



water smart home

Transcript of *Running on Empty: Water Futures Forum*

Held at Melbourne Museum, 18 October 2005

Liza Dale-Hallett

Ladies and Gentlemen, guest speakers, good evening. My name is Liza Dale-Hallett. I'm the Senior Curator of Sustainable Futures here at Museum Victoria and the Manager of the Water Smart Home program. I'd like to acknowledge the traditional owners of this land, the Kulin nation and pay my respects to their elders and any elders who might be present.

Welcome to Melbourne Museum and the 2005 Water Futures Forum, *Running on Empty*. This is part of an exciting week of events being organised by the Museum as part of our Water Smart Home Program and it has been made possible by the support of the Smart Water Fund. You will find information near your seat tonight on other events that we're holding this week, including an evaluation form for tonight's forum so please give some thought to giving your feedback. And those who do are in the running for a 12 month family membership to the Museum. I'd also like to invite you and remind you that tonight also includes refreshments after the forum.

Museum Victoria is actively seeking ways to become a more environmentally sustainable organisation, both in its operations and in developing exhibitions, research and special events that engage and educate our community. Tonight we're considering the creative options available to us in exploring the very real threat of losing our most precious source of life, water.

It gives me great pleasure to introduce Greg Hunt, who's seated in the middle, who's the National Manager for Waterkeepers Australia and who will be our facilitator for tonight's conversation. Greg comes to us, again, having been at Melbourne Museum as the Head of our Education Department, he has a longstanding involvement in education and environmental science and is also involved in developing community strategies to protect our waterways across Australia. Now I'll hand over to you Greg and you can start the ball rolling. Thank you.

Greg Hunt

Thank you very much Liza. Just very briefly if you'd indulge me for just a moment please. I am National Manager of Waterkeepers Australia and I'll put some brochures on the tables out the front for you to take away with you [see www.waterkeepers.org.au]. Waterkeepers Australia is based on the premise that communities need independent involvement in the issues that surround care and protection of their waterways. So we support community groups with their infrastructure to make sure that they can sustain themselves and do the job that they need to do, with the knowledge base so that when

they enter a debate they've got their facts soundly based. And we don't want to get exposed by, you know, putting forward nonsense into the public arena: the debate goes pear-shaped very quickly. And also with skill so that they can do the things that they want to do in looking after their waterways. I'll be very happy to talk with people about Waterkeepers afterwards, however this is about Water Smart and us becoming more water smart because I think there's some very good reasons why we should be doing something a little bit different.

We're here because we're concerned about water. And it's not as though we have a choice. "Oh no, thanks, we're not having any water this year, we're going to have the alternative." There just isn't one. So we've got to make the most of the water that we have. We've got to make sure that we have access to sufficient amounts of clean water, that we use it in the most efficient way possible, and that means as least as possible for the tasks for which we really need water to do, and that we collect as much of the stuff as we can for either direct use or for treatment, for reuse or for treatment and then we discharge it appropriately into the environment. Because unfortunately we're not doing enough of these things wisely. Tonight's a chance to think about what we are doing well and what we need to change.

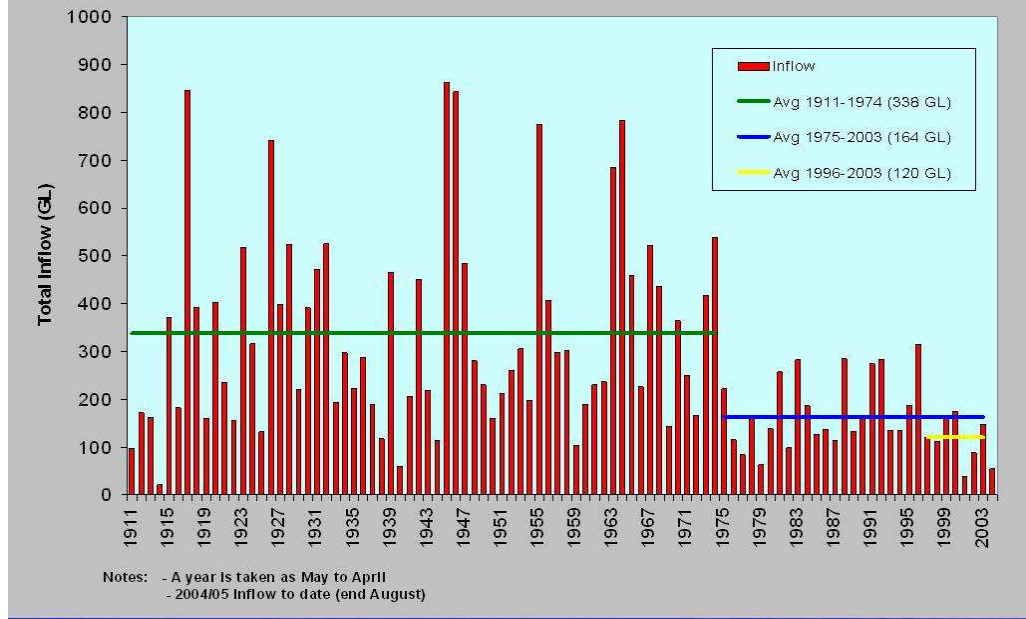
We've got four people with direct knowledge and experience in these matters. John Langford has spanned a gamut of water, from dual flush dunnies – and you can thank him when you go home later tonight – to the National Water Initiative. Anne Barker is CEO of City West Water where she's charged with running a business that somewhat counter-intuitively aims to reduce the amount of the product that it sells. Think about that one for a moment. Sheree Marris runs a business in marketing ideas and educating the community about behaviour change that will lead to a better environment. And Stuart McQuire is someone to whom we really need to listen because he is doing it. His use of water is minimal and he shows that what we're talking about, that is making the most of our water, is achievable.

So we're going to have a conversation about water tonight. We'll start with these four talking about issues that we all face from their perspectives of being on the inside, of being in water. There will be an opportunity for you to join in, so we've got microphones and we can throw the discussion open. There will be a taping of the program tonight and you'll find a transcript of this on the Museum's website. You'll get a chance to put in your own ideas as well. That we're "running on empty" is not a problem for the boffins or for the corporates or any particular group, it's a problem for all of us so we've all got to come up with resolutions to these issues that we can, that we want rather than the ones we just have to endure.

John, I believe we've got some images that we can start this conversation off as a way of perhaps crystallising some of these things that we're talking about.

Reduced inflows to dams (as at 31 August 2004)

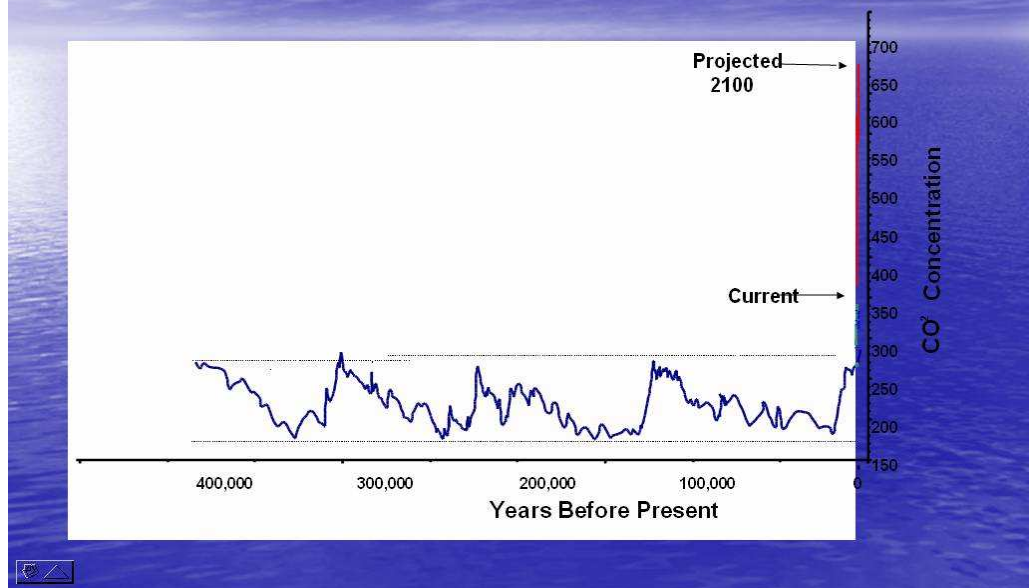
Yearly Streamflow for Major Surface Water Sources
Perth Water Supply System



