquifer and that up until the time at which that was requested, the Council was being barraged with demands to make uh, uh, uh high levels of public expenditure based upon information from the taps. And the Capital Health Region uhs, testing methodology, which we supplied, we made an assessment of it, if we want to talk about a testing methodology, the testing methodology up until the time that Mr. **Loen** came in, was wholly inadequate. And Mr. **Loen**'s is the first systematic attempt=

Naught: =his results are greatly affected by the time of year.

VB: Okay, Mr. Teller.

Teller: Frank Teller, 630 Senanus Drive. I have a question for Mr. Bradbury. As I understand it, the Capital Health Region spent significant time and money over a long period of time investigating the water at multiple homes using professional engineers, professional people involved in water quality and they produced a report. In the report it states that "the residents should be advised not to continue to consume the water, or to use it for cooking purposes, or beverage preparation without proper treatment." Could Mr. Bradbury please tell us if that still stands?

RB/CHR: That uh. Thank you. That statement was correct and that recommendation came from our public health engineer, Mr. Sexton. That recommendation was discussed with our senior administrative staff in the medical health officer. Um, that recommendation was based on the water quality findings of the time. Clearly, when we look at different sampling episodes we get different results. Uh for example, this we do not have the chromium problems that we found in the first sampling episode. That does not mean to say that as the water quality changes and the aquifer decreases, that you're not going to encounter chromium again. So the answer to your question, based on the last or the most current sampling result, we would not put that letter out based on the chromium and some of the findings we have.

Teller: Are you suggesting that if you were to test that water today, this statement would again stand?

RB/CHR: We would certainly have to look at it. Uh, we know that we are going into period where we see decreased water quality. Uh I think that Mr. **Loen** has said that in his report and we know from the two snapshots in time that water quality is indeed different. And I would say that at this point in time if we did another sampling episode, we could be back at the same scenario, yes.

Teller: Mr. Bradbury, would you say that the Capital Health Region is an independent body? And that its results are unbiased?

RB/CHR: I would say that we would put forward at least five different suggested recommendations. One that we thought was the best long-term solution. We certainly didn't address the dollars and cents that needed to be done but we certainly recognize that that's a factor.

Teller: In the experience of Capital Health Region you're suggesting that the long term solution is an extension of the Municipal water service, is that correct?

RB/CHR: We suggested that in the first report, and we suggested that in the second report, and we suggested that tonight as corroborated by our regional public health engineer, yes.

Teller: Mr. Bradbury, is there any reason that members of this community should ignore you? And your report?

RB/CHR: Gee, I would hope not.

[laughter from audience]

Teller: Thank you.

[laughter and applause from audience]

Denford: Don't go away Mr. Bradbury. I just have one question for you. Um, in the event that uh=

VB: =could you give your name and address please?

Denford: Oh Gordon Denford. 617 Senanus Drive. The owner of the monitored well. I asked the Ministry of the Environment to do that so that we would it. The question is that in the event, likely, I hope, that there is an application made for an infrastructure grant to senior levels of government uh would the Capital Region Health people and yourself support that application?

RB/CHR: I have discussed that with our senior staff and the answer is yes we would.

Denford: Thank you very much.

RB/CHR: You're welcome.

VB: Are there any other questions of a technical nature before we move into a public comment? Yes?

Clayhart: Judd **Clayhart**, 1217 Mount Newton Crossroad. I'd like to ask a question concerning the aquifer. Now, the samples that have been taken have extended, as I understand it, throughout the little peninsula, mini-peninsula, if you wish, on Senanus Drive. That area, as we all know, is surrounded by salt water. The springs that feed that area, there's 3 springs apparently know as the **Hall** Springs, and I find there's another one called the Finnlayson Spring, and another one called the **Roslyn** Spring. That water may I ask, was that water thoroughly tested at its source? Now when I say its source, I don't mean it bubbles out of the ground and its immediate in the area but that particular source is clear of any infusion that might occur from salt surrounding the peninsula where the majority of the people who have well problems are located. And might I also state that I have discovered also that a

significant number of people, that of the 25 people that live in that peninsula, are connected to these springs so that they haven't real problems in the sense. The problems that are being discussed are the real problems of houses that are removed from the main area of, may I say, the aquifer. So, would you care to elaborate on that please? Thank you.

DL: If the question was, did we sample any springs, we didn't sample any springs uh, we just sampled the wells and the wells that are reported on in the report and we think there is an aquifer system, uh, uh a single aquifer system across the peninsula. The aquifer is fractured more in some places so you get better wells in some places than other places but it's all the same granitic bedrock underneath the whole area there and uh, it, it's one interconnected aquifer system as far as we can tell. Does that answer your question?

Clayhart: Not really. My question was, is there interference from the infusion from the salt water to those wells in the peninsula as opposed to the area higher up in the corner of Mount Newton and the West Road where these springs are? They are well established in the Water Rights Branch, they've been there for years.

DL: Um, beneath the wells that are drilled on the peninsula there is probably brackish water down below and uh, when, when, late in the summer when uh, the pumping waters are at their deepest, they're probably bringing in some brackish water from down below. Springs that are up in the corner there are probably less affected by intrusion. But the study that I did was not comprehensive enough to determine=

VB: =yes, Dennis was not asked to look at the area of West Saanich Road and Mount Newton=

DL: =yeah=

VB: =he was only asked to look at those wells on the Henderson Point area on Senanus Drive.

Clayhart: Some of the discussions which have come forth have quoted using those particular springs, if you wish the storage tank to service the rest of those people that have problems=

VB: =yes, that=

Clayhart: =and that on the other hand the recommendations made state a certain amount of water, an amount of water in the pipeline, the pipeline, and the pipeline. Three times.

