



**LEGISLATIVE ASSEMBLY FOR THE AUSTRALIAN CAPITAL  
TERRITORY**

**STANDING COMMITTEE ON PLANNING AND  
ENVIRONMENT**

**(Reference: Inquiry into water use and management)**

**Members:**

**MR M GENTLEMAN (The Chair)  
MR Z SESELJA (The Deputy Chair)  
MS M PORTER**

**TRANSCRIPT OF EVIDENCE**

**CANBERRA**

**TUESDAY, 11 DECEMBER 2007**

**Secretary to the committee:  
Ms N Derigo (Ph: 6205 0435)**

**By authority of the Legislative Assembly for the Australian Capital Territory**

Submissions, answers to questions on notice and other documents relevant to this inquiry that have been authorised for publication by the committee may be obtained from the committee office of the Legislative Assembly (Ph: 6205 0127).

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### **The committee met at 3.13 pm.**

**BAKER, MR TOM**, Deputy Chair, Molonglo Catchment Group

**LLOYD, Mrs SANDRA**, Committee Member, Molonglo Catchment Group

**WOOD, MS ZOE**, Molonglo Catchment Coordinator, Molonglo Catchment Group

**THE CHAIR:** Good afternoon and welcome to the Assembly Standing Committee on Planning and Environment's public inquiry into water use and management. This afternoon we are hearing from the Molonglo Catchment Group until 4 o'clock and after that we have Actew Corporation with their submission.

Before we begin, I will just read out the privileges card for you. The committee has authorised the recording, broadcasting and rebroadcasting of these proceedings in accordance with the rules contained in the resolution agreed by the Assembly on 7 March 2002 concerning the broadcasting of Assembly and committee proceedings.

Before the committee commences taking evidence, let me place on record that all witnesses are protected by parliamentary privilege with respect to submissions made to the committee in evidence given before it. Parliamentary privilege means special rights and immunities attach to parliament, its members and others necessary to the discharge of functions of the Assembly without obstruction and without fear of prosecution.

While the committee prefers to hear all evidence in public, if the committee accedes to such a request the committee will take evidence in camera and record that evidence. Should the committee take evidence in this manner, I remind the committee and those present that it is within the power of the committee at a later date to publish or present all or part of that evidence to the Assembly. I should add that any decision regarding publication of in camera evidence or confidential submissions will not be taken by the committee without prior reference to the person whose evidence the committee may consider publishing.

Would you like to make any opening comments to the committee?

**Mr Baker:** We would. We have a short statement of about five or six minutes, if that is okay. I have with me Zoe Wood, the full-time paid coordinator for the Molonglo Catchment Group, which is community based by the way, and Sandy Lloyd. Sandra is on our management committee but, significantly, is one of the landholders in the Queanbeyan river catchment, one of those many people who produce our water, if you like, for the catchment.

I am not going to go into our submission in detail now but I just want to emphasise a few points on the committee's behalf. First of all, we have been a little bit oblique in addressing the terms of reference in the sense that one of the themes in our submission is that we are looking at the cross-border perspective as well because the inquiry is an ACT inquiry. I guess that is one of the points that we are trying to make—that you cannot look at management of water supply and restrict it to political boundaries. You are looking at catchment boundaries, and I guess that is obvious.

As a little bit of background on the Molonglo Catchment Group itself, it is community

based. We are one of three catchment groups which have set up over the last few years under the ACT government's integrated catchment management strategy. I think that came out quite a few years ago. The other ones are Ginninderra catchment and the southern area catchment. Each of those catchments goes across the border because they look at the water catchment boundaries rather than political boundaries, for obvious reasons. To the ACT government's credit, that seems to have worked quite well.

The Molonglo Catchment Group has been set up not only so that it is an important part of that ICM framework but also to take advantage of funding programs around the country and locally. I guess the best way to visualise the Molonglo catchment itself is all the creeks and rivers that run into Lake Burley Griffin, which include the Queanbeyan and Molonglo rivers, Jerrabomberra Creek, Sullivans Creek, Woolshed Creek—you name it—as well as below Scrivener dam the Molonglo River then flows down to the Murrumbidgee River, so that also comes under the Molonglo catchment. Because of that we have a direct interest in the management of Googong dam and Lake Burley Griffin, and even the Captains Flat dam, which is outside of the ACT because on the upper Molonglo there is a dam, a water supply, for the Captains Flat community.

