

CORRECTED VERSION

ENVIRONMENT AND NATURAL RESOURCES COMMITTEE

Inquiry into Melbourne's future water supply

Melbourne — 10 November 2008

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Witnesses

Mr S. Cannon, president,

Mr P. Gaynor, and

Mr N. Rankine, Watershed Victoria, and

Mr A. Vigners, chief executive officer, Clean Ocean Foundation.

The CHAIR — We will now hear from our witnesses from the Watershed Victoria and the Clean Ocean Foundation — so Anton Vigenser, Neil Rankine and Stephen Cannon.

Mr CANNON — Thank you very much to the inquiry for the opportunity to speak.

The CHAIR — Before we do that I need to go through a formal process once I find my paperwork, which Craig Ingram has stolen. Here we are.

Mr INGRAM — They have all been done.

The CHAIR — That has all been done anyway but we have Neil to come on board. You have already gone through the process of swearing in, so that is fine, please proceed.

Mr CANNON — Okay, thanks very much.

The CHAIR — We can give you about half an hour.

Overheads shown.

Mr CANNON — I am Stephen Cannon, president of Watershed Victoria. We are appreciative of the opportunity to come to the inquiry by virtue of your acceptance of a late request. I think you have the slides of my talk so since you have not seen that before — it has just helped you with taking notes.

The Victorian Water Forum including its members, Watershed included, is about sustainable water supply options. Public awareness of climate change has certainly ramped up in the last year, and it is important to understand what approach we need to take to water supply. Others have looked at it — the New South Wales Legislative Assembly. The key words in finding 1 are ‘integration’ and ‘closed water cycle’. Finding 3 says we need leadership in policy to drive the total water cycle policy.

What is it about? Traditionally water supply was a once-through system, and Melbourne’s was certainly that. It involves taking water from a dam, using it once and then disposing of it and we have had that luxury. By contrast, the objective of a closed water cycle is to reduce the net total loss of water from the system. Desalination will prolong the unsustainable once-through system for another half a century. We think that needs to be addressed by a sustainable water supply policy.

With desalination you have to ask, at what cost? We have just had the environment effects statement hearing. A lot of problems were identified with the desalination option. There were over 400 submissions from the public. The environment effects statement itself is some 1700 pages, so a lot of detail over the last three weeks. The problems — economic, environmental, social and also the scalability issue of this desalination plant. We build that, it is a big plant, 150 gegalitres. By its size it is going to shut out other options.

Professor Langford, when he was presenting to you the other day, spoke about the desirability of staged implementation of desalination or perhaps even smaller plants would be a better option. Neil Rankine has also spoken about this issue in his presentation earlier today.

Desalination as a PPP, yes, gives rise to business interests counter to the interests of we consumers. Dave Wingfield gave some comments on that. Often the PPP projects are written such that they contain conditions to protect the handsome profit that the PPP wants to make out of the project. They are looking for a secure, long-term investment, and it can tie up the opportunity for introducing other water supply measures and run counter to the interests of the consumers.

Economic costs: the government has put out \$3.1 billion. We do not know the detail behind that. Because it is a PPP, it does not get public scrutiny — claims of commercial in confidence interfere with that. The cost of the pipe is high due to the remote location. We think the \$3.1 billion — and there has been a lot of public comment about that — could well be \$5 billion or \$6 billion by the time it is built. It also involves high running costs. It is a very energy intensive process.

The environment damage — that occupied major attention at the EES hearing. We know it generates huge amounts of carbon dioxide, equivalent to over 300 000 extra cars on the road. Victoria is already in a bad situation. We are

30 per cent above our 1990 level. Bob Carr described desal as ‘bottled electricity’, and it is a pretty accurate comment.

On top of natural plant energy use, there is energy cost of piping from the remote location. The other environmental concern of course is 50 000 tonnes of toxic waste per year. It is still not decided where that is going to go. The EES made clear that the PPPs can offer alternatives, so they include consideration of dumping to landfill or indeed back to the ocean. Those options are not tied down yet. The effects are not known.