John Langford

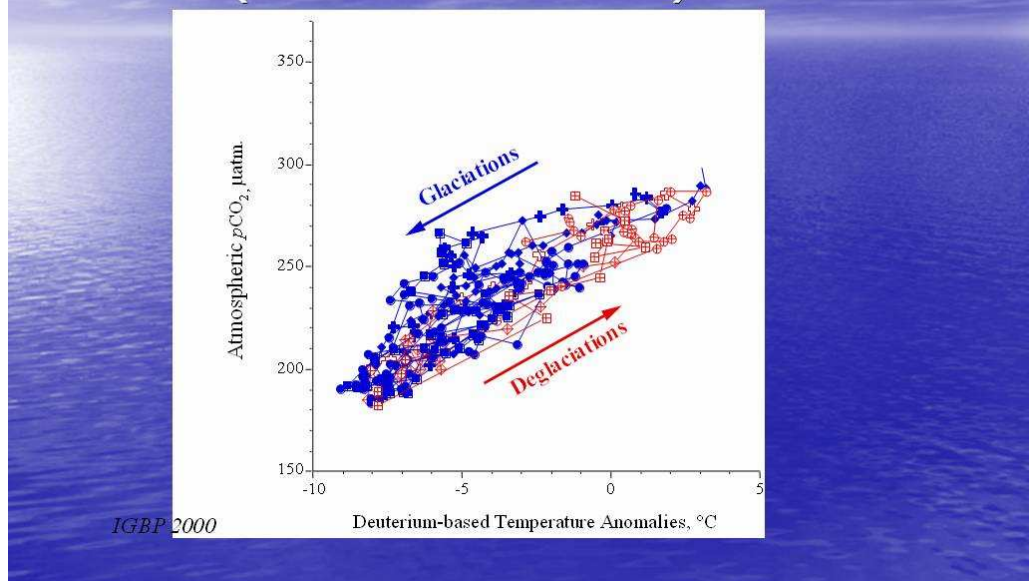
Could we have the first slide? That actually is the flow into the reservoirs in Perth over about the last century. And it shows for the first 70 years, the green line is the average. And since 1975, that's for 30 years, the blue line is the average. So over the last 30 years the flow into Perth's reservoirs has been half what it was in the previous 70. And Perth, as a consequence of that, has had to double the capability of its water supply in a decade and is now building a world-scale desalination plant. So: Perth on the margins has really suffered the impact of climate change and if you think this is an academic exercise well I suggest you have a good look at that graph. One other thing about it is you'll notice all the very wet years have been knocked out of that record in the last 30 years. And for a water supply system like ours, which relies on large storages to hold water from very wet years for use in droughts, that's not very good news. May I have the next one please?

Unprecedented CO₂ Change in History of Our Species

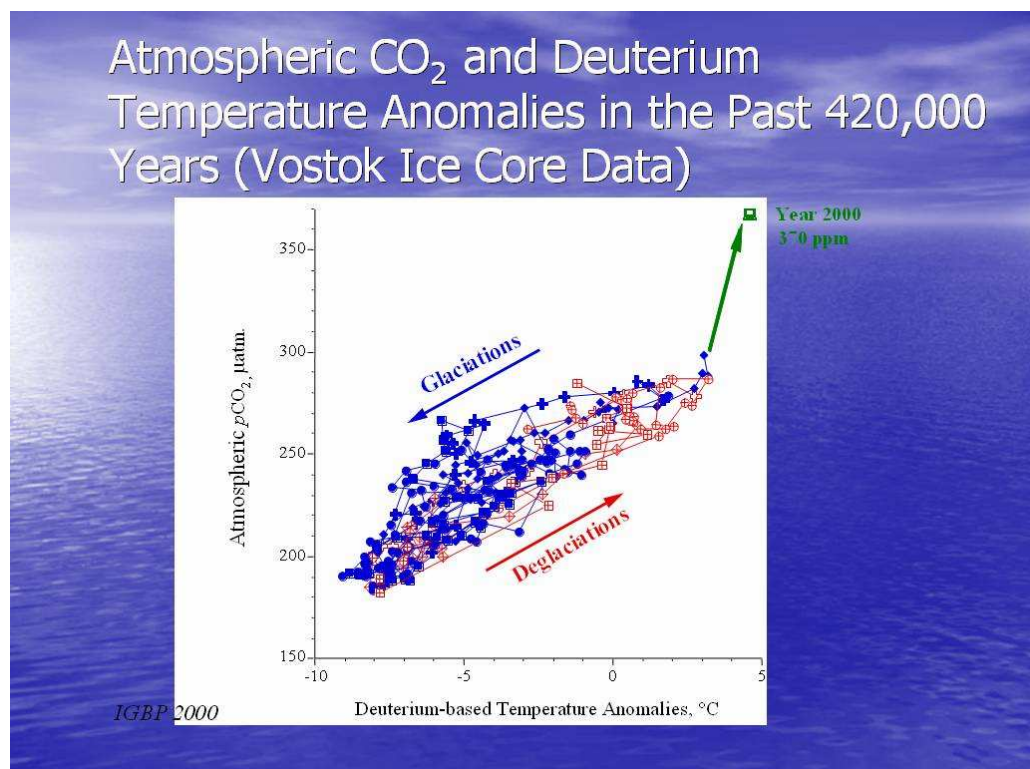


That chart, the blue trace – that is the CO₂ concentration at Vostok in the ice cores taken from Vostok in the Antarctic. And it's the CO₂ concentrations over about the last 400,000 years and it shows the low points of the ice ages, the higher points are periods of greenhouse. And where we're sitting now is well and truly above anything that was occurring in the last 400,000 years. So can I have the next one please?

Atmospheric CO₂ and Deuterium Temperature Anomalies in the Past 420,000 Years (Vostok Ice Core Data)



This shows the temperature anomalies along the X axis. So high temperatures are towards the right, low temperatures towards the left and CO₂ concentrations – actually it's the partial pressure of CO₂ on the atmosphere. The red dots show periods of deglaciation, blue – glaciation. Can I have the next point please?



That's where we are now, right. So we're in completely uncharted territory with the state of our atmosphere. Now the combination of those three graphs, my message to you is not to panic but we've really got to treat this seriously. It's not something we can deny. What we've got to do is invest time and intellect in the planning, not rush out and build infrastructure. Work out what we're going to do because we are going to have to do something.

Greg Hunt

Okay, thanks for that scene setter John and please remember that, don't panic, just not yet anyway. Anne, you run a business that's charged supplying water to us domestic consumers here. Should we be panicking? What are the sorts of things that you've got in mind that are going to give us some confidence that when we get home tonight and this time next year, etcetera, we turn the tap on, there will be water? What are you doing?

Anne Baker

The Victorian Government is doing an enormous amount about planning. And just picking up what John said, I think that a very critical word is planning. That what we can't have happen is to not be prepared for whatever scenario might eventuate. And so what the Government's doing at the moment is it's got the whole water industry putting together strategic water, no, sustainable water strategies – there's so many acronyms running around at the moment, it's all terribly confusing – and they're for the whole of

Victoria and for the regions within Victoria. And metro Melbourne has its own which involves the four water businesses that operate within metropolitan Melbourne.