Our main task is to implement the Molonglo catchment strategy. That is basically a guide to agencies, the community and land managers in the catchment to meet targets for the ACT natural resource management plan and also the Murrumbidgee catchment action plan. Those two sort of nicely meld into each other. We provided a submission on the ACT water strategy some years ago when that came into being and we strongly supported the strategy, partly because an enormous amount of research went into that strategy and also community consultation. We think it is a good strategy, and we also support water to water, which is the more recent initiative to raise the level of the Cotter dam and to pump additional water up to Googong dam. There are even more recent initiatives and that is the demonstration purification plant; that has now been agreed to be set up and we think that is a great idea.

So in terms of general directions we think the ACT and region are on track. Our submission makes a lot of noise about the idea that you cannot really separate the idea of safe and secure water from managing our catchments, and when we say managing our catchments we mean our land, water, biodiversity and vegetation, and vice versa; one relies upon the other. You really cannot deal in isolation, and that is the theme and that is why in an inquiry of this form you really have to look at the catchment base rather than the political boundaries.

In view of that we have added another section. In the terms of reference, paragraph 1 (h) is "any other related matters". We have agreed and we went ahead and devoted that whole other section to a bit of a discussion of all the catchment issues that we think need to be addressed. You would have read that. A lot of those issues in the other section towards the end of our submission were raised in Think water, act water, the catchment issues, which was a bit surprising. It raised a lot of eyebrows because concerns were expressed by the ACT government about how the catchment was being managed, particularly the Queanbeyan and Molonglo catchments, in that water strategy.

On the positive side, the community has responded very positively in recent times to our water deficit; 78 per cent of residents, for instance, are saving water in gardens, which is a pretty impressive record—higher than anywhere else in Australia. This is all information from a recent ABS survey. Rainwater tanks have doubled since 1994 in the ACT, 83 per cent of people have dual-flush toilets et cetera. So that obviously demonstrates a very high level of awareness and commitment by the Queanbeyan and Canberra community—I mention Queanbeyan from time to time because they use 10 per cent of the potable water as produced by the ACT—so we have a lot of goodwill there. It is really important to the inquiry to think about that. We really need to maintain that goodwill and act upon that.

We have tried as much as possible in our submission to reflect the sorts of questions that people in the community have been asking about water. Very importantly, we believe it is possible to protect our environment, particularly our riparian environments along our creeks, streams, waterways, wetlands and groundwater, while ensuring safe and secure water. We think we can do both. We make that point because there have been noises from a number of quarters that we need to sacrifice environmental flows, for instance, because water supply for human beings is more important. We will not go into the issue of whether water is more important for human beings; I guess it is. What we are saying is that we can still protect our environment and that, if we do not, it will be to the detriment of our water supply, if that makes sense.

We have a dilemma and of course that dilemma is water scarcity. Adding to that dilemma is that we are now expecting, under the water strategy over the next 20 years, 10 years or whatever it is, all residents in Canberra and Queanbeyan to lower per capita water consumption, and yet at the same time we know—and all scientists and climatologists across the world agree—that climate change is with us and that means that water supply is going to fall. We are going to get probably lower rainfall in this area—we do not really know, but there is a good chance—and at the same time evaporation is going to rise substantially, and that is because of the high temperatures, less vegetation et cetera. So supply is going to be down.

On the other hand, demand is going to go up because we are already planning for an increase in population of another 100,000 to 150,000 people in Canberra and Queanbeyan. Right now we have just put in a submission for the lower Molonglo for 60,000 to 70,000 people and Queanbeyan, as per this development proposal, for another 7,000 or 8,000 households. So we are looking at another 20,000 people there already, as well as all the other developments that are in the pipeline. So we have a dilemma because, on the one hand, we are all really in trouble and yet we are going to add to that demand and we can be pretty sure that the supply is going to be reduced because of what is happening in our global environment.

Our concern, and we hope that we made it fairly clear in our submission, is that those two things, the fact that demand is going to rise because of population and the fact that supply could well fall—runoff is going to fall by up to 20 per cent according to the water scientists—may undermine the strategy of getting residents to reduce their per capita consumption. The community are already saying: “Well, how do you work that out? You’re asking us to reduce our consumption just so that we can have a lot more people in this community and at the same time greenhouse is going to start

biting more and more.” It is already happening in Western Australia. South-west of Western Australia has lost 30 per cent of its rainfall.