VB: Well that=

Clayhart: =and yet you state that you hadn't looked into the sources on the corner of Mount Newton Crossroad and the West Saanich Road. That is the area where this clears, or shall we say is=

VB: =you're correct that we have never looked at that and that would be one solution that if it was to be investigated further, those wells or springs and that aquifer would have to be tested and looked at a lot more closely. Yes. You are correct. All of the work done at this moment has been done is down on Senanus Drive. Are there any other questions of a technical nature? Yes, Ming.

Ming: Yes. Just to answer the gentleman's question regarding is there any, any water intrusion, sea water intrusion, to those house down below. We think the, the Capital Health Region recommendation of Public Health Engineer. We did do a study on chlorides, chloride test. And then uh we did uh 5 houses there. The numbers 500, 560, 617, 629. Uh yeah we did, we did uh, chloride [inimize] No one did not show high concentration of chloride. So that's an indicates, uh, there is no CY in=

[unknown voice whispers 'Stan']

VB: Uh, those were up at the corner Ming or were they up at the point?

Ming: uh, number 500 was the=

VB: =that's on the point itself.

Ming: Yeah.

VB: That was 500 to uh 629=

Ming: =and before [inaudible] 500 [inaudible] is 115 chloride milligram per litre, and the seawater, it comes about 10000, no that a very high level. Even if intrusion, it would show. Yeah.

Unknown Man: We have readings at our place of 2000.

Ming: That's not chloride.

Unknown Man: Chloride, yes, chloride.

Ming: At 2000?

Unknown Man: Yes [paper noise]

VB: Well, I think that that's really an indication that when rain goes up and down there will be intrusion. So, yes I think we have established that there is intrusion the point at different times.

Ming: Maybe at different times=

VB: Anyway, um if there are no more questions of a technical nature I'd like to move onto the public comments and opinions part of the meeting. I know that there are a number of people on the Senanus Drive, excuse me Ming, Dennis, Ming could you guys talk about it quietly. [laughter] Thank you. I would like to move into the public opinion and comments part. I know that there are a number of people that live on Senanus Drive particularly who've been dealing with individual water problems over the years who wanted to have an opportunity to say again as they have done in different public bodies about their concerns and I appreciate that. But I also would remind you that we'd like to hear from other people as well who have opinions that I'm sure are just as valid so, I would ask again if you would come in an orderly fashion please to the microphone. Just give your name and address for the record and try and keep your comments as brief as you can in the interest of time. We are already up to 9:30 and I would like to move it along. Thank you sir.

Damguard: Thank you. My name is John **Damguard** and my wife and I live at 480 Senanus Drive. My wife and I have spent in excess of \$100,000 to supply potable water to our home at 480 Senanus. In 1978, we drilled our first well and it produced a good quality and supply of water sufficient to get a building permit. We began construction shortly thereafter and occupied the premises in October of 1980. We enjoyed this water source for nearly 2 years until we noticed a change in the taste and quality. Soon it became necessary to drill another well at a different location at our 1 and 1/3 acre property. Uh, this was a start for a search for good water that was terminated until a total of 5 wells were drilled, one to a depth of 800 feet. It was then that a kindly neighbour, a Mrs. Nora Newton, invited us to share her water which she thought was adequate for both of us. Uh, it soon proved her source was fairly inadequate for her needs, let alone hers. It was uh then that we took measures to split the plumbing system in our house utilizing our well water for sanitary purposes and the outside irrigation in our garden and then contracting with a company called '**Stancel** Water Services' to fill our two water tanks on a regular basis. And this went on for a number of years until the Greater Victoria Water District revoked Stancel's water license on sanitary grounds and put into action, their own water delivery system which continued to supply our household for several years. Uh during this 'truck period', I call it, the cost of delivery escalated nearly 300%. Then on January the second, 1990, the Greater Victoria Water District advised us of their intent to terminate the water deliveries. And the irony of it all was that their suggestion was to revert to the Stancel firm which they had all but put out of business alleging

dangerous contamination with these deliveries. It was then that an application was made to Central Saanich to drill a well on the municipal right of way and construct a private pipeline of nearly 0.8 of a kilometre running the full length of Senanus Drive. After about a year and a half we were given the go ahead to drill, and install the pipes necessary to bring the water to our house. The supply is low, about 2 gallons per hour but with care this has made a considerable change to the enjoyment of our home. This measure is really a stopgap until all the residents of our street have what the majority of the municipality already have. And I dare say that the people on the Majority Committee have no water problem. Uh, and that is a guaranteed supply of water commonly referred to as 'city water'. The Residents' association in our area has been working long and hard with presentation after presentation to Council, asking endorsement for an application for a provincial and at the beginning the Federal government, to consider our request for assistance similar to that given to the Ardmere residents for city water. The big difference here with the Senanus extension is that the third of the expense generally assumed by the municipality as in the Ardmere case, is the responsible, response, responsibility of the residents affected and *only* administered by the municipality. That was our original request. There are some residents in the area expressing concern that uncontrollable subdivision will be the outcome of supply of city water. I do not think that this is a factor any more than it was in the Ardmere project. Future subdivision is in the hands of both Council and the local homeowners. Public hearings would have to held, environmental impact studies must be done, in the same sort of factors that affect an applicant for subdivision now will still be in force, if and when water is finally brought to us. It is extremely difficult for my wife and I to understand why Council is reluctant to give support to our street and those on Mount Newton who want city water especially when there is little cost to the municipality in general. Uh, we need Council's help now so for goodness sakes let's get on with it. We have so many reports. I have an interesting one here which was only nine years ago which was written by the municipal engineer, Mr. **Mackie**. And this was to the Mayor and Council from him and he talks about the cost of bringing water down Senanus Drive. And it said, "Senanus Drive could be served with water by extending the 8" water main on Mount Newton Crossroad to West Saanich Road and then installing a 6" line west of West Saanich Road. Order of magnitude of work is approximately \$400,000." That was only nine years ago and we are in an economic time that hasn't changed a heck of a lot since then uh, we haven't had a lot of inflation. Interesting though how that's changed so much since now. Um you, we'd talked, one of the gentlemen talked at the head table about trucking water and I have a letter from the Greater Victoria Water Board some time ago dated in 1990 and it talked about their water deliveries and it just simply uh said that the district is getting out of the water delivery business and they sin-, sincerely regret their decision and uh hope that you can make other armang- arrangements to satisfy your water and that was then. Anyway I just wanted to share with the, the problems of somebody that has been fighting for water for 20 years. We're probably on the highest taxed street in the municipality and we think that we deserve consideration and that's all we're really asking for. We're not asking for anything for nothing. We're just asking for the opportunity to apply to the powers that be in the various governments for assistance. Thank you.