The plant site and pipe/power corridors are in scenic, coastal and farming environments with important marine parks and acknowledged flora and wildlife habitats. They are totally non-industrial. This desalination plant is counter to the planning zone.

Social damage. The minister and water supply authorities have just this last week acknowledged that household water rates will double in the next five years. Average household water bills will be up by at least \$500 a year. There is the likelihood of rises on top of that. There will be a flow-through effect. Those costs of water go onto businesses and commerce. That is another cost that is going to come back to the consumer.

We have spoken about the PPP implications and those running counter to our interests. The principal one I think is that it is likely to inhibit flexibility to adopt competing water sources in future or even reap the benefits if the drought situation, that we are really building the desal plan to deal with, abates. We are looking at 3-year figures, 10-year figures. I certainly believe climate change is an issue, and I accept that we could well need to augment Melbourne’s water supplies, but if we build it all in one big desal plant, we lose our flexibility.

To summarise, desalination is the wrong water option. It is a greenhouse gas blow-out, toxic waste generating, environmentally damaging, and it is very high in straight dollar terms. The plant site, the pipe and power line corridors involved with the Wonthaggi location are incompatible with industrialisation.

Doing desal is bad enough but doing it as a PPP just exacerbates the problems. It removes our flexibility for the future. Going back to what is sustainable water supply, it proliferates the once-through approach and shuts out sustainable option development in the future.

The recommendations: we ask you to expedite this inquiry with an interim report addressing the desalination plant issue. This inquiry is important, but due to the fact that you look like your final report will not be till the end of April there is a chance you will become a lame duck inquiry, and Melbourne cannot afford that.

We need to focus instead on sustainable, readily available alternatives that have been commented upon in the other presentations — sustainable, sustainable, sustainable. Thank you, I will hand over to the Clean Ocean Foundation. We will have a handout later regarding the final submission to the EES process, which goes fairly concisely into the huge amount of economic, social and environmental issues. It will save you sitting in there for three weeks. It is only reading about 50 pages. We could supply more if you would like.

Mr VIGENSER — Thank you for our opportunity to be here. The Clean Ocean Foundation, as a history, has always been at the end of the pipe. What we would like now is to see us becoming part of the full circle and being at the start of something brand new, as in purified recycled water. The case is there. As a state our plan at the moment is to have the desal and the north–south pipeline. The problem we face at the end of the pipeline is that these two options negate and basically shut out the chance to be sustainable in Victoria and to create a potable source. It is a lost opportunity to become sustainable.

As we see here — I know you have been down to the end of the pipe; but for those who have not been there — it is a pretty graphic place to be. I had a group of schoolchildren down there this morning, and they were like, ‘That is disgusting’, but unfortunately what it comes down to, in a political view, is a wasted resource.

Class A was first announced back in 2002 — \$170 million — and again and again until now it has gone up to \$322 million. Class A water is a good thing, but the demand is for potable water in Victoria. It is about time that we bite the bullet, jump out of the frying pan, get in the boil of purified recycled water and move on.

The case for purified recycled water — as we all know, south-east Queensland is already doing it. Other parts of the world are already doing it. We have principle support from other organisations, some of which have presented

to you guys as well that it is the right option to take. What it also comes down to is Victorians just turning on the tap and wanting water.

There are lots of well-known examples where recycled water is going in already as class A water. As we know, the Sugarloaf Reservoir is fed via class A water from Lilydale. In Sydney, Canberra and all through inland Australia there are areas where indirect potable reuse is already happening.

Desal versus water purification. Basically what I would like to point out here is that the purified recycled water option is deliverable within three years. It is not a long-term option at all. It is not, 'Oh, we can do this in the future. We can do this in 10 years'. It is doable right now. As you can see here, the benefits versus the desal plant are very obvious.

Melbourne fits the category to have purified recycled water. There is definitely the need for it. We will be producing class A water down at the eastern treatment plant. It is high quality water; it just takes that extra step to go that little bit further. We also have other options available. There are our aquifers, and the closeness of Cardinia for this water is right there. As you can see, our sources are available.