On top of that we have this cross-border situation. It is really one of the most complex water situations in Australia, and probably in the world, because we have three levels of government. Local government, the commonwealth government and the ACT government already have an interest in the water supply, particularly in the Queanbeyan and Molonglo catchments, which is the one that we try and keep an eye on. From a community perspective we really need to address this cross-border issue in the long term. What we really need is a simple, regional, understandable framework to ensure good relations, efficiency—because we need to be using taxpayers’ money efficiently—and equity. All that of course is for the public interest and quality of life. If you like, you can have these notes when I have finished here.

Generally speaking, the situation we have around here is so complex that most people really do not understand it; they get snatches of it but really cannot see the full picture. We spend all our time on it and even we do not have the full picture—but we are getting there. So confusion abounds and there is political strife. Right now Queanbeyan are taking the ACT government to court on the abstraction charge, and most people do not even know what an abstraction charge is, let alone why they are doing that and what all the issues are.

Because of those three issues—demand is going to rise, the supply is going to fall and on top of that, unfortunately, we have this complexity, this political boundary—we have come up with a package. I will just read out what I have got here because it comes straight out of our submission but it is really the guts of our submission. We think it is an option. It is a bit tricky; it has raised a few eyebrows already. One of them is to establish a water commission that would bring a consistent, regional, whole-of-catchment approach to managing water, and that includes fire risk. We had a big fire, of course, in 2003 in the Brindabellas but we have not had a fire in the Googong catchment yet.

Vegetation management and riparian works: this would be resourced from the abstraction charge which we estimate is about \$30 million to \$33 million a year now, which goes into consolidated revenue. Our understanding is that that started off as an environment levy under the Council of Australian Governments water reforms—all states are doing that—and it seems to have been lost.

What we are saying is that this abstraction charge, which in Queanbeyan pays about \$2.5 million to \$3 million per year, should be more transparent and should become a catchment levy to manage the catchment and it should be all hypothecated or allocated to managing the catchment—not necessarily just the Molonglo-Queanbeyan but to ensure that there is a minimum amount looking after the catchments so that we can be assured safe and secure water in the future for our whole community. I am just coming back to that same theme: you have to look after the catchments for safe and secure water.

The second bit is to ensure that the water supply authority, because of this cross-border complexity that we have, is a cross-border one that manages all infrastructure. That would mean buying Queanbeyan’s water supply and sewage

treatment works so that it owns the whole lot. Some bodies are going to baulk at that but the offer was made in 1998; Actew did say, "Look, we'll give you a cheque. We'll buy you all your pipes and pumps. That is a liability for the Queanbeyan city council and it would be an asset for Actew and it would become more efficient. But the most important issue there is that there would not be any squabbles about how much you are paying for water because Queanbeyan would be paying exactly the same as Canberra residents." That would address the second issue of political turmoil and confusion in the community.

The third bit is that all management decisions should be informed by best available information and research and that should be an ongoing process. We believe the ACT have done a fantastic job in terms of think water, act water and the more recent strategy. It is very well researched and the community is very well consulted on that. We think it is a credit to the ACT government the way it has been handled. We think that it is expert opinion that we should be basing decisions upon, not political expediency.

The long one is that water use and management must be aimed at long-term reductions in per capita consumption, including strategies to manage the potable and non-potable use and considering the triple bottom line. We all know those words because they are over and over again in the water strategy. One, two and three fulfil best practice expectations of residents of the national capital, and that is one of the terms of reference in your inquiry. We believe that, if we do one, two and three, that would be the very best approach to create a wonderful national model, if you like, to tackle not only our water situation but also a very unusual political situation that we have here.

The timing is perfect because the ACT government and the New South Wales governments only last year signed the cross-border agreements on the water strategy and settlement strategies. That is far, far reaching. Of course that work has not been done yet but I understand it is about to start. And who better to do a lot of that work, to oversee a lot of that work, than a cross-border water commission for the ACT region? So we think the timing is perfect. There will not be another opportunity like this for a cooperative, positive, cross-border water management process transcending artificial boundaries.