[applause]

VB: Thank you, Mr. **Damgaard**. [applause] If you would like to speak please move quickly to the mike and we will try to reduce dead air time. Thanks.

Tallis: Frank Tallis, 630 Senanus Drive. I'm also President of the Central Saanich Voters Association, an association that was formed directly as because of the problems the community had had and the instruction that the community had received from our local Mayor and Council. I liked to talk today on the impact of the residents and the costs associated on the water main solution. I'd also like to say that there are times that I am ashamed to be a member of this community. I'm ashamed when our elderly have to physically fetch and move heavy loads of water. And I must say that I can thank and congratulate the gas jockeys at the Peninsula Co-op for assisting them. I'm ashamed when the Mayor and Council refuse to support our community in a grant request for a water main extension. I'm ashamed when our Mayor says that he does not believe the residents along Senanus Mount Newton Drive are deserving of his support. I'm ashamed when our Council rates four-laning East Saanich Road, a project with little or no support in the community has a greater priority than many of the homes and families along Senanus and Mount Newton. I'm ashamed when our country supplies hundreds of dollars of aid to third world countries, money to which we all contribute, yet we reject the needs of our own community and people. I'm ashamed when we pay taxes towards the Greater Victoria water system and we are blocked from the use of our system for ourselves. I'm ashamed when the first rhyme we teach our children is "If it's brown, flush it down; if it's yellow wait till it's mellow". I'm ashamed when the people in our neighbourhood have insufficient water with which to conduct healthy hygiene. I'm ashamed when our community would turn out in force to prevent a tree from being cut down but it would ignore the plight of fellow men looking for water. I'm ashamed when our Council would spend thousands of dollars of our taxes on the needs of a single individual and reject an opportunity to help our community, even though there's no cost to the other taxpayers. I'm ashamed when we'd spend \$140,000.00 of our tax dollars on a Mount Newton pathway and yet not be prepared to spend a dime in providing much needed water along the same road. I'm ashamed when a group of individuals shanghais a Task Force and uses it for their own selfish, personal, and political wishes. I'm ashamed when our Mayor and Council would reject the findings of the Capital Health Region and accuse them of not being an independent body. When Moses was in the desert and needed water, the Lord granted his wish. Moses must be grateful that he did not have to deal with our Mayor and Council [laughter]. I'm ashamed when our Council, against our wishes, spends money on a useless study which had predetermined results. I'm ashamed when our Mayor and Council absolutely ignore comments made by our Capital Health Region. The statements are quite clear; we already talked about some of them. Capital Health Region also said that the ground water in the Senanus Drive area should not be considered potable. It is not palatable and should not be used for drinking water. They also said in the low quality of water also implies that there is insufficient water for fire protection. I'm ashamed that our Council will not give the residents a chance to lower their costs of living and remove the problems associated with maintenance of individual water systems. Based in the highest cost estimate of the three obtained, which was \$850,000, which comes from the same municipality that quoted 400 and something thousand just a few years ago, the monthly cost based on 15 years at 6.25 interest and issuing a 50 cent infrastructure grant would be 58 hundred dollars per home. The savings on household insurance and water system equipment repair in the same period would be \$73.00 per month. For an annual saving to each home of \$180.00 or 27 hundred dollars over 15 years. We cannot put a dollar figure on our improved health, the enjoyment of our homes and gardens, reduced fear of forest fire, and the freedom

not to worry about the next drop of water. Let's not be ashamed any more of our actions.

Let's get behind our neighbours and recognize their need.

[applause]

[End of Tape 1, side b]

Tape 2 [begins as audience participant is talking so no name]