The main thing I would like to point out on this slide is it needs to be a priority, firstly, because of the piping. It is a lot closer; the cost is better. Shorter pipe means lower energy costs — it is all pretty simple. We do need this to be an advanced waste water treatment plant.

Basically we would be using the same as south-east Queensland — the seven-barrier process. We could drink the water after barrier five. This was straight out of the plant at barrier five. I could take a sip of it, and it would be safe. Those extra barriers — six and seven — are basically just a safeguard, to make people happy, to make people feel at ease that it is going through the natural process like it normally does now with our drinking water.

Once again it is definitely a real choice. Victorians should be very jealous of what Queensland has got going on up there. It is not just a north to south pipeline in Queensland. Queensland has pipelines being able to take water where they need it and when they want it. It is definitely an option up there that makes it very sustainable and flexible and scalable compared to what is the future plan for here.

Basically our recommendations are that we need to push past the class A to purified recycled water. It is not a big hurdle. It is doable within the two to three-year time frame, and it needs to be a priority right now. We do not need to keep putting it off. There is nothing to be scared of. We need to do it.

Mr WALSH — So, Anton, I take it from that you are suggesting that the eastern treatment plant water be all put back into the potable system.

Mr VIGENSER — That is correct, yes, through the Cardinia Reservoir or whatever means it needs to take.

Mr WALSH — Do you believe the population of Melbourne is ready for that psychologically?

Mr VIGENSER — I believe they are. What it comes down to is when people turn on the tap, they just want water to come out. In the future water is going to come out at a massive cost. There will be skyrocketing water bills. People do not want that. They just want to be able to turn on the tap and have water for them.

I know it seems that maybe in Toowoomba there was that scare campaign when people were like, 'We do not want to drink poo', but we can get past that. Melbourne is over that. We can do it. It is easy.

Mr GAYNOR — If I can I just add to that, I think Monash University answered that question as well, where they are doing research now to show the guilt factor in Toowoomba of not actually going ahead with the purification. It was not seen as an emergency then; it is seen as an emergency now. The attitude is changing. Victoria is exactly the same. We have the same opportunity as Queensland to get over the paranoia and actually provide leadership to the people and let them know why this should happen rather than allowing people to say, unfounded, why it should not happen. That is a leadership issue.

Mr CANNON — And if it needs education programs or information, that needs to accompany it as well.

Mr VIGENSER — As we know, the education program for the desal cost \$1.7 million — Steve Bracks getting around in his chopper. You could put that into education or into purified recycled water.

Mr WALSH — So you believe Shannon's Way could do a good job with that?

Mr VIGENSER — Yes.

Ms DUNCAN — That was not about desal.

Mr INGRAM — Thank you very much, gentlemen, and thanks for your presentation. I have been up there and looked at the south-east Queensland system and the seven-step process of proving that it is safe and all the rest of it. The unfortunate thing is we live in a political environment. Recently in Queensland the opposition has come out and said that if it gets elected it will not put the purified recycled water into the system. It is used as a political football.

At the last state election we had a very negative and irrational, unprofessional campaign saying that endocrine destructors would basically have babies being deformed in Gippsland if they were used in the power station. This is the environment we live in. How do you sell this and get away from the political reality that, if one of the major parties jumps out of the tent here, it will make the desal or the north-south campaigns look like Little League?

Mr VIGENSER — I am not a marketer, but it is in how you market it. You would use examples of overseas, use examples of south-east Queensland.

Mr INGRAM — It is not the marketing, it is the political reality that if one of the major political parties gets out of step on this and says, 'No way', and uses the emotional issue — —

Mr WALSH — Or an Independent.

Mr INGRAM — It could be an Independent.