We do not want to say any more. I have a whole list of specific issues that I could go through but I have already spoken for 17 minutes of our time and most of those are in our submission. They are in detail but they are worth looking at because each of them is important. Some of them are about reducing consumption, some of them are really tricky ways to pricing policies. For instance, Sandra has come up with the idea that we should be doing something that they are doing in Melbourne: we should be giving all water users a very good idea about how much water they should be using for their household and family size and, if they are using more than that, once they go beyond a certain kilolitre—a reasonable and fair amount for a household of, say, three people in a semi-detached dwelling or something like that—they should be charged an enormous amount for water.

Those ideas we have pointed out and they are really worth pursuing. Melbourne is doing that sort of thing. We have lots and lots of other ideas. For instance, this

building could have waterless toilets, couldn't it? I know they are already doing all that out at the airport. I have not seen one yet—I do not even know what they look like—but for them to have waterless toilets sounds great.

**THE CHAIR:** They have them down the road, I think, in the DITR building as well.

**Mr Baker:** Yes, so there are lots and lots of ideas. The new Xeriscape garden should be top class. I have a couple here that are not in our submission because they are things that have happened since. It is tragic that we are losing the Xeriscape garden, but perhaps we should not have just one Xeriscape garden but maybe have one in Tuggeranong, one in Belconnen and one in the central area. Why not? It is an investment in a community that is so important for the next 30 years so that we capture that goodwill that we have created in the last three or four years.

**THE CHAIR:** Thanks very much for those comments. I will kick off with a couple of questions. In the introduction to your submission, you mention that there is confusion, division and inefficiencies in water management. Do you think these are Australia-wide problems, not necessarily just within the ACT? Should we have a larger body, perhaps a national body, looking at these issues rather than focusing on individual states? You have already talked about cross-border activities. Could you expand on that a little?

**Mr Baker:** We are not experts on what is happening in other states, obviously, because we are doing five things at once in our own catchment. Most of us work around the clock on a voluntary basis. Zoe keeps us all in line.

The ACT does have some peculiarities in terms of water management. For instance, we have got the commonwealth government looking after the Parliamentary Triangle, through the National Capital Authority. We understand that they can draw water whenever they like. I am not even sure that they pay for it. We are not picking on anyone; we are just stating facts. There were a few cross people. We have heard that directly. Actew, of course, have a lot of responsibility. But there seemed to be decision making coming from other directions.

I guess the ACT is probably not peculiar, but there is a great level of interest in the ACT—I won't use the word "plundering" by the community thinking that all the ponds around the place are aside from our sewerage and it is happening to our sewerage systems; the ponds are there for the taking; we can pump as much water out as possible for huge landscaping areas. The National Capital Authority do that, but many, many other bodies do already. That is an issue that may be peculiar to the ACT, because we have such a high concentration of open areas that are being watered.

We also have high-profile areas. That, of course, is one of the criteria for your inquiry. What areas do we look after and keep green? There are some peculiarities in the ACT because it is the national capital. We have got, for instance, the airport. That is another body that is doing things a bit independently, if you like. We know that there is a little bit of confusion out there. I guess, the more you think about it, the more good reasons you can think about, even within the ACT's borders, to bring all of these under one umbrella.



We should have transparent costing. Some people are paying a lot. Some community bodies are not paying anything. We will not mention any golf clubs, but they are not paying anything because of previous agreements. Other bodies like that are paying a lot. Nurseries are paying a lot—Pialligo and that—for the pond water. There is a bit of sorting out to go on there.

What body is set up to do that? We have answered the question. We have got the perfect answer to that, and that is a cross-border water commission, which has been advocated by water scientists in the past for the ACT region. Did you want to add anything as to the complexity?

**Ms Wood:** I think it is specific to this region. There would need to be an approach to taking out some of the confusion within the region. There is a management level and an education level. In terms of the general public, I think their education needs to be Australia wide for using per capita consumption but also specific to the catchments in which they live. It should be both Australia wide and local.

**THE CHAIR:** If you are looking at per capita consumption, how do you devolve that down where there are big government bodies like the NCA looking after the Parliamentary Triangle? Do you say, “You are allowed so many litres per head of population,” when they have to look after those big garden areas?