No name: 532 Senanus. Uh, this is just a very brief version of our experience on Senanus. We bought our lot in 1960. We liked it when we saw it and we were the first to buy there when the subdivision occurred. We didn't have a thought of building immediately but we wait and after approximately 10 years decided that maybe we would begin building and so we began to inquire and realized that there was no water. And we talked to a couple neighbours and they said that they dug *wells*. And we automatically thought well nobody's crazy enough to dig a well, you know, we'll wait until water comes [laughter] so we waited [laughter]. And this was naive of me I know but we really hadn't had experience with wells. I did have 3 years experience during the Depression. Let's see, nin- 1931-1934, when we had an 8' well that my dad dug and uh, it wasn't a good system at all. So we um did finally find that there didn't appear to be water arriving so low and behold in about 1985, we decided to build anyway so we had a well dug, which was 540' deep and um, provides water that we don't drink. That was a little bit of a surprise to us that it wasn't potable, but we cope by going to the gas station and getting water there. We tried buying it, but it proved to be too expensive. Um, these are things, and we've had it thrown back to us from Council several times, that 'well you knew this stuff and you still moved there, didn't you?'. I agree with that and we were quite prepared to put up with it, uhm, so you, so the stuff stains your clothing, it uh you put it in the washer, you can't drink it, but you can get that and there's not enough to do things like grow gardens. We don't have any grass. My wife has I think, 6 flower pots, I think Irene? and sprinkles water on them and sometimes the plants die because of lack of water. Um and this isn't a sad story the sad part is to come. Um, something that happened about 7 or 8 years ago on the corner of West Saanich and Mount Newton Crossroad. That is 1 kilometre from our place exactly. We were coming home and noticed smoke billowing across the road so we turned into the closest house and Irene had the 911 call and we watched the fire department in action. There are a few people here who were also, also watching that scene and it was a pretty sad one. I won't go into detail but it was oh, half an hour before water started to get onto the building and we watched, and watched because the road was closed by this time and we couldn't get home and uh watched the building burn right to the ground except for the chimney. We thought that was pretty scary. We live a kilometre further from any water source. About 3 years ago, we had another incident of a similar sort. You all remember the um young people in a car. There were 7 of them and 4 of them died. That landed right in front of our place against the no parking sign. Um, I heard this noise in my sleep, it was about 2:00. And for some reason, I thought it was heavy machinery down near the water so I went to look, nothing there. That was on one side of the house. And then I went to the road and there were people screaming in the roadway and when I ran back I called the 911 and I said I think there's a fight going on or something and uh you better send the police. And uh, Irene said you better send the fire truck too. There are flames about 20' high too which there were. So we wanted to at least get the hose out and use this minimal water we have but of course the power was knocked out so we couldn't use the water cause you can't run the, the water supply when the water's off. And uh, anyway we were further shocked and uh the feeling about fire safety is the big thing for us. The fact that we can't

drink the water, that's not a big deal. The fact that there isn't very much of it, we're prepared not to grow things and not to, and be pretty careful having people in the house so that they don't go flushing the toilet too much. But this fire hazard thing is a pretty big thing with us. Thank you.

[applause]

Byer: My name is Mike Byer. I live at 500 Senanus. Uh, I'll just go through a brief thing as well. Uh, we purchased the property three and a half years ago fully realizing that there was a water problem but not until you actually live under these conditions does one realize what an amazing impact this problem has on your life. The situation is much worse than we ever dreamed of. We couldn't have flowers, or plants, which we found out, after spending \$4000.00 on landscaping. We were told that it wasn't that bad when we moved in but that wasn't the case. Not enough no- not enough water in what we have, is so corrosive that it actually burns the plants. Flowers will burn with the, with the water that we have down there. Showers, bath, dishwashing, laundry, etc. has to be spaced out so, so that we don't run out of water. If we run the water for 7 or 8 minutes in the summer, we are dry for 20 minutes. The winter used to be acceptable but after the wettest winter in history, we ran out of water on March the 7th, the 9th, and the 18th under normal usage and that's for two people, myself and my wife. The aquifer is definitely getting worse. Fire is a major, major concern. Up until we moved here we never had owned a fire extinguisher before I never had one. Now I own four scattered throughout the house. I don't think my hose running for 6 or 7 minutes before it dies out is much comfort. Neither is the fire department as its nearest fire hydrant is about 2 miles away. Maybe your pumper truck could tackle a small fire but anything major on that street and the whole neighbour could go up as it is heavily treed as we all know and I do believe we are all trying our best to save what remaining trees we have. As to the quality of the water it is worse, than the quantity. We've had to replace a new water tank which was new when we moved in, dishwasher as the corrosiveness eats them away. After a few months the inside of the dishwasher looks like its 20 years old. The plumbing fixtures take a serious beating and we can't keep anything clean with such hard, corrosive water. As a matter of fact I replaced my main bathroom about 6 months ago and in my 20 years of being a contractor I've never seen such disgusting pipes and valves as the one that came out of my house. As a plumber said, 'You shower in *this* ___'. After we moved in, in 1996 MB Labs tested our water that was shortly after we moved in 'cause we were concerned then. We were over the acceptable limit of arsenic, 5 times the acceptable limit of lead, plus other problems. Their comments were as follows "Arsenic continuous ingestion of high amounts is toxic. Sources of arsenic in water include industrial discharge, mineral dissolution, and insecticides. Lead. Lead is toxic and accumulates in body tissues. Lead may come from old lead pipes," which we don't have, "sauders or industrial discharges. Even small amounts can contribute to learning disability in children." These are not comforting thoughts as you step into the shower, wash your dishes, or brush your teeth. Our water kills plants and plumbing fixtures, and MB Labs says that this is not fit for human consumption. So I say, we have a very serious problem on Senanus Drive. If I sound bitter well, I'm not. I'm just very, very disappointed and concerned. After living in Saanich, and Calwood for most of my life, and tak-, taking such simple things as water quality and quantity, and proper fire protection for granted and moving to an extremely beautiful home in Central Saanich, I can't feel anything more than disappointed. I love the area, the people, the shopping and everything else about Central Saanich but I hate the water. It's driving me

crazy. It just absolutely disrupts your life. *It does.* Victoria and the islands are noted for its clean air and water. It's our God-given right as far as I'm concerned to have clean air and water. So, please help us in acquiring this right. I am directing this to Council. You seem to be standing in our way, instead of helping your people help us. I respectfully request that you Mr. Mayor, and members of Council allow us to be included in municipal water system. Also, future development should not be your concern right now as far as this issue is, is concerned. You should be concerned about your existing taxpayers. Please do not miss what the issue is, it is *water*, not development. I don't buy into the nimby approach of some misinformed people. There is very little development that could occur from the water going into Senanus and their many ways that Council can curtail any future development if you're worried about it which I know you are. And that's fair. I'm worried about it too. Remember that you Council are in development with various methods to deal with it. Concern yourselves about us. The water hungry, high tax paying citizen on Senanus. The time is right and the price will never be better. Don't wait for anew Council to do what this Council should be doing. That is doing not stalling. Thank you.