Mr GAYNOR — I think it is time Victoria really started to look at the facts rather than the emotion. You have one choice which is going to put the equivalent in pollution of 300 000 cars on the road, it is going to cause toxic waste, it comes at an enormous environmental, social and economic cost versus another solution that only has a perception problem, at 45 per cent discount to achieve a solution for Victoria. One distribution site is 25 kilometres away from Cardinia; the other is 100 kilometres away. If you take out the emotion and compare the two solutions on the table, purified water wins every time. The desal plant fails every test that you could apply to it. I would have thought a government looking at social, economic and environment impacts would find that pretty easy to sell, based on the facts. It is a fact versus perception issue here.

Mr CANNON — Take out the emotion and take out the politics. We are talking to an all-party committee here. We would hope to have these issues heard on their merits, on the science, on the facts and give you the opportunity to all support it.

Mr INGRAM — I agree with that comment.

Mr CANNON — It is a good comment to draw out.

Mrs FYFFE — Staying with the issue of recycled water, this morning the *Australian* is running a story that says the federal agency for establishing national health has warned the Queensland government it should not proceed with its \$2.5 billion plan to recycle sewage and industrial waste for drinking water unless absolutely necessary. If that happened here, what other suggestions have you got for that water to be used sensibly in Victoria if it could not be done? I will pass over that article, because obviously you have not seen it.

Mr VIGENSER — I have not read that yet. Firstly, I would like to point out that the word 'sewage' is kind of emotive, so that needs to be taken out. But there are other options. Instead of using it for potable use, we could use it for environmental flows. There is of course the Yarra option there — the same as class A, but it can be better than that. There are options for aquifer recharge; there are options for industry; there are all sorts of options there.

Mr CANNON — Recycled water is not experimental; it is not new. There is a body of usage.

Mrs FYFFE — Yes, but we cannot disagree with that article there, because we do not know everything it is based on. What of the suggestion that the water from the eastern treatment plant be actually pumped up into yet-to-be-created wetlands and then pumped into the Yarra for environmental flow, which would mean that more water could be taken out of the Yarra prior to that water coming in and going up just before Yering Gorge? Would you think that was a sensible solution?

Mr VIGENSER — That would probably be the solution after having it for potable reuse drinking water.

Mr GAYNOR — If the facts were there clearly against purification of water, which we do not believe the facts are there — there are plenty of people who come out against it, but when you actually scratch beneath the surface, they do not have the required expertise to make those comments.

Mrs FYFFE — But that article is talking about the possibility of human error. It is saying the scientific area in the process may be fine, but it is human error.

Mr GAYNOR — So we are going to ban the sewerage water going to Sugarloaf tomorrow, are we? Are we going to take away all the recycled water that goes into our system as of tomorrow?

Mrs FYFFE — I am not arguing against it.

Mr GAYNOR — The reality is we are not. The facts need to be addressed here. Even if you did find the facts were against potable use of recycled water, even as class A water it would still remove the need for the desal plant if it was part of a basket of measures as we have indicated: stormwater harvesting, 150 gigalitres in its own right; aquifer management; and water conservation, getting some real targets and letting Victorians know they have to keep the belt tight rather than stealing water from northern Victoria.

These are measures as part of a basket, each of which takes the desal out of the equation, as it should be. What we are calling for is a halt on that all-or-nothing approach, enabling this committee, with the body of evidence that is available, to put up a basket of measures that provides that scalability and flexibility that as Victorians we all need. That is our principal argument, not whether it should be class A or potable, although we think the case for potable is extremely high. Even if it was not there, it is still a case to stop the desal plant and look at the basket of measures available.

Mrs PETROVICH — Thank you for your presentation, gentlemen. It was excellent. What environmental benefits would there be for the marine environment at Gunnamatta if this water was used for potable and industrial supply? And what pressure would this take off our potable water supply?

Mr VIGENSER — Firstly, the environmental benefits down at Gunnamatta would be immediately obvious. The main pollutant down there unfortunately is fresh water and that has totally stripped the marine environment, like going out to the forest right now in and chopping down all the trees. There is nothing left, as you all would have seen. The bull kelp has gone, Neptune's Necklace has gone, the habitat is gone. To stop that pipe right now would allow immediate recovery of that area.