**Ms Wood:** There is education, for a start—to get people educated from the primary school level, through high school, tertiary education and even workplace education. I notice in the bathrooms here there is information about recycling and waste. There can also be information about water put out to the individuals so that they can make their difference.

For bigger corporations such as the ones that you mentioned, there needs to be legislation in place. That actually means that it enforces water reduction strategies such as AAA appliances; having water tanks; reducing hard surfaces; making sure that the infrastructure and the planning processes are in place when you are setting up bigger organisations and managing them and managing the gardens; and that there is actually legislation that enforces water saving. There have to be potential incentives as well for doing so.

**Mrs Lloyd:** Residential people should not be the ones that have to make all the sacrifices.

**THE CHAIR:** There is an interesting position, I suppose, in your submission that looks at that and says that at the moment we have restrictions on residential but that does not necessarily equate to perhaps commercial or bigger government bodies. Would you like to talk to that a little?

**Mr Baker:** Yes. I think what you raise is a very interesting question. I do not think we have really addressed that. How do you translate the per capita for these larger water users? I suppose you can. I am sure the economists could work out a way to do it. We have got a vision about that. We will tell you about that just before we finish.

We really need to audit how much water is actually available. Then it needs to be

equitable, and the charging has to be equitable. Equitable pricing will sort out to a certain extent the fact that we do not have a per capita device for your national capital authorities and your Australian national botanic gardens and those sorts of people.

We also need to know how much water is available and then, basically, divide it and say, "That is how much water is going to be available in the next five years." You have to get agreements or negotiate on how much each body will have. They need their certainty, of course. They need to know how much water they can extract from the potable water, from the recycled water—because we are going to be using more and more sewage effluent; and we believe that is going to run out fairly shortly, too, because that is going to be in huge demand—and your pond water from your lakes and your stormwater.

It will be a matter of allocation. It will be like parking in Civic. There is only so much. We are going to have to price it, like the economists would say. We are going to have to allocate it according to how much is available over a five or 10-year planning period. Does that make sense?

**THE CHAIR:** Do you suggest different rates of purchase prices for your pond water—for example, Lake Burley Griffin water—as opposed to potable water?

**Mr Baker:** The potable water has to come down to cost. You really need to cover the cost where we are providing potable water because, in a sense, there is plenty of potable water and the pricing should really reflect what the community is charged. That is going up quite steadily from year to year, and I cannot see how we can get away with that, even for the bigger users.

With regard to the audit, again that is something we have not really addressed and have not thought too much about. The pricing for recycled effluent and for pond water is something we have not thought too much about, to be quite honest.

**Ms Wood:** I think it would be an incentive for people to start using non-potable water—for example, the golf courses et cetera—if the pricing was slightly less than for potable water. That would provide an incentive. That would be one method of encouraging people to use the non-potable supply.

**Mr Baker:** It begs the question, though.

**MR SESELJA:** You talked about the water rating system. I am interested in that. It is operating in Melbourne. Is that the start? Are you able to give us any further detail on how that has gone in Melbourne and whether each individual property needs to be assessed and how that process is undertaken?

**Mr Baker:** We only know that from paper cuttings, to be quite honest. We understand it is quite recent. The rate has increased from \$1 a kilolitre to \$7.80 or \$8 a kilolitre.

**MR SESELJA:** This is once a family gets above their allocation?

**Mr Baker:** Yes. Then they really mean business. There is probably another reason.

Some people, probably on higher incomes, do not care how much the water costs. It will probably make even them think and say, "You kids, turn the shower off." It is probably partly that and is probably partly being accountable to the rest of the community, the people who are really making an effort to save water. They get a pat on the back, if you like, and say, "We have been saving water. Look at all the money we are saving." No, we are not sure how that is going and whether that has been assessed. We did talk in our submission about the experience in Sydney. What were they doing in Sydney?

**Ms Wood:** I think that was referring to when certain programs had been implemented to use recycled water and have a dual system in the household. It had not been accompanied by a proper education strategy. What eventuated was that people who had a dual system in their home actually increased water usage, compared to suburbs which just had the one system, because the education system was not there to reinforce that water is still a valuable asset and still needs to be valued and its use reduced; whereas, when they had a dual system, they thought it was there for the taking. The education strategy, combined with that, is really essential.