And what we're looking at doing is planning for the supply and demand for the next 50, 30 and 10 years. And an enormous amount of work's been put into looking at various options. The Minister is actually going to launch the central region sustainable water strategy process on Thursday and that's really going to flag an opportunity for the community to contribute to that. But what the water businesses are trying to do is to give thought to all of the different demand reduction options that might exist and also the various supply options of which there are a large number.

The Victorian Government I think is actually doing this very well and they really are looking a long way ahead, although we're not in the sort of crisis situation that Perth and Sydney are facing. So it is, you know, as John says, it's not an issue for panicking. What we need to do is to make very sensible decisions and the way to do that is to look a long way ahead and to try to make sure that we have all of the data that we need to be able to do that.

Greg Hunt

Okay, thanks. Stuart, you've been able to do some of these things, put water saving into practice in your home. Can you give us a bit of a clue as to what you do?

Stuart McQuire

Yeah, look, I'll just briefly describe our house. A lot of you have been there, I know, because I can see a few faces in the audience. But it's an old house, it's not a purpose built house. It's a 1929 Californian bungalow style home and it's home to my partner Wendy and two kids, two daughters 11 and 14½ so it's very much a family home from our point of view. But we've lived there nearly 15 years and over that time we've made it progressively more environmentally sustainable. And we started out in 1992 by diverting water to the garden. Using simple methods we diverted the water from the laundry and the shower out to the garden and watered the plants for about 10 years that way and really noticed the benefit of doing that.

Now in 2003 we were lucky enough to get a Smart Water Fund grant and I think we're the only home in Melbourne that's got a direct grant from the fund so we feel very lucky. And basically from our point of view it was helping us live sustainably but from the point of view of the Fund, which is a government initiative and a water retailer initiative, we're exploring the full range of options. So they've given us money to see how far you can go, if you want to, in cutting your mains water consumption. And in our case it's almost all the way. Like, we've cut our water consumption by 96% compared to a typical Melbourne home. We're down to two and a half buckets a day for a family of four. So that's around six litres per person. And the reason for that is most of our water supply is now rainwater and – about 60% is rainwater. About a third is recycled water and we only use two taps for mains water – the kitchen cold taps for drinking and cooking and the bathroom basin cold tap for brushing teeth. And we've done that since November last year so that's nearly a year's worth of data and we have really accurate metering on the

different water supplies. And we've been through, this year I think the driest Autumn on record.

So it is exploring the full range of options, it's not just about large scale central solutions. Some of what we could do could be applied to pretty much any home in terms of cutting consumption. And then there's some more expensive options that would apply to a different number of homes.

Greg Hunt Your children are hitting the shower age. Anne, you're sitting closest to Stuart. There's not a problem with being that close to someone who's got a 96% reduction in their water use?

Anne Barker It seems alright but I've got terrible hay fever so don't pin me to it.

Greg Hunt Okay, um, Sheree, given this is the context in which we're working, what's the message we should be getting to people out there about their involvement in this.

Sheree Marris I think one of the messages is, I think one of the first things we have to do is, you know, look at the misconceptions about reusing water, etcetera. I know a lot of people, you know, think, oh, you know, I don't want to use recycled water, it's not good for me, or etcetera. So I think that's one of the things that we need to do. But we also need to empower people that they can make a difference and they don't have to make major lifestyle changes to actually do it. There are simple things like Stuart's been talking about.

And I think the other thing is that we need to stop doing the doom and gloom as well, you know, oh, the water crisis, oh! All it does is render, what I think, you know, it renders people helpless. They think, well, what can I do, I'm not going to make any difference anyway. So I think that's one of the other things that we have to do, is just to empower people. They can do simple things to actually make a big difference.

So, yeah, I think it's a lot of, you know, just dispelling misconceptions and empowering people so that they can make a difference. And I think, you know, just using really clever communications and marketing strategies as well, I think that's what we have to do.

Greg Hunt At any stage, please, if people would like to either clarify things that are being said from here or would like to make a comment yourself about the sorts of things that you've got in your mind or would like to ask questions, please feel free to do so at any stage now. We'd like to explore some of these issues, and what they mean for the kind of things that we could be doing: where can we get ideas about this? Stuart, you made reference to, you're one of the only people you think, who got some Smart Water Fund grants. How did you get this? Where were the dollars? What did you do?

Stuart McQuire Well the water retailers, including City West Water and the Department of Sustainability and Environment and Melbourne Water set up the Smart Water Fund and they have now

had three rounds of grants I think. And we simply put in an application, and part of the reason we were funded is our house has a profile for environmental sustainability. It was the first house in Victoria to have grid connected solar electricity, going back to 1996. And ever since then we've generated more electricity than we've used and we've also calculated we've cut our greenhouse emissions by around 90% compared to what we were in 1994.

So part of the reason we got the grant is that they knew that we were serious about what we were doing. But as I said, from our point of view it's primarily a family home. It's not a display home, it's not a purpose built home and it hasn't been renovated to do this. It's been refitted, or retrofitted with the different energy and water initiatives.

Greg Hunt

Okay, so, I think the story of your home and what you've done is also on the Museum's website, is it not? There's an interactive in the Museum where it explores a whole range of issues to do with the domestic use of water. And while you can be manipulating the device and finding out things for yourself, there's also a series of websites – and I believe your story Stuart and the images of what you've done is there and available for all. [\[www.museum.vic.gov.au/watersmarthome/story.aspx?st=6&th=0\]](http://www.museum.vic.gov.au/watersmarthome/story.aspx?st=6&th=0).

Stuart McQuire

Yeah, and it's also one of the houses open this coming Saturday as part of the Museum's Water Smart Home and Garden tours. There's five or six places open, I think. There's three in Brunswick and there's also Brod Street's house. Brod's just sitting up on the side there, his place in Hawthorn and the house Luke Middleton designed. Luke's just sitting over there, in Prahran is open this Saturday between 10:30 and 3:30. And there's probably brochures here about that so it's an opportunity to go and look first hand at some of the latest and the state of the art initiatives.

Greg Hunt

So there are models that we can look at and think about putting into our place.

Stuart McQuire

I should say Ismael Sosa-Sanchez who's sitting – you might want to put your hand up Ismael – he's the person that designed or invented the water recycling or water treatment system that we're using [Enviro Water, <http://www.envbiochem.com.au>]. And Ismael has a business based in Melbourne that normally uses this technology on an industrial scale and he's adapted it to a residential scale. And it effectively doubles as a water feature in our front yard, which is a really nice thing. And the water from our shower and laundry goes out to the tank underground in the front yard and then a fountain comes on and ten hours later the water's clean enough to go into storage under the house for reuse. So it's a great invention. And one of the issues – I don't want to be too negative, but one of the issues is that the current regulatory framework makes it difficult for Ismael to market his product in Victoria. And he is actually marketing it in the ACT at the moment, but he's not able to sell any more in Victoria.

And I've heard similar stories from Brod in relation to getting permits for small scale water recycling systems. And one of the issues is that there's a very much a risk

management framework for regulation instead of a sustainability framework that would include risk management as well.

Greg Hunt But I mean, the community perception about these things is changing so that with enough political pressure we may in fact get a change in that kind of framework.

Stuart McQuire Yeah, and part of it I guess is to have actual systems, real life systems operating and to do the water quality monitoring, which we're doing, and to experience living with them and give feedback to the Smart Water Fund and others so that there'll be greater confidence in giving permission for them to be used elsewhere.

Greg Hunt Right. Sheree, you mentioned to me earlier the Aurora project [see www.museum.vic.gov.au/watersmarthome/story.aspx?st=8&th=0]. Can you give us a little bit of information about that please?