Mrs PETROVICH — What pressure would it take off our potable water supply?

Mr VIGENSER — Substantial pressure. There is 150 gigalitres right there. That is the pressure we would take off.

Mrs PETROVICH — Thank you.

Mr RANKINE — I wonder whether I could just say something about this article. I have not seen the article.

Mrs FYFFE — No, that is fair enough.

Mr RANKINE — As in Queensland, if we were to do it here it would have to comply with federal government drinking water requirements and there have been federal government studies going on for many years to develop those. They have just come out over the last year — about six months ago, I think it was. All the federal government scientists and so on have set up that policy to ensure that it will be safe.

Mr CANNON — And it is monitored and tested.

Mr RANKINE — And it is a multi-barrier system. If one barrier fails, the next will stop anything coming through.

Ms LOBATO — I do not have a question, but I just wanted to make a comment in relation to the purified, recycled water. You claimed that it is operational in Queensland and we do not believe that it is. We were informed that it is starting next March.

Mr RANKINE — It is actually operational to industry at the moment.

Ms LOBATO — Yes, that is right.

Ms DUNCAN — It is a big jump from industry to drinking — a quantum leap in fact.

Mr RANKINE — Yes, but then a couple of months is not far away.

Ms DUNCAN — You are talking about the eastern treatment plant. The proposal that you are describing is currently under way, the only difference is that it is not at this point going to be used for potable water use. So all of that water you are referring to is going to be used in the manner in which you describe.

Mr VIGENSER — That is reliant on the business case though and — —

Mr RANKINE — There are two things I would say there. Firstly, there is not the demand for class A. The demand is for potable. So we could not use all of the output at the eastern treatment plant; certainly not within the next few years.

Ms DUNCAN — With the addition to the Yarra environmental flows we can.

Mr RANKINE — We could if that went ahead, yes.

Ms DUNCAN — And that is what is occurring, as I understand it.

Mr RANKINE — We could not use it in industry or in households.

Ms DUNCAN — I guess my point is the government already has plans to do all of that with the eastern treatment plant water and still believes there is a need for a desal plant. You have talked before about the south-east Queensland water grid and you would be aware that some of that water will end up in their drinking water. Most of it will go to industry on the way and I am not sure what percentage of that ends up in the potable drinking system.

Mr RANKINE — I think it is up to 70 gigalitres.

Ms DUNCAN — I am not sure what percentage that is of the water that is being produced, but in addition to that they are also building a desal plant. Have you seen the desal plant there?

Mr RANKINE — I have not actually seen it, no.

Ms DUNCAN — It is in the middle of a residential area, in the middle of the Gold Coast at Tugun. Is it the Gold Coast or the Sunshine Coast; which is it?

Mrs PETROVICH — The Gold Coast.

Ms DUNCAN — So even with all of that \$9 billion and a number of recycling treatment plants, they are still building a desal plant. As I understand it, that desal plant has already been enlarged from their original plans. I guess I just ask, because it seems to me that your proposals are all predicated on if we did all of these things, we would not need a desal plant.

Mr CANNON — Yes.

Ms DUNCAN — That is what I think I am hearing you say. I have two questions. First of all, if we did everything that you said, what is the total cost of that and what is the augmentation to Melbourne's water supply?

And if you do not believe that under the current scenario we need a desal plant, at what point do you consider we would ever need one?

Mr RANKINE — Can I just come in on that one? In Queensland, they have gone for desal because it is a comparable price to potable. They can get so much out of the treatment — purified recycled water. In their situation they have to pump that purified recycled water a long way to their dam, and because of that pumping cost it winds up a comparable cost, producing the water.

Melbourne, of all the states, has the best scenario for producing purified recycled water because we only have to pump it 23 k or something. Whereas from the desal down at Wonthaggi, we have to pump it 95 k to get it up into Cardinia, and possibly further if we are getting it up to Sylvan. Paul said it was a 45 per cent reduction; in fact it is a 55 per cent reduction. The cost is 45 per cent. In our situation we are economically far better off to go for this option — I have lost the train of the question now.