That would be the same as having a reduced price for non-potable water. You would still need to educate about the fact that it does not mean it is fair to hose down paths again, because it is a non-potable supply.

**Mr Baker:** It is all scarce, whether it is from the sewage effluent or potable water or from a pond. It is going to be scarce, and there is going to be a huge demand for the recycled effluent. For instance, if they have a dual system in Lower Molonglo, that is going to take a lot. The arboretum is trucking that water already. They are going to want it on-line before too much longer.

**MR SESELJA:** You recommend major new developments utilising dual reticulation. Is there any idea of the cost, either on a per household basis or across developments, to implement that system?

**Mr Baker:** No, but we can tell you on good authority that the Canberra Investment Corporation have now got detailed plans out for Googong township. They are going for a 70 per cent reduction in water there. By the way, that is not in our submission because the local environment plan is only just out on that. That is for a self-contained township which will have their own sewerage system. They are going to catch all the stormwater. I understand that they have done all those calculations. The CIC would probably be good people to talk to. They would love to talk to you about that.

**THE CHAIR:** How does it affect your catchment area if you produce a new residential estate within the catchment and then capture the rainwater and use it within that area rather than let it flow into your catchment area? Have you looked at that?

**Mr Baker:** The actual town is not in the Googong catchment.

**Mrs Lloyd:** It is adjacent to the dam.

**Mr Baker:** In fact, a lot of houses will look onto the lake. The stormwater will actually flow into the Queanbeyan River below the treatment works.

**THE CHAIR:** That would then flow into Lake Burley Griffin?

**Mr Baker:** It will, yes. It will actually increase the water going into Lake Burley Griffin because of the hard surface. The roofs and the roads et cetera will tremendously increase the amount of stormwater. However, they will retain a lot of the stormwater on site for reticulation into this dual system. As you can imagine, once it rains, a lot of stormwater will still be going down. It has no impact on Googong Dam.

**THE CHAIR:** Would you think, similarly with the other estates at the moment—Tralee and those—that would affect the catchment?

**Mr Baker:** It will be as if they were part of the ACT. Queanbeyan uses exactly the same. Queanbeyan bulk-buys off Canberra. I live in Queanbeyan. The water is bought off the Canberra water supplier. Googong dam is only a back-up.

You have raised an interesting issue: I think Googong township is hoping that they will actually pump water straight up from the base of the treatment works. That would be new. Queanbeyan and Canberra residents get all their water from Brindabella; we all get the water from the same pipes. This would be a departure, if you like. It is only a proposal at this stage, of course, and there will be people opposing this development. That is an interesting element. They will actually be extracting water from Googong from the word go. Only per capita would it be a reduced amount.

**THE CHAIR:** In your opening comments, you said that there are enough of these new residential areas in the ACT, that demand will rise and that supply will fall as well. Are you saying that off the predictions of climatologists for climate change? Where do you see supply falling?

**Mr Baker:** That is very well documented. It is in think water, act water. We have used the figures from think water, act water. They are already old. In fact, the latest scenario from Professor Peter Cullen is that we may have a reduced flow of 20 to 25 per cent from rain into our water resource partly because of lower rainfall but partly because evaporation and transpiration from plants and that sort of thing. When you look at the total water balance, that complex whole water balance, it is quite frightening. We are not authorities on that; we are simply using the words of the scientists.

**THE CHAIR:** I remember his presentation to an environmental conference at the Melbourne parliament a few months ago. Some of the statements he made were scary. He said some large cities in Australia only had 60 days of water left.

**Mr Baker:** Right now Melbourne is in big trouble. We know Brisbane is at stage 6, although they will get their pipeline shortly. We are the ones that are going to pipe water to Sutton, Bungendore and Yass. That is the expectation. Yet we have problems already. Brisbane are going to pipe water from the Sunshine Coast because they have got an excess of water. One day they won't, but that is another storey.

**THE CHAIR:** In your opening comments you mentioned, Sandra, you were

a landholder in the Queanbeyan catchment area. Could you give us an idea of where you are?

**Mrs Lloyd:** I am in the upper Queanbeyan catchment, probably about 20 kilometres up from the Googong dam. My concern is that I think it is a really unsatisfactory situation when Canberra does not have any control over development in that catchment. You are getting more and more hobby farms, more and more dams and more and more bores, so less and less water is going into the river. The river actually runs past my house and it is a very sad river now.