Sheree Marris The Aurora project was, it's been created by the Vic Urban and it's a new residential site I think near Craigieburn. And all the residents have two separate pipes: one's freshwater, the other one is recycled water that's going to be used on the garden, etcetera. And it's a really interesting project that I've been involved with to try and develop the communication strategy for that. But I think one of the really great things with the Aurora project is people know that they're going to be going in there and actually, you know, reducing their ecological footprint. They're going to be going there and reducing their water consumption and things like that. And I think that in itself is a really big selling point. And I think it's actually showing where we're leading and where we actually need to go in terms of, you know, reducing our water consumption. But also just, you know, living and how our homes and watering systems and things are designed.

So I think we're going to be seeing more of that. I know the Government have been really, you know, right behind that. And I know, I was just talking to Richard Woods from ES Link, one of the really big things with that is that is actually trying to get the media on board as well, getting the media to help with the communications and dispelling the myths about recycled water. So that's an exciting project that's up and about and we're going to be looking at, you know, how we're actually going to communicate that and using the people who are going to be living in there, like, viral marketers to go out and tell people, you know, this is what we're doing – it's not affecting our health, you know, our kids are still healthy, their growth hasn't been stunted or anything like that. And just using really clever ways to actually, you know, disseminate the message and get it out there via different methods.

Greg Hunt Okay, thank you. If people wish to make a comment please, I'm having a look around the audience so just please indicate if you do want to say something. John?

John Langford I might actually make a comment there. We've got to be aware of the risk of experimenting with recycled water so I might make a word on the side of the health

regulators here. In Holland they did put in a dual reticulation system a la Aurora but they used contaminated river water and the system was cross connected into a number of apartments and a few hundred people got ill, which has completely demolished any innovation in Holland for a generation. So we have to be very cautious that, we are taking more risks than the traditional system and we've got to be careful that nobody gets sick. Because frankly if they do then innovation is going to be stifled.

Greg Hunt Yes?

Audience member 1: My name is Liz. This question is to whoever wants to make a comment but I'm just interested in what you have to say about us trying to become more sustainable with, well, we're talking about water tonight but they're all connected, in a highly consumptive society. When you look at where Aurora is in Epping, if you look at the surrounding suburbs, you know, they might have two or three bathrooms and spas and so forth. So I'd really like to hear somebody's comment about that cultural sort of contradiction really.

Greg Hunt Someone to start?

John Langford Well, we're becoming an increasingly wealthy society and one of the concerns is that that wealth is actually driving up consumption – spas, air conditioning, evaporative coolers. You could use an analogy with fuel consumption and sports utility vehicles or whatever you call them. Indeed we've done better with water than we've done with petrol in terms of making more efficient use of it. So those cultural issues are an extremely important factor. And to persuade the community to do what Stuart is doing, to persuade the wider community to do that is going to be quite a challenge. So I think our marketing people might soon work that out.

Anne Barker I think the Government is actually doing quite a lot in terms of the requirement for five star rating on new homes, which does have – it actually makes a great deal of difference to the amount of power that the home consumes, and also the amount of water that it can consume as well. But the, you know, the whole consumption issue is much bigger than that. I don't know what the answer to that is.

Greg Hunt John, you talked earlier of a rating system for water. Is this sort of thing possible do you think?

John Langford Well my previous association [Water Services Association of Australia, www.wsaa.asn.au] developed a system of AAA, AAAA, AAAAA rating for water using appliances, and you'll see those symbols around. That was a voluntary scheme so only the people who had efficient appliances actually got involved in it. The Commonwealth Government, and I'm very glad they've done that, have taken over the scheme and making it mandatory. So there will be a star rating system similar to the energy rating so you'll be able to see the water efficiency of washing machines, toilet cisterns, shower

roses, dishwashers and other things. So you'll get much better information.

It also provides a regulatory basis for government who might say, and I hope they do, washing machine manufacturers, you're making water hogs – you've got five years and your litres per dry kilogram have got to hit this target. Because to go to a lot of trouble to harvest additional sources of water while we're wasting it doesn't seem to be a very good strategy.

Greg Hunt

Yes please.

Audience member 2
(female)

Sorry, I just wanted to just take a step back a bit. Just in relation to your comments about the cultural base in relation to water consumption and water usage. Do you think that perhaps a part of the ongoing cause for that, for the average person, the average home owner, there's very little publicity about all these new initiatives that are actually taking place and what's actually available out there. I mean, we hear about saving water and the dams are running dry and all those sorts of things but there's very little public, you know, publicity to the average person in relation to what we can actually do and what the initiatives, as you're talking about, you know, some of these water saving features that are available. Why is that not sort of publicised more?

Anne Barker

I think that we probably do what we can on all of that stuff. The information is actually out there but people have to try to seek it out rather than have it actually presented to them. And one thing which the water businesses are trying to look at is a whole lot of different ways of reducing demand because, up to a point anyway, that's certainly the most efficient way of trying to preserve our water supply into the future. There's a really good website called savewater.com.au which all of the water industry uses to put up a heap of information about water saving ideas and the various things that you can do but we probably still haven't quite got the communication of all of that stuff right because it really – I think that for the average person to decide to do something really useful you've got to give them information in a way that's going to let them do that with as little effort as possible and I think we still have a long way to go to get that right.

Audience member 2
(female)

The average person won't go to these, you know, won't know about these internet sites to sort of go and look at and I think using the media to be able to publicise things would actually go a long way, that's just my view.

Anne Barker

And if the average person would read the stuff we send them in their bills too, that would help, but I'm sure most of them just throw it out and it's all just part of a big consumption problem.

Greg Hunt

Sheree, you were going to comment on this?

Sheree Marris

Yeah. I think there is information out there but I think it – sometimes you can get information overload and I think another thing we need to do is make it more engaging,

relate it back to people, relate it back to how it will actually affect their lifestyle, the way that they live and I think that's really, really important to do. I know that, you know, with energy and other things and other communications projects that I've been involved in – for instance, waste, working with Sustainability Victoria we wanted to try and get people to reduce their waste. And we thought, well, there's no use in targeting the people who are already converted so we want to try and target the people who don't really give a rat's about waste, who don't really care about how much they're using. We thought, well, what do they care about? Well they care about themselves. So we had to make them think, well, how is this going to relate to them, how is this going to affect how they're living, how they're working? So for instance we adopted the four Rs, the four R mantra – so you've got reduce, reuse, recycle then relax! Well reducing your waste will actually save you time, energy and effort and actually changing people's behaviour through that, so indirectly. And I think that's some of the things that we need to look at, just being more clever and making it relate to how it will effect people's lifestyle, how it will effect their every day to day living. And making it more engaging because we are daunted with so much information. You know, save water, do this, do that and I think it's really hard to kind of disseminate all of that information. Sometimes it's just a bit of overload so I think you need to make it engaging and just really clever and relating it back to people and how they live.

Greg Hunt

Okay, thank you. Could you just say your name please and where you're from, whether it's from an organisation or which suburb you're from or just something to give a bit of a sense of the range of people who are asking the questions please. Yes, Robin.

Audience member 3:
Robin Merrick

Yes, hi, my name's Robin Merrick from the Alternative Technology Association [www.ata.org.au] and I'd like to make a very quick comment and then ask a question, I think of Anne probably. My comment is that through the ATA we've worked very closely with the Victorian Government and I must say they are to be congratulated in terms of showing leadership in relation to water. I can only put in the request for them to show similar leadership in relation to energy. But a quite separate issue is the one of water pricing and I'd like to throw it to Anne to talk about the limitations that are imposed upon the water authorities and the Government in terms of addressing the water pricing issue because it seems to be a commonly held view that water is simply too cheap yet not a lot is being done quickly to respond to that.