[applause]

Jones: I have just a short one. Umm, my name is Gladys Stanley Jones. I live at 535 Senanus Drive. We built our house and had our well drilled 30 years ago and the well was considered adequate and it tasted pure and it tested pure for drinking. At the time, we were told by a member of the Council that in 5 years we were sure to get water down Senanus Drive. After all the pipe was half way down Mount Newton Crossroad and it was str-, a straight run. We had enough water for the garden and the house although it curtailed, entailed a lot of dragging hoses around and had enough water to have a very good garden and flowers and vegetables. We tried laying sprinkler, um soaker hoses with filters but the water is so full of iron that a filter clogs in a matter of days when it is expected to last months. At the time we were very definitely out in the country and it was reasonable to expect to have a water supply from a well. Since 1969, there have been great changes in this area, a lot of growth and housing developments in every direction. All are supplied with water, a very essential thing taken for granted by most people. We have been supporting Central Saanich with our ever increasing taxes all these years but we have no more services now then we had when we first came and those services are almost nil. I don't think anyone who has lived with a shortage of water plus the worry of getting it polluted really knows what it is like. Maybe they have in a camping trip or something like that but this is every day. Hmm, from early in July to the end of October, in this area, and that's our driest period and the water is very, very short, I always have a pail in my, on my counter in the kitchen and during the summer months, it's a permanent part of my kitchen. Every time I run the tap to get hot water, I run the cold into the pail. I wash vegetables over the pail and any non-soapy water goes into it as well. When it's full I carry it out and decide which drooping plant or tree it's going to be put on. I use a distiller to make my drinking water and I lift and carry heavy jugs from it. I don't water anything if I'm doing a washing so as not to use too much at one time. I keep my shower to a minimum and every other household use. It's a lot of extra work and worry. Instead of appreciating and enjoying the lovely hot, dry weather such as we've just had, I'm looking out at my shriveling garden and wishing for rain. And then there's always the thought of the fire especially at this time of year. No way could it be stopped without a fire hydrant. The amount of water has decreased over the 30 years and the quality has deteriorated and I think

the time, this, it's the time the municipality did the right thing and provided a proper water supply to its older residents or at least not block the application for a grant. Thank you.

[applause]

Bolt: My name is Clarence Bolt, 1082 Mount Newton Crossroad. Um, there's another side to this whole issue. Uh, you're hearing from Senanus; there's the Mount Newton side as well and I think that uh, I'm sure that everybody in my neighbourhood, I haven't talked to everybody on this issue, shares the concern about the problems in Senanus. There certainly are people that uh anecdotally that I've spoken with, who have situations that I really wouldn't want to pit up with myself. Uh, we too have about 2 and a 1/2 gallons per minute. We water a lot of things by hand, we watch everything very carefully so it's not an issue that we're with 50 gallons uh a minute or whatever like that. Um, the, the real problem that I think has to be addressed is that the Senanus problem has to be dealt with however it is dealt with but putting in a pipeline is going to force the residents along Mount Newton to join into a system, if they subscribe to, that many of them don't want to get into. I'm ambivalent about whether I get hooked up. I like the idea of less insurance; I like the idea of a lot of pressure. I'm not sure that a pipeline is the right solution. What I am concerned about is that I am my neighbours, who are satisfied with our water system are going to be forced whether we like it or not, to pay into a system that we don't necessarily think that we need. There is a different water issue along Mount Newton. Uh whatever the solution to the problem is, there has to be a solution that takes into account the varying needs of the people along the line. Uh, and there are two distinct areas, the Mount Newton area and the Senanus area. Um and you're going to find that the residents in my neighbourhood particularly when they talk about water get very upset at the idea of feeling that they have to be forced in, by a specified area a system into a system that they do not want. The other danger is taking this route of a specified area system may find that the majority may not want it and we're still dealing with the problem then. And that doesn't solve the problem. There has to be a way of solving this problem that satisfies the people along Mount Newton as well as the people in Senanus.

Unknown person in crowd: Yes.

[Applause]

Arts-Martin: I'm been going to say, oh yes, thank you, Marilyn Claire **Arts-Martin**, Mount Newton Crossroad, 1217. We have the other, there are always two sides to every question. I am fortunate. I've got an excellent well and we don't have any problems. On the other hand if, if this goes through, do I have to go with you and do I have to pay for something I don't want?

VB: If a specified area was to be done, and if more than two thirds of the people in that area said yes and they're prepared to pay that, then yes those others who didn't vote for it, even though they are included, they would be included yes.

Arts-Martin: Well that's kind of a hard deal is it not?

VB: Yes.

Arts-Martin: And also I might add, Senanus isn't the only problem of fire areas. We are, we live with that magnificent slope up above us, uh running up from Thompson Place with 10 acre houses of terrific value and beautiful area. They have that fire problem too. So it's not just, uh, concentrated in one area. Thank you.

VB: Thank you.