**THE CHAIR:** You are acutely aware of it then, I suppose.

**Mrs Lloyd:** Yes. So Tom's proposal for a water commission—

**Mr Baker:** Our proposal.

**Mrs Lloyd:** Yes. It is an essential thing. There is no review of allocations. People just use as much water as they want. A Google Earth look at the Burra catchment is just amazing when you look at all the dams.

**THE CHAIR:** Mr Baker, another thing that you mentioned in your opening comments—you talked about Captains Flat. I understand—I have had some conversations recently where they have advised this—that they are reopening some of the mines up at Captains Flat. Do you see a concern there with water flow into the catchment if they reopen the mines?

**Mr Baker:** I have heard of an idea. I heard of some people interested—because of metal prices going up, I guess. I would be concerned because already, during very heavy rain events, which we have not had for some years, the toxic effluent from there will—not might but will—become mobile again and will go down the Molonglo River. As you know, there are already layers of very toxic effluent in the lower layers—the mud in Lake Burley Griffin.

So yes, you would have to be concerned. But I would hope that there will be an EIS. I am sure that our organisation would be one of the first to hear if that was actually going to happen. And also, because the commonwealth is involved, because the ACT on behalf of the commonwealth has paramount rights to the waters of the Molonglo and the Queanbeyan River—that is part of the complexity of all this—people would be very concerned to make sure that any new mining venture was very safeguarded indeed.

**THE CHAIR:** Thank you very much for coming in this afternoon and thank you very much for your detailed submission. We will continue to go through that throughout our inquiry. We will get any questions that we might have on notice to you as soon as possible and we will also get your copy of the transcript from this afternoon to you as soon as possible so that, if you need to make any changes there, you can let us know.

**Mr Baker:** Are the questions on notice from the Assembly?

**THE CHAIR:** If, from your submission, my colleague or I have any questions that

we forgot to ask—

**Mr Baker:** To clarify?

**THE CHAIR:** Yes. We will get those to you.

**Mr Baker:** Can I just mention two things very quickly. One of the points we made—I am not sure if we made it strongly enough—is that a lot of the initiatives work on goodwill in the community. It is going to require incentives. Part of that is the rising cost of water through prices—the price of water. But the other thing is incentives—for instance, for older homes to be retro-fitted. We believe that that should be done at a national level. We hope that this inquiry picks up and has a think about that through the national tax system.

There should be a strong incentive for people to go out there and do some fantastic, really good, imaginative work on their home. Some people have already demonstrated how much you can save in your home. But it needs to be done properly, because there are health issues there that need to be safeguarded. It costs money. There should be really good incentives for people to do that sort of thing, but it really needs to be on a national basis so there is equity and so that we are sharing the information. Once we get our water commission up and rolling, we will have some expert scientists on that group and they will be sussing out what other states and countries are doing in terms of water conservation.

**THE CHAIR:** Thank you very much for those comments and again thanks for coming in this afternoon.

**Short adjournment.**

**COSTELLO, MR MICHAEL**, Managing Director, Actew Corporation Ltd  
**KNEE, MR ROSS**, Principal Strategic Planner, Actew Corporation Ltd  
**STOLT, MS MARLENE**, Corporate Communications Manager, Actew Corporation Ltd

**THE CHAIR:** Welcome to the Assembly's planning and environment committee's inquiry into water use and management. I understand that you were all here this morning—

**Mr Costello:** We were.

**THE CHAIR:** So you are aware of the privilege card. Can I just ask whether you understand all the details within that card as a witness?

**Mr Costello:** Yes.

**Ms Stolt:** Yes.

**THE CHAIR:** Fantastic; we do not need to read it out again. Thanks very much for your submission to the inquiry. Would you like to begin with opening comments?

**Mr Costello:** Let me begin with an apology. I have just realised that I have left my glasses behind so I will simply have to do the best I can in the absence of that. This morning, before the public accounts committee, I began with a statement about where things stood with us. It might be useful for the committee if I run through that for the record again.

**THE CHAIR:** Indeed, yes.

**Mr Costello:** We have issued our annual report. In that, we set out the situation up to 30 June. We foreshadowed that in July we would be sending to the government our recommendations, drawing on the work that we have done in 2004, 2005 and this year. There was an enormous amount of consultancy work, with expert evidence, all peer reviewed and so on.