Mr CANNON — What Neil is saying is that there will be differences in each city's situation. Again Sydney has some differences. I guess what we were drawing from the Queensland experience is, no. 1, acceptance that purified water can be introduced into the drinking, potable water system, and it is not just Queensland doing it — it is Singapore, and places in America, Europe and the UK.

Ms DUNCAN — These places all have desal plants as well.

Mr GAYNOR — As back-ups, yes.

Ms DUNCAN — As back-ups. As a non-rainfall dependent — we have heard it before, again and again. We also heard at the eastern treatment plant — and I know about our own recycling system locally — that over January they were in serious trouble because there was not enough water going into the system and there was still the same amount of solids. I guess I repeat the question: if we do not build a desal and the north–south pipeline, under your scenario how much time would all of your augmentation measures take and how much water would they deliver to us in what time frame and at what cost?

Mr RANKINE — Could I refer you to the recommendations in my scale 1, because it seems to me that over the next three years the recommendation is that you source that 155 gigalitres to cover the current level of drought.

Ms DUNCAN — Well, and plus.

Mr RANKINE — Things may get worse, I agree. However, if we are covered at this current level of drought, then any further reductions are not going to make dams drop away. We have got that barrier there. Our current problem is we have not augmented Melbourne's water supply for the last 25 years, at all. So if we can implement, over the next three years, 155 gig of supply — and 100 gig could come from the eastern treatment plant if we wanted to — —

Ms DUNCAN — It is going to come now. You mean for potable, just for potable?

Mr RANKINE — I really question — —

Ms DUNCAN — Because our use is not really potable. How much do we drink?

Mr RANKINE — I really have to question whether it would happen now, because if we build the north–south pipeline and the desal plant to 225 gigalitres, there is no justification to do anything else with that water other than pump it out to sea.

Mr GAYNOR — And Cardinia cannot take the volumes.

Mr RANKINE — That is the other thing, too, yes. If we build the desal plant, its output goes into Cardinia Reservoir. That shuts Cardinia off from any option like this purified recycled water option.

Mr CANNON — And the size of the desal plant — 150 gigalitres — is part of what shuts off those options.

Mr GAYNOR — Can I just add that we are not sitting here pretending to be scientists or heavy researchers. We are just asking questions that we believe should have been asked a while ago before major decisions were made for Victoria. As far as we are aware, there has never been the proper analysis done on purified recycled water that we are talking about here. One of our concerns is that we would have thought those detailed analyses would have been done before heavy investment decisions were made for Victoria.

Mr CANNON — Huge investments.

Mr GAYNOR — We are simply putting on the table here, as I said at the outset of my presentation, publicly available information and saying that we believe there is a basket of options that provide far more flexibility and scalability than the two-pronged option that is currently being put into motion. Until these other measures have been properly researched — and at the end of the day, if they do not stack up, then fair enough — but we are putting the cart before the horse a bit by actually ploughing ahead with huge investment decisions for generations to come before doing proper research. That is one of our major points.

This committee has an opportunity to do the research. It should have been done before these decisions were made, and we are hoping it will come out with an interim report which will actually put some of these options on the table. As we say, even if potable recycling is not the go and class A is, if you add that to stormwater harvesting and other measures, you still remove the necessity for the desal plant and probably the north–south pipeline. So it is that basket that we think should be considered.

Mr VIGENSER — I would also like to make a point that, yes, the eastern treatment plant is going to class A, but what they are going to do with that water is still reliant on a business case, and that could fall through. We could be facing a situation here where class A water is pumped out at Gunnamatta instead of class C; so still a wasted resource, still polluting.

Ms DUNCAN — If it is pumped out into the ocean?

Mr VIGENSER — Yes.

The CHAIR — Thank you for your detailed submission and the range of attachments you have provided to support your case.

Witnesses withdrew.