K. Naught: Karen Naught, 629 Senanus. I feel like this should be turned around because I am addressing the public rather than the people at the head table here but, um uh, a couple of

things. First of all, anyone who is in the specified area is going to save money. They're going to save money on their insurance and that can be anywhere from 20% to 50% and perhaps more. They don't have to join the water system. They're going to pay something extra on their taxes and it's going to be available for fire protection for them as well as decreased costs but they don't have to hook on. So that's their option. And the other aspect is it, um is that's called democracy and being part of a municipality. We pay school taxes, I don't have any children in the local school system as we all do. So this is something that when you live in an incorporated area that you contribute to. Um, now as far as asking technical questions of the panel, I noted that the panel members are not completely independent and the biases of course in, to some degree are apparent and the answers weren't completely technical in nature. So I just wanted to make sure that the public understood that, that people are presenting from their points of view. They're not necessarily experts in their area. And the CRD certainly is an independent agency. I don't think that there is any suggestion that they're not independent. Um, I just wanted to say that our water samples, beyond the one that was done by Mr. **Loen**, have always tested very high in the negative areas. Uh, the one in particular is chromium. Now I knew that we had a huge problem. We had the problem with staining, we have the problem that we can't drink, or, or use the water for any purpose, for gardening because it destroys everything. When we first moved in my teenagers instinctively realized that the water was bad for their bodies and my daughter, teenage daughter when she came home she said, 'Oo, you know there's know way that I'm going to bathe in this. It leaves a scale on your skin' and as it turns out I learn about chromium after reading the CRD report that said it could possibly be carcinogenic. And I'm reminded of the movie that's just come out called 'Civil Action' where an entire town was poisoned and part of the poisoning was through skin absorption which was exactly what happens with the chromium in its carcinogenic state. And uh, it's a big lawsuit and if you've seen the movie, you know what happened with it. But it's a very, very serious problem and as I said, I didn't realize how serious a problem it was until CRD did the testing. So I'm now in a catch-22 uh situation where I can't use the water in its present state, I can't chlorinate it. Its got bacteria in it, so what do I do? I can't use the water for bathing and feel safe, safe and clean as well. Um our water also has high manganese and the CRD says that this creates biofouling of all the intakes and creates a great nuisance. It um creates that black precipitat which I'm sure that you've heard about tonight and seen pictures of um it also has, there's dangerous levels of sodium in many of the wells along Senanus. And that creates excessive sodium of course creates great health problems for certain people. Um, calcium doesn't cause health problems but causes encrustation of pipes and you've heard how all of us spend a great deal of money every year relacing all our pipes and pumps, etc. anything that comes in contact with our water source. Um, the bacteriological, um, uh results that were found by the CRD uh, stated that not one of the homes tested had acceptable results for all three sampling events. So and for us there was a high biological activity in the water source and that's I think the standard for all of Senanus Drive. The hardness causes excessive soap consumption and enc-, and encrustation scale deposits on the pipes and fixtures which in turn encourages the build up of biofilm and, and regrowth in pipes. The uh pH was found by the CRD to be, to be near the top of acceptable limits. The high pH encourages scale formation and decreases the efficiency of chlorine in disinfecting the water which we can't use anyway because of the high chromium content. So the effect of all of this, for us personally, and for most of the residents on Senanus, and for some of the residents on Mount Newton, and I

might add that we did a survey 2 years ago, and we surveyed, I believe it was 80% of the residents along the affected proposed route which includes Mount Newton and Senanus and 88% of the people supported applying for an infrastructure grant and paying their share of the um, of the cost of a, a proposed water line. But as you've heard from everyone else, the effect is that you can't drink or bathe in the water, feel clean and safe, stains household laundry, we can't water our plants, we can't grow a proper garden, um our insurance costs are 20 to 50% higher. We have a constant replacement of all of our pipes and pumps. Uh we can't clean anything in the house properly, everything streaks. So we don't want to be just a part of the 20th or the 21st century that's coming up, we want to be part of the 20th century as Mr. **Towler** said, water is one of the greatest issues facing the world today and uh we're contributing heavily to third world countries today trying to improve their water supplies. Well, let's do it right here.

[applause]

Tright: Thank you to members of the committee. **Van Tright** of 8277 Central Saanich Road.

Uh, as I sit here and listen to the input and the feedback and the information that's been provided by the members of the front table, I look at and take a look at this issue as two issues and one of them has two issues in it. Um the one issue uh on one side is, the residential issue. Um, and as Mr. **Volt** pointed out there is the need for the residents down in Senanus Drive, and I don't think that anybody in this room or anybody in this municipality is going to argue with or vote for having a water supply where it is uh at a level where it needs to be scrutinized to the degree that it has been by all the people up front here or it's limited by the volume. I think that, that's pretty much a given, [laughs] there's a, there's a uh, a problem here that needs to be resolved but there is the residents or the landowners on Mount Newton who are going to be affected by the solution that needs to be uh, uh brought to light and, and brought to, to, to create a system that is going to solu- uh, uh bring a solution for Senanus Drive. I don't think that if Council was looking at um a group of residents that came to them and said we've got \$850,000 and we want to build a park that you would have had near the problems, near the opposition, or near the time spent on making a decision whether that was something that Council wanted to do. So I would think that that needs to be looked at uh, the issue of the two residen-, uh residents areas. Personally, we, my brother and I own a piece of property on Mount Newton Crossroads that will have no benefit of this water line going down there. Our land is primarily agricultural land and that's all it is used for by us. We don't have the problems that the residents on Senanus Drive have and yet we would be in that area. So I think that's something that Council's going to need to look at. If I recall some of the comments made by the lady earlier that they moved there in 1960, maybe the reason why that the farmer that had it before hand subdivided it in 1960 before the LR came along was because he didn't have enough water. So I do think that it is time to do something to create a more even playing field for some of the residences. My second part of the issue here is my primary reason why I'm speaking this evening, is agriculture's need for water. In speaking with Von earlier and uh, uh a few weeks back, the sizing of the line down Mount Newton that's going to be the primary supply of the proposed line, is not sized for agriculture and yet there's agriculture all the way along and down Mount Newton. I fail to see, and I would hope that Council would take a long hard look at creating a policy whereby when that hole's open and there's a pipe being put in the ground, that that water supply system be sized sufficient so that agriculture will have a supply of water. If this uh forethought and thinking ahead of time had been in place there wouldn't be an 8" down

Mount Newton right now, there'd be a 12" there coming from the village. So I would greatly uh encourage and ask Council to take a look at creating a policy where, for a minimal cost, agriculture's needs are looked at as a standard policy for your engineering department to uh create a distribution system that I feel should be throughout this whole municipality. If we really are going to be a farming community and we wave that flag, well then let's put our actions where it needs to be and, and uh put in a system for water distribution in this municipality that supports not only its residents but its agriculture industry too. Thank you.