Anne Barker

There probably are a number of different issues involved in the answer to that question. The Government has recently done a couple of things. One is that it's authorised the water businesses to introduce tiered pricing for residential water consumption. So now the customers are, they get their water much cheaper if they only use a small amount of it. And then the more they use the higher the price goes. So I think that the average price is about 86 cents a kilolitre but the top price is something like \$1.30. And so there are some price signals out there already for customers to use less water. Another component of it is that the Government at that same time introduced a 5% environment

levy and that 5% goes onto our customers' charges for water, sewage and trade waste. And the Government's accumulating the levy they're collecting and it's going to be specifically directed at environmental remediation type projects, which I think are all water related; they are all to do with giving back to the environment to compensate for the damage that's done by the water being taken away in the first place.

That is moving along and water is more expensive than it was a while ago but one of the things which we also find when we do some research is that price actually isn't a fantastic incentive to people to stop using water because people who do use an enormous amount of water tend to be in the higher income category and they tend to think, well, good, I'll use as much as I like because I'm prepared to pay for it. So it's actually quite a limited tool to get really major changes in people's behaviour but I suppose also we haven't tested it to its extremes either, so I'm not sure what you would have to take the price to to get some really strong responses. But I do, I must say that my customers in the CBD and inner and western suburbs are using a lot less water than they were using previously. Our water sales are really down which is actually very good news even though I've still got to convince my board about that. But they are really using a lot less water.

Greg Hunt Anne, what's your executive remuneration scheme I wonder? This sounds quite an interesting problem.

Anne Barker Well that's a, that's right, I mean, they certainly couldn't ...

Greg Hunt *[laughter]* It's an inverse relationship.

Anne Barker Oh yes, on bringing it down and, yes, that's right. The worst financial result we get the bigger a pat on the back I get. No, actually it doesn't work that way yet, but we'll hope, we can hope.

Greg Hunt Okay. John, you've got a comment?

John Langford Well, what I would say is I'll start by saying, and this might sound obtuse, but the Chinese character for rivers is a beautifully sinuous piece of calligraphy. And if you overlay on that the character for levies, like levies around rice, what Chinese word, what word do you think you'd end up with? It's actually politics. *[laughter]* So even in an ancient language water is very political. Now I've dealt with water pricing, I've almost had riots, I've had character building meetings and some vigorous talkback radio – everybody reckons water's too cheap until you try and do something about it and then they say, how on earth can you charge for this stuff that falls out of the sky for nothing? If we had the price of water double what it is now there'd be a lot of innovation that would be cost effective but to do that – and I mean, we've got full cost recovery, apart from the environmental externalities so indeed, you know, Urban Water, City West Water, is a

profit making business and so it should be.

But the politics of putting up water prices, you know, people sort of carry on about large families and all sorts of things, which targeted assistance would be much more efficient than just having a broad subsidy of water price, okay? So I think the idea, the compromise is to get tiered which has been done and that's sensible and it's having its effect. And indeed historically the combination of regulation like dual flush toilets, education like 'Don't be a Wally with water' – and that's perhaps showing my age a little bit, and pricing has been remarkably effective. The Australian cities have actually done a remarkable job over the last 20 years, stimulated by the 1982 drought. So we shouldn't be ashamed of that. I mean, Sydney have absorbed something like 700,000 extra people with no growth in their average water consumption so pricing can make a difference but it's very political.

Anne Barker And I'll also just chuck in there for interest that Melbourne customers, people, used less water per capita than any other capital city in Australia last year so that was really good too.

Greg Hunt Okay, thank you.

Audience member 4: My name is Rodney Dale, I live in Brunswick. I was just wanting to pursue, Anne, that
Rodney Dale dilemma you have with the board that wants you to make a profit and your wish to
reduce demand. Just – Greg alluded to it at the start but I think I'd like to explore that a
bit more if you wouldn't mind.

Anne Barker Well, I mean, we're a government owned utility and so what we try to balance is our
prediction of what we're going to deliver to the Government in a year with the
Government's very strong targets for us to reduce water consumption. And so even
though I joke a bit about the board, I'm sure that that if what we're doing is really over-
delivering on our environmental targets then they're not going to be too concerned about
us under-delivering in relation to the financial targets. But it is very important, it's not
cheap to run a water system and so it is important that we do make a profit, yeah. But
they, you know, it's just as important that our customers reduce their water consumption
too and they're doing a great job on that at the moment.

Audience member 5: Hi, my name's Gerard Brody and I'm with the Consumer Law Centre Victoria. We do a
Gerard Brody lot of work around advocacy for low income and vulnerable consumers and we're talking
a bit about water pricing and the prices of water as being too cheap. For a lot of people
out there water is still, it's an essential service, it's expensive and they have to pay for it
and people are still getting restricted and they have water debt, etcetera. I just want to
ask a bit about the relationship between pricing as the main strategy tool and other tools
such as, you're talking about putting, you know, retrofitting of homes and that sort of
thing. What ways can we help or encourage – I'm thinking specifically tenants and low
income earners who do not get their own capital value for retrofitting their own homes.

What mechanisms or processes do we need to have in place to enable them to be able to reduce water so they're not affected by the high prices?

Anne Barker

That's – let me do that one too. There are probably a couple of strategies. One is that there are concessions, government concessions available to low income earners and the concessions were increased when the water price went up, specifically to deal with the imbalance that that might create. Also the tiered pricing regime actually works extremely well for customers who do, who occupy flats or units because their water requirements are actually quite low and so the price for water for the – and, I mean, it's actually – I can't remember the exact number off the top of my head but it's actually a surprisingly high percentage of our customers have received a decrease in their water price despite the 5% enviro levy. And that's as a result of tiered pricing. So I think that there are a lot of customers who are better off.

We also have a promotion or an offer anyway to customers who have large families where we pay for them to have a plumber do an inspection of their house and come up with a whole lot of recommendations including low flow showers and getting the leaks fixed and all of those kind of things, which we fund I think it's about a \$500, you know, that we will fund up to \$500. That I have to say quite remarkably we have incredibly low take-up on. You know, we budgeted quite a large amount of money for that because we really thought that we would get an awful lot of interest in that but we haven't. Despite the fact that we very actively promote that to our customers we're still not seeing much of a take up on that.

So I think, I mean, all of that – there are probably other measures as well and certainly City West Water has a very large proportion of low income customers and we have an extremely positive, the Hardship Policy, which we use with our low income customers. We would never restrict a customer who actually can't pay their bill. We restrict very few customers and they are only ever customers who just simply won't pay. And we do a lot of great work with the local, you know, the benefits type organisations where we help people to pay their bill. We have something like 72 different ways that you can pay your bill because we understand that we need to be flexible with a lot of our customer base. So there, there's lots of things that they can do. And ringing their water company to get a lot of advice would be the good place to start.

John Langford

One comment I'd make is it's much better to target assistance to help those that need it rather than provide people who've got the means to pay and who use a lot of water, that – I'm often – maybe I'm getting old and cynical but sometimes that group actually stir up the issue of what about large poor families and all the rest of it as a means of suppressing water prices for everybody. To me it's more efficient to target the people who need help, provide them with direct help rather than providing help through subsidised water prices for everybody.