[applause]

Armiston: I'm Sandy Armiston and I live at 952 Mount Newton Crossroad and I'm up two doors from Clarence and most of my neighbours are very much in favour of water as we have problems with our wells. I remember years back when the wells were all on East Saanich Road and they wanted to put municipal water and everyone voted against it who had a good well [coughs] and uh, a farmer drilled a deep well and all the wells went dry and everyone changed their mind [laughter and applause].

VB: Surely we're not finished. Anyone else like to speak?

MacLean: I'm Mike MacLean at 936 Mount Newton Crossroad and um, I'd like to say that we welcome the idea of a water main going down Mount Newton to Senanus whole-heartedly. I bought the place about a little over two years ago. I've replaced 5 water heaters, 3 high pressure pumps, uh currently my deep well at 465' is gasping for water and that pump's only a year and a half old and I'm afraid that I'm going to lose it again at a cost of somewhere around \$4000.00. But, more importantly, I have a household with five children my wife and I, and uh my mother and father-in-law in the cottage, and uh I simply cannot endure the prospect of uh wells running dry. And uh currently our deep well is dry uh it's the one that's gasping. we're getting water from our lower well and uh, I uh feel like a man with one eye and I'm uh very protective of that that small lower well and I hope it uh holds long enough for that water main to get through. I would encourage you to do everything possible to see that this happens not just for Senanus Drive who need it desperately but for us who would like to have this comfort. Thank you.

[applause]

Denford: Gordon Denford, 617 Senanus Drive. Um, I was going to say a lot more but I'll do it, uh keep it very short because I don't want to repeat what other people have said. But it's more than thirty years ago when I acquired my property on Senanus Drive and it had a perfectly good well that had been drilled in 1964. It continued to supply good, clean potable water year round with no reservoir to the new home that I built there in 1971. A year or two after I sold 629 Senanus in 1989, the new owners started to experience both quality and quantity problems which have progressively become worse over, during the last few years. During 1990 to 1991, I built my new home on the property next door and drilled three wells. Each well functioned for two or three months with questionable quality water and we were obliged to abandon the first two of them. One of them is the one that was used by the Ministry of the Environment for their monitoring. After much testing of the third well, it was decided to install a large reservoir and treatment system so that we could at least use it for sanitary and bathing purposes. Our consultants doubted that it could ever be drinkable, drinkable without spending a great deal of money. I had been told by the Municipality in 1970 that a domestic water supply would likely be installed within ten years. Twenty years later I was told again that it was likely to be installed in the near future. During the past nine

years, I have replaced one well pump, one reservoir pump, two pressure tank pumps, seven water heaters, four sets of swim-spa heating elements, a complete spa filter system, and numerous shut-off valves, taps, and shower heads. All due to the corrosive properties of the water from the well. And some of these items are displayed from the back here. Course we all know the history of uh, uh, it's been four years I guess since we first wrote uh to the previous Council, who actually responded fairly quickly and uh produced a feasibility report and a recommendation that a water line be extended from Mount Newton and the costs as it has been pointed out had risen from 400,000 in 1990 to 800,000 at that time. I was disappointed that Council, it appeared to me uh had uh thrown a number of roadblocks in the way of a speedy resolution to the problem. Uh, the first one uh was the uh our quest to grant uh for a federal uh grant, infrastructure grant was not supported because of the notion that our water extension application would jeopardize the application that Council had already submitted which was to widen the chunk of East Saanich Road to four lanes. The affected residents had not been consulted, did not want it, and it was subsequently not approved and I doubt if it would have been approved anyway. And of course the second obstruction has been mentioned here tonight which is the development bogey and I think that this is the red herring that precipitated a staff report to the Council which horror of horrors said that the water main extension would create a potential ten additional two acre lots from four existing large properties. This card was played for some months until Council amended the land use by-law regulation in the R33 zone preventing this from happening so that has disappeared. To my knowledge none of the owners had any intention of subdividing anyway. The third obstruction was the formation, of what I consider to be, a poorly constructed Water Advisory Task Force. Uh, Mr. **Magonnegal** and Mr. **Kitrich** had been outspoken opponents of bringing potable water to the people of Senanus and two others were recruited with the same view and they embarked on a program which led to the mutual Chairman of the Task Force to resign in frustration. When Mr. **Magonnegal** became Chairman, the seven members were divided four to three and we now have a Minority Report and a Majority Report. And I would consider sir that to the statement that you made tonight was not a technical report but rather a political statement. In any event, these reports along with Mr. **Loen's** does no more than confirm that there is a quality problem and if each householder throws enough money at it, there's a possibility that it might be so, sold. It does not address quantity problems. But we knew all this back in 1995. I am, I uh would doubt very much if any of us, or if any modern community could support the kind of alternatives that have been suggested here tonight but the Water Advisory Task Force is a creature of Council and if it endorses Mr. **Magonnegal's** principles then the Council must and will be held accountable uh for any uh adverse uh circumstances that may result. So these delays have been uh costly. We've lost opportunities for Federal and Provincial grants and the costs uh construction cost estimates have been increased and four years is long enough. We know as much now as we knew at the start of this sorry episode of municipal relations. We will not give up until the matter is resolved to the satisfaction of the residents and their families who have endured this deficiency while paying some of the highest taxes in the community. Thank you.