- Greg Hunt There was an article I found in the press that I've put on the Waterkeepers website along the lines that you mentioned before Anne, I can afford to pay for the water therefore I should be able to use as much as I like. This sounds as a very, very, an odd sort of statement for people to make.
- Anne Barker I think that we're finding that attitude less and less but there are still some customers who think like that.
- Audience member 6:
Ray Beaton Ray Beaton from Yarra Valley Water. I just wanted to add to Anne's comment for the guy up the back, if that's alright. The single biggest area where we use water is in the shower, that's the single biggest use at home. And a simple \$20 efficient shower rose will save the home owner about \$40 a year in water and another \$30 a year in energy through hot water savings. So over a 12 month period any person I think could afford to spend \$20 on a Bunnings shower rose and get a really good payback and contribute to the environment as well. So that's one area where I think anyone could probably afford to contribute ... and it's still a good shower!
- Greg Hunt We can approach you can we Ray?
- Audience member 7:
Luke Middleton Hi there, Luke Middleton. I just wanted to put an example to you regarding the prices. A friend of mine, they have two properties and one house uses no water at all and the other house is using approximately 30,000 litres in two months. The difference in their bill is approximately \$35, one bill is \$120 and the other bill is \$155. It doesn't seem to be much incentive considering we pay \$1 for a litre of bottled water at the petrol station and we pay whatever it is, it's less than one thousandth. So this tiering, why is it that there's such a base to have an essential service connected rather than be really user pays?
- Anne Barker I think that issue will continue to be debated and there's probably, I mean, obviously what you're talking about is the service charge so there is a fixed service charge that everybody who's connected to the system pays and then there's a variable water charge over and above that. And the water industry and, particularly being government owned, it probably has in the past had a real reluctance to take a risk on the amount of revenue that the industry is likely to earn. And that probably has a lot to do with why such a high proportion is fixed. A high proportion of our costs absolutely are fixed as well. So really the only variable part of our cost is what we pay in, for the quantity of water that we buy. But that's not to say that we won't continue to change that next going forward. And what, because what we need to come up with is something which gives an appropriate signal to consumers to do something about water usage, while at the same time making sure that we actually do still have enough money to run the businesses. So the balance is somewhere in between. And as I mentioned before, the research shows us that price is actually not a particularly good driver of behaviour anyway.
- Luke Middleton It would be if it was a dollar a litre.

- Anne Barker That's, yeah ...
- John Langford Well I'd suggest you go and propose that as Minister for Water Supply for a day and see what happened to you. What I would say about prices and the high access charge – if we actually had cost reflective prices and water was \$1 a kilolitre, about 80% of it would be a fixed charge because water is very capital intensive, and 20 cents would be the usage charge. Actually the pricing structure has been distorted to help demand management by making the access charges smaller and the usage charges a lot higher. So in fact we've actually distorted the price structure – if we had a cost reflective system we would have much higher fixed and lower variable. And I think the average is something like 20% or 30% fixed and 70% variable if you look across Australia's cities.
- Stuart McQuire Can I just comment as well, like, I know our bill's extreme but our water consumption charge for the last three months was \$1.55 but the overall bit was \$117. So just to reinforce what Luke was saying, about \$50 was a Parks charge, which is an historical thing – it used to be Melbourne Water but Parks Victoria are now getting their revenue partly through our water bills. And that doesn't have to be the case; they could get it through State Government direct budgeting. And there was also a drainage charge, which again doesn't flow to the water retailers and that was, I can't remember, about \$20. And again that's money that would go to Melbourne Water and as a government agency they could get funded direct through State Government revenue. And if those bits of the bill were taken out you'd be taking out, in our case, I don't know, about two thirds of the bill. And it would be more responsive to us reducing our water consumption. So at least we could address those parts without trying to distort the supply or capital intensive part.
- Luke Middleton I think the – I get your point about the infrastructure however the infrastructure costs are assuming water has no value when it falls out of the sky, which is an historical flaw in our current system I suppose.
- John Langford Well the charge we have for water is for storing it, cleaning it, transporting it and supplying it to your home at the pressure and time 24 hours a day. It's not for the basic resource. What we ought to introduce into the price is the environmental externalities which are the cost of the environmental damage we do or, indeed, a positive environmental externality. In Melbourne, for example, we've got something like 100,000 hectares of virgin old growth forest in our catchments, probably the largest reserves of old growth mountain ash in the country if the Tasmanians keep going. There's a positive environmental externality associated with water so if we do the balance of that we'd probably come out with a negative, that ought to go into the water prices but the politics – and I tried to get that in the National Water Initiative – everybody runs a mile. It's too political.
- Audience member 8: It's a tax but they're afraid to call it a tax. I mean the charge that we're getting charged is for the service fee and the infrastructure. The environmental charge is just a tax but the

- Jon Augier politicians are, you know, afraid call it that.
- John Langford I'd dispute that it's a tax but anyway we can have that debate another day.
- Greg Hunt Yes, down the back.
- Audience member 9: My name is Martin Hallett and I live in Vermont. So far the conversation has treated water as a commodity. Water's something in addition to being a commodity, it's a basic element of the natural systems that give us beautiful places for recreation and that in fact sustain the supply of water in the long run. What can we do to ensure that our use for domestic and industrial and agricultural purposes is set at a level that enables the natural systems to survive as well?
- Martin Hallett
- John Langford Well, um, the issue – and I guess this is where the National Water Commission and others come into it – there's been a sea change over the last 30 years. When I was younger we had a mantra which said, we've got to stop these rivers running to waste in the sea and we've been remarkably successful in doing that. The environment got the residual, what was left after everybody else had had a go. But over the last 10 years there's been a change and now the environment is getting a legal entitlement to the water again, an allocation that has the same legal status as the requirement for the irrigators. And indeed the environment gets the first go. Now to try and reverse the last 100 years of water management practice is going to take a while but with the Snowy and the Living Murray initiative, attempts are being made to get water back into the environment, initially through efficiency savings. My personal view is that's not going to be enough and the Government are going to have to stand in the water market and buy water back from irrigation and put it back into the river. How much needs to go back? Who knows, so long as we do it as intelligently as we possibly can in an ecologically sensitive way and get the best return for our investment in that environmental repair, in buying back water. But, you know, so we're in a lot better state than we were, say, a decade ago but we've still got a long way to go.
- Anne Barker If I can just add to John's comments. A lot of work has been done as part of the planning work that the Government's doing at the moment where they are assessing the environmental flow requirements of the rivers and as John said, the environment gets first dibs. And I think that we will see a difference soon.
- Greg Hunt So I note that, I think it was Peter Ryan, Head of the National Party was recently suggesting that one of the answers to Melbourne's problems may well be more dams.
- John Langford Well bluntly, Melbourne has more than enough storage capacity. If it needs water it needs more water diverted into the dams that it's already got and that can be done two ways: by more efficient use and because we've got such large dams, small savings build up over long periods between when the dam is full. So we've got this big bank account we can keep putting our little savings in every year and it will build up for use in bad

times. One of the controversial issues that hasn't been raised is in fact trading of water between the city and irrigation. Now if I look at Adelaide, for example, which is interconnected with the Murray Darling system and is about 1% of the total diversions out of the Murray Darling basin, irrigation being the other 99% or 98% if you count Canberra and the regional cities, okay. Now Adelaide has a process of waterproofing Adelaide. Saving water in an urban environment is very expensive compared to saving in a rural environment.

So the issue comes why don't, instead of doing that in the name of saving the Murray and reducing the draw of Adelaide from 1% to half a percent, why not pick the money up, the city's money and spend it along the river to try and improve the environment. You'd get a much better environmental result for your investment. If Adelaide then bought some water, which it has, a tenth the cost of desalination, much lower overall cost, much lower energy use. And if the city uses its money to make sure there's more than a significant environmental improvement, so it spends its money in the bush on tidying up some of the situations that are there, put more water down for the Red Gum and whatever, we might actually end up with a more sustainable situation than we've got now. But it's politics. Again, it's that Chinese character – you can't do it.

Audience member
10: Kim Truong

Yes, my name is Kim. I know that saving water is the big issue and very important for every member in our community. What do you think about, if the people don't speak English like me, and also we have a very low knowledge about understanding the importance about the environment or saving water. What do you think about supporting ethnic communities like this?

And also because I am involved with the environment I did help some members of my community about the issue of saving the water and in the beginning they don't understand a lot but they're willing to do something. And some of the families, for example one family, they would like to install a rainwater tank to use for all of their family. The cost to buy is total – plus the Rainbank – is about \$2,400-500 but the labour for the plumber for them to install for this family so they can qualify to have the rebate from the Government it will cost, the first cost we have is nearly \$4,000. Unbelievable.

And then I have to, like shopping around with them and find out the cheaper one is \$2,500. It costs too much, because to have a rebate for only \$150 for the – when they install the rainwater tank and another \$100 to use for the house and if they use for the toilets they can have another \$150 it means they only receive \$300 when they have to pay, it's nearly \$3,000 to get the rebate from the Government and they are really concerned about this. And if they do it themselves or from someone not qualified they're not really sure is it the right or correct. So can you, um, do you have any comment about this?

Anne Barker

You've raised a couple of issues there and I'll address some of them and just tell me if I've missed anything. The first point that you raised about the need for the water

businesses to become more involved with non-English speaking customers to try and improve their understanding and commitment to water conservation is absolutely critical. And I think that, I know that at City West we have recognised that there's really been a gap in our approach. And at the moment we are working very hard, particularly with our Customer and Community Engagement Committee to try and address that balance. So we're getting more representatives of non-English speaking customers helping us to do that. So that really is very important.

The issue of water tanks there is, as you pointed out, there are the two rebates: the rebate for the water tank plus the additional rebate for connection to flushing the toilet. But those things are not going to get anywhere near defraying the cost of actually installing a water tank. And the other thing about water tanks is that they, if you're looking at a payback period for the amount of water that you save, it's an incredibly long payback period. And I think that while we would certainly encourage the use of water tanks for a whole lot of different reasons, financial, getting a financial benefit from it is not going to be a justification for installing a water tank. So, and it's not compulsory to do that either, even in new developments where, or new houses where the house builder has to achieve this five star rating they have a choice about whether they put in a water tank or take a number of other initiatives. So it really, you know, it's fantastic when people do feel sufficiently concerned about water to put their own water tank in there but they're never going to get the money back. It's just the financial gain is not a justification for that.

Kim Truong

With, sorry, also I did visit Stuart McQuire's tour and I find out it's like the, where he install for the reuse the water, it costs too much to, it's about for the plumber \$1000 and the reuse water underneath of his house, it costs I think nearly \$5,000 and some people they say, it's too much to spend a lot of money. He lucky because he had the support, the sponsor, but like, individual family or normal family how can they spend nearly \$5,000 to install and to reuse the water like this? You know, any technique, simple technique anyone involved can reuse the water and not cost too much?

Stuart McQuire

Yeah, look, I agree with what you said Kim and I guess there's a progression. And I mean, I know you're aware of this and it's been mentioned tonight already but you start with things like the low flow shower rose that cost \$20 and will save you more than that within a few months. After that you would probably, when you're buying a washing machine get a water efficient washing machine. And the new water efficient washing machines I think start at around \$600 or \$700. They'll save you a lot of water. The dual flush toilets if you own the house and you're not renting they start from around \$120. So those sorts of things and a fourth one, mulching the garden. Those four things for us cut our water consumption in half. So instead of using 240,000 litres a year we were using about \$120,000 litres a year. After that you'd go onto the rainwater tanks and, look, I agree, we've had mixed experiences with plumbers too and I think that's one of the issues. The plumbers in Melbourne at least don't have a lot of experience with rainwater

tanks yet, or not many of them do and you need to shop around a bit and get a few different quotes. And we got a quote for installing the water storage under the house for the recycled water and then connecting it to a few pipes and the quote was something like \$3,500 and we didn't go ahead with that and a lot of it I ended up doing myself which hopefully wasn't illegal but shhh.

- Greg Hunt The plumbing regulator's not here so that's ...
- Stuart McQuire Please, but I didn't do any connections ...
- Liza Dale-Hallett This will be on the website soon.
- Stuart McQuire That's right, you can edit that bit. I didn't do any connections to the sewer or anything like that, the plumber did that, Ismael's plumber and also we used a couple of other plumbers. But we did have mixed experiences. With the rain-bank device which is a device that automatically switches from rainwater to mains water or vice versa, we paid \$410. But I was speaking to Kim on Saturday and she said she was quoted \$1,000 for that so I don't know why that is. With the pump we bought it was about \$300 so there's maybe \$1,000 of hardware with the pump and the Rainbank, \$1,000 for a plumber and \$1,000 for a tank. I think you can have a good rainwater system for around \$3,000 that will make a really big impact on your mains water consumption. It won't make you self-sufficient but because you've got the Rainbank type device that switches automatically to mains when your rain tank goes down to a certain level. And you'll find most of the year you're using rainwater but some of the year you're using mains water. So for around \$3,000 – and as Anne said, you wouldn't do that just for a financial point of view. But what I find is, like most of the purchases we make, whether we're buying cars or clothes or computers, we're not getting a payback on them we're just spending money. So I tend to think that with a rain tank we're buying sustainability and I don't expect it to cost the same as – and I don't think about it in terms of paybacks. And I think that's one of the barriers that is stopping people because they think it's not good value, even if they can afford it they don't go ahead with it. And I think we need to jump out of that mindset and stop thinking of it as a payback but think we want to buy a rainwater tank and we want to feel good when it rains next time.
- Greg Hunt Stuart, where does one go to get advice about these sorts of things?
- Stuart McQuire Well, look, Robin mentioned the ATA, the Alternative Technology Association is a great source of information. The savewater website ...
- Greg Hunt Robin, put your hand up please. Alternative Technologies Association, Robyn can help. Thank you.
- Stuart McQuire The savewater website that Anne mentioned. Luke Middleton has put out a little booklet about rain tanks.

- Greg Hunt Luke, wave your hand please. There's Luke.
- Stuart McQuire And the Museum, Melbourne Museum or Museum Victoria website is a good source of information too.
- Greg Hunt Okay, ladies and gentlemen ...
- Kim Truong Another comment, I would like to ask, is there any idea you can – because when you look in west side [of Melbourne] you see the Green Plumber is very limited, you know. And then they can give you all the cost in different price. When I ask why you cost too much they say because they are the Green Plumber. Anyway you can do more training for the plumbers or they not limited so they don't charge too much for the customer, you know.
- Greg Hunt We're going to start to have to wind up shortly please, so.
- Audience member 11: Geoff Leach Geoff Leach, resident of North Melbourne. My question is really about the relative value residents – it's picking on a point I think John made earlier about the relative value residents of cities trying to save water as opposed to our farmers who, our good farmers, who seem profligate with their use of water at times. And I've been out in regional New South Wales at times, in the middle of summer and seen farms that have got irrigation going near 24 hours, not to mention rice farmers. So I'm just wondering about how much the consumption we have in the cities amounts to compared to the amount of consumption if you like, that our regional Australia uses.
- John Langford Well the short answer is across Australia all Australian cities combined would use about 15% of the total water harvested for consumptive use, that's 15%. If I took the State of Victoria, Melbourne would use 8%, that's 8% of the total water harvested for consumptive use. The cities are quite small uses of water with one proviso. About ten times more water comes into a city in the form of food. And in fact one of the most effective ways that we have of saving water is in fact not to waste food because that goes back into the – so if you'll have a rice meal for example, and you waste half the rice then there's one incredible volume of water that's been used to produce that rice. But in terms of consumptive use the cities are a very smaller player.
- Geoff Leach And so just picking up on that, you know, are the efforts to save water in cities somewhat misguided given what you're saying there?
- John Langford Not necessarily. We all have to do our bit and it costs a lot of money to build major schemes. We're also causing significant environmental issues with our diversions of water and with our management of waste water. Okay, so we do need to do our bit but so do the people in the bush. We've all got to make better use of water because we're going to have to cope with a very much more uncertain climate. So we just can't be profligate in our use.