[applause]

Carmack: Um, my name is Ed Carmack. I live at 900 Mount Newton Crossroad. Um, I kind of take exceptions to the allegations that uh four of us are some eco-warriors. Um, Nevil Garner is a farmer and has more common sense than any person I've ever met. Peter **Kitrich** who's not here is well-known energy economist and brings a lot of the cost responsibility

concepts to our group. Uh, I've worked in lakes, rivers, oceans, and creeks for about thirty years, not as an environmentalist, I've never laid down, made a road block or anything but I think I've worked in a responsible way and I think our, I'm just going to say this once, I think that we did work to carry out the charge that was laid upon us and that is to look at the water quality and quantity issue in Senanus and the alternative solutions. We all agree that a solution must be found. I'd like to answer um Clarence Bolt's first question and that is the number of people who would be served by an 8" pipeline and this brings about one of the really interesting points in that we had to grapple with and that is that most of the engineering solutions are for single problems. Um the quantity of water needed to service Senanus is not for the population it's to meet the fire regulations which are set by needs of urban high density flat suburban areas and that's the 1000 gallon or 800 gallons a minute number. If you take that number and translate that into the 500 gallons per day that are needed per day by an average household that comes put to 3000 households. So you see now the imbalance and some of the problems that we were trying to tackle. One of the suggestions in our group, that we felt uncomfortable with was that this trunk line down the middle of Mount Newton was not servicing other people within the white district, the area that's not serviced, and um, that \$800,000 was uh for, simply for a small part of the white population. It's my understanding that people up Alec Road and up um **Riley** have equally valid concerns for water supply and fire protection. So what are the answers. Well, we looked at trying to integrate fire protection and small pipes and pump storage so that uh for the same amount of water uh water storage could be pumped up the side of Mount Newton Crossroad. We talked to people in who are expert or fire prevention professionals in rural, in other rural areas, like the Gulf Islands. And it turns out that fire hydrants aren't necessarily the right solution for low density, uh rural settings. So when you try to put all this together, you truly are, you truly do run into problems and if we continually throw a, large amounts of money at single purpose solutions, we're not really not going to, uh maybe some people would like to move into the twentieth century, but I think that we are looking ahead to the, to the twenty first. Um, I partic-, I really got in on this because I had a, my valid concern or my concern in joining the Task Force was the health of the watershed and the creek. Uh, I was part of the group that started the Hagen Creek Project, and I also started the **Sakum** Creek Project and the Airport Creek Project which I run out the Institute of Ocean Sciences. The, if you look at a curve like that and you wonder why the 1998 and, which was the hottest record in the millenium and this past year which was a very, one of our wettest years, only filled the aquifer to the same point, it's because of what we've done within the aquifer. We've paved it and we've turned it into a fast track for storm drainage so water never gets a chance to get back into the aquifer. I would like to see if no matter what the solution of the Senanus problem is, we take a hard look at protecting the aquifer. The aquifer feeds the creek, without the aquifer there is no flow through Hagen Creek, there will be no fish. Why can't we take all of these things into consideration. I'm also still a little disappointed with the report of the Capital Health. I mean, mean not disappointed, I'm still confused. I, I'm hearing that the health issues are not a strong concern, but if they were measured at the right time, they would be, maybe. And, and as a scientist, I find this presumptive um and the statement that measuring for a third time would not necessarily would give good answers is contradictory to the fundamental law in geosciences that you never use two points to define a time series. So, I, I think it's time to put a lot of these hostilities aside and um, and the, the you know the accu-, accusations that

this is all political. It's not really, it's, it's a, these are honest efforts to solve the problems of our community.

[applause]

I've come to respond because I understand that Mr. Bradbury isn't in a position to defend his report but I'm reading from the July 21st, 1999 letter to Council where the Capital Health Region says "under present circumstances, area residents may continue to encounter poor water quality and quantity due to seasonal variations." And um later on they say "the utilization of an ongoing multiple water treatment approach is not cost effective and presents continuing maintenance issues and is not recommended. It is our opinion that the best long-term solution to the drinking water quality problems in the Senanus area is the extension of the municipal water service. Therefore we strongly recommend that Central Saanich Council pursue this avenue." And this was written by, well it's signed by Robert Bradbury but I believe he said earlier that it was Murray Sexton who actually prepared the report that accompanied this and he's the Regional Public Health Engineer and um out of Nanimo.

Towler: I too would like to make a comment about the previous speaker's comments. I believe we all have a=

VB: =Frank=

Towler: =Frank Towler=

VB: =yeah, I know but everybody has a bias or a concern about it=

Towler: =no I could=

VB: =I don't know if Ed said anything in particular. All he was doing was presenting his side=

Towler: =this is, this is just a comment=

VB: =his side of the Water Advisory Task Force. Well, okay. Let's try and=

Towler: =it's very brief=

VB: =well, let's not try and bash each other, please.

Towler: I'm not bashing you. I'm not bashing. Um, I wanted to make a comment that the people in the area where the water main would go, I believe they're all very environ mentally conscious and wish to maintain the environment as it is today. We're not interested in development. It's my understanding that the Hagen Creek waster is supplied from, a great deal of it is supplied from the aquifer and that during the summer months 50% of the water that flows into Hagen Creek comes from the aquifer. If we take people off the aquifer and put them on a water main we will be supporting more water in that creek.

[applause]

[laughter]

VB: Thank you very much um if there are no other public comments, I would tell you that there are forms available at the back that I've labeled a 'Comment Card'. If you would prefer to put down your comment cards and submit them to me, either give them to me tonight or mail or bring them into the hall, I will be collating along with the comments that were given tonight and presenting it to Council. Thank you very much for attending and I appreciate it.

[applause]