- Greg Hunt About our second last comment please.
- Audience member
12: Monica Miron Yes, my name is Monica Miron and I am from Sustainable Living Centre, Moonee Valley. We have a complex project at the moment underway and trying to implement our project we find that there are a lot of conclusions that we raise. Firstly, the sustainability at the moment is not sustainable. The costs are enormous. It is a lack of plumbers. Plumbing cost is a very, very big part of the project. Water tanks, water treatment plants, they are difficult. Every water treatment plants need approval of the city council, which should be not like that. If they are approved in Australia they should be free of any application. They have to be implemented and finish the story. All those projects are delayed, delayed because they need approval and approval and it's up to the city council if they want to give you the approval or not. And I am not talking about us but there are other people that are lacking – what the – knowledge and the time the ordinary person is giving up, it's not going ahead anyway. And only a few people are having the guts to go ahead.
- It looks like we don't have the guts to say a lot of things. I thought that this forum, people would come more openly to say things that will reach the ears of the politicians and of the Government in order to change things. Going against the nature is not the way to go. We are importing from China all sorts of bits and pieces, why we are producing in Australia rice and cotton? Why should we waste an energy like this in products that we can easily import?
- Another thing, we are the driest continent in the world. We have the biggest influx of tourists. When people are coming here from Europe they are used to the luxury of having probably two or three showers a day in the summer and they apply the same policy here. They have to be given a flyer from the plane and educate them and say, look, you are coming into a dry country, you should protect this terrific thing that is the water. And don't put Australians in a position to restrict those tourists and say, look, we don't need to make them the education, the Government has to initiate this and to come ready prepared, like they are filling up the entry form in Australia they have to be given a flyer attached to this ...
- Greg Hunt So, okay, it would sound as though we've quite a big change process to do if we're going to implement the things that you're talking about.
- Monica Miron Exactly, exactly and this has to reach the ears of the people that are in power to do those things.
- Greg Hunt It indeed has – and John has said a couple of times the need for a political process to engage in that. The first thing we're going to do – I started by talking about Waterkeepers Australia and one of the things that we would help community groups with is building their knowledge base so that when we start to get involved in the political process we've got something credible to say that's well based on the research so that we can attempt to carry the argument. Now unfortunately in our world logic won't always win

you an argument but it's not a bad place to start.

Monica Miron

Exactly.

Greg Hunt

And so that's the kind of thing I just wanted to – we've got time I think for just one last comment, was over here somewhere.

Monica Miron

One more thing.

Greg Hunt

I'm sorry, we really do have to finish up shortly, we've ...

Monica Miron

Thank you.

Greg Hunt

Thank you very much. There was one last comment was there over here?

Luke Middleton

I'll be pretty quick. I just think that it's interesting, as you say, everyone's responsible. And is it, do you think, a policy sort of decision to make the city more aware of it even though it is a very small user?

John Langford

Yes, I think we all ought to be water aware. And nor are we, we're in a situation where we have large population growth, which is not something that's necessarily occurring in the bush and with irrigation water. Another 700,000 people in this part of the world in the next 25 years, another million in Sydney, another million in South East Queensland so we need to supply these people with water in the face of a declining resource. So we really need to do something. Now that something might be go and build some more dams. Okay, that's environmentally difficult and in fact in Melbourne, no. What we need to do is either divert more water into the dams, that's politically difficult because we'd have to trade with the irrigators. And anyway, the most cost effective and environmentally sustainable thing to do is to actually make more efficient use. If you look at an environmentally/sustainability scorecard and cost effectiveness – energy use, water use, waste water generation, the salt balance, the nutrient balance, the pathogen balance – most of the initiatives that come up the top of that ladder are in fact in efficient use. So to cope with this population growth and to cope with the declining resource we're going to have to do some things. Okay, and wasting water and stopping that waste is probably right on the top of the list.

Greg Hunt

Look, thank you very much ladies and gentlemen. We'd just like to have an absolutely very, very brief finishing comment from here. Liz, I'm going to ask you if you would just mention something briefly about *Watermark* Australia in a moment too, because we've got ways where the community can continue this debate and I think we need to get involved in that. Stuart, can you just – what advice would you give, what take home message are these people going to take with them do you think?

Stuart McQuire

Well look, I agree with John, start with the water conservation things but then also start with catching water off your roof, that's a great thing to do. And if that's successful and

you've still got enough money then look at your water recycling.

Greg Hunt

Thank you very much and that was brief. Anne.

Anne Barker

We've mentioned the political difficulty of a whole lot of these things a number of times this evening. And the Government is about to start a consultation process so on the 50, 30 and 10 year plans for balancing supply and demand in Victoria and Melbourne and this is a really good opportunity for everybody to have their say about what they want to see the Government doing. And certainly the louder the message on a number of these issues the easier the Government's going to find to do something about it. So I would really encourage you all to participate in that.

Greg Hunt

Thank you. John.

John Langford

What I'd say is we need to be careful about what we mean by sustainability and we need to look across all the factors that are involved. As I said before: cost effectiveness; the material that we're using and the energy that's embedded in that material; the energy use because in fact a lot of the alternative sources of water, including recycling are more energy intensive; looking at the salt balance because the more we close the loop the more we've got to worry about where the salt and other material are being concentrated; we've got to look at the nutrient balances as to where the nutrients are going; and look at the pathogens and where they're going. And I'd say if we can get a good sustainability scorecard then we can look at all the options from towing icebergs to onsite solutions to whatever and pick out the things that are the most cost effective and sustainable, whether they be onsite or whether they be for a whole community. And be extremely suspicious of people who propose large scale or silver bullet solutions.

Greg Hunt

Thanks John. Sheree.

Sheree Marris

I just think, I suppose my final comment is that we just need to be a lot smarter I think in our communications, how we deliver the information and the format. We need to make it really, really simple. We need people to be able to realise that they can do simple things to actually make a big difference, and using the mass media as a vehicle to actually do that. So that's what I would say.

Greg Hunt

Thank you very much. Liz, you're involved in a project that does enable people to get involved. Can you tell us about it please, very briefly?

Liz McAloon

It's called *Watermark* Australia and it's community based, it doesn't have any government funding [see www.watermarkaustralia.org.au/home.asp]. People self select to run a group in their homes, in their school clubs, in their neighbourhoods and the whole aim of it, it's very, very unashamedly and upfront, it's about education. And the premise is that once people learn, people don't really change their behaviour until they actually understand why. And we all know there's been masses of research on all those

sorts of things like the Quit campaign. We have got about, we've got about 220 something groups across Australia and we've just been looking at their first reports and they are, when you talk about intelligent planning, John, they are starting to ask the intelligent questions. A lot of those people have asked questions and concerns back to us like why, agricultural practices, why are we growing certain things? People are asking about who owns our water, what does water trading mean to me? So once people start to learn things and the scales fall off their eyes and they realise they're in trouble they do start to ask more intelligent questions. And we could get this fantastic body of really good questions out there across the community. We've got perhaps, if each of those groups has up to 10, there's 2,000 people out there across Australia, they're mostly in Victoria, and they're learning around their kitchen tables and they're starting to talk to their water authorities because they're starting to look at the websites. It's really up scaling their knowledge and they're starting to link into things, like Waterkeepers and savewater.com.au. And so it's been a really, so far, it's really a go ahead process.

Greg Hunt

And if people were to put *Watermark* Australia into their browser they'd come up with your website?

Liz McAloon

And there's about 20 of these out on the table which gives you a good sense of what the project's on about and what we're trying to do. It's just a little information pack. But if you were to run a group you'd get a lot more support than just this.

Greg Hunt

Thank you very much. And Waterkeepers Australia that I mentioned at the start is a similar kind of project to empower communities where they are already active on their waterways. And so we've been very keen to support *Watermark* Australia with the kind of building of the knowledge base and of the engagement of communities because that's where the answer to these issues are going to lie. They are personal things and I was very impressed with the water savings. For a \$20 shower rose, the \$40 reduction in your water bill and the \$30 reduction in your energy bill, it's a no-brainer not to be doing it. So there's something that people walking away tonight, if you haven't got one at home you need to get it.

[end of recording]