As a result of that work, we made some recommendations to the government, and they have come down with a series of five key conclusions for us. The first is that we should begin the construction of an enlarged Cotter dam as soon as possible. We have put our requests for proposals for the design and construction of that dam. We expect to get the responses for the design by 21 December, and preliminary approaches by constructors at that time too, and then final information from potential constructors by February, with a view to going to our board in about April for a decision.

The second proposal that the government agreed to in broad principle was that we very much enhance our ability to transfer water from the Murrumbidgee into the Googong dam. We currently have that possibility via the Stromlo treatment plant, but this proposal was for something to transfer it directly from the Murrumbidgee where it flows through Canberra across to the Googong dam, with us to go back to our shareholders early next year to seek final agreement and in particular to seek final agreement on where that should be sourced from. We had considered Angle Crossing.

We are now looking at Point Hut. We are also looking at one little bit somewhere in between those two. What was at issue was in part the ease of getting approvals. If we can go through an easement that we already own the whole way, it is a great deal easier with no private land involved. Of course, one of the problems with going from Angle Crossing is that it has a very high lift: from Angle Crossing itself, you have to lift it up something like 70 or 90 metres, maybe 100 metres, and that is an expensive thing.

**THE CHAIR:** I have walked up that approach road many times.

**Mr Costello:** And that is expensive. You would not have to do that from Point Hut.

The third proposal they agreed was that we should examine as a matter of urgency whether over the course of the coming 12 months we could develop and acquire water rights down river in the Murray-Darling system from agricultural users or other users that would then give us a right to store that water in Tantangara as and when we needed it to bring it down the Murrumbidgee and draw on that water. That will not be a simple thing to do. There is a very tricky set of legal and jurisdictional issues involved and very considerable political sensitivities in buying the water rights from farmers. The farmers are often very happy sellers, but the small country towns that surround them and to some extent depend on them are not so happy about us doing so. It is not just about us but more generally, because of course the commonwealth is going to be a much bigger buyer than anybody for environmental purposes.

So there is a set of difficult issues there. And of course the most difficult issue right now is that these water rights have no allocation given to them. It is zero allocation. I see in today's paper that the forecast is that next year they will have zero allocation. So you have a licence to take a certain amount of water but you have actually had none allocated to you. That does not apply to high-security water rights where there are 70 per cent allocations, but, not surprisingly, they are very, very expensive at the moment. So there is a whole set of issues about what we do in regard to that that we are going to have to consider going through the year.

The fourth decision the government made was that, in a sense, they were not yet prepared to come to a conclusion on the possibility of a water purification project. They needed further analysis and information both from us and from others. In particular, they would want to see where the Tantangara project ended up before they came to a conclusion. If the Tantangara project were to be successful within a reasonable period of time, that would be another source, and a considerable source, of alternative water. They will not know the answer to that, and nor will we, until the end of next year or maybe early the year after.

However, they did decide that we should go ahead with the design of a demonstration plant in the meantime, so that if the government came to the conclusion in 2009 that this did need to go ahead, we would not have lost a whole year. Presumably, if they did decide to do that at that time, it would be because other options were looking pretty bad and they would want us to proceed in a minimum time frame.

Those were the four structural conclusions. The final one was that there would be greenhouse gas offsets to the energy that would be consumed, from both the



construction and the operation of these new facilities. We are doing work on that now. That will, of course, be significantly impacted by the decisions of the new federal government's approach to greenhouse gas emissions and what it will do about carbon trading and so on. So we have quite an agenda in front of us there.

Why did we come to this new set of proposals when only 18 months ago we felt we could put those off for some time? The answer lies in the scientific advice we got two years ago and the scientific advice we are getting now. Two years ago, based on the CSIRO analysis which was done specifically for us, we took their most pessimistic set of assumptions. That most pessimistic set of assumptions was that, by 2030, our long-term average inflows would have declined by 30 per cent. Over the last seven years, they have declined by 63 per cent. In 2006, they declined by nearly 90 per cent. This year, they have declined by something like 63 per cent so far, with the way it is going at the moment. So there has been no real let-up at the moment.

We got further work done on this to see what this meant. In light of that further work, we are now working on the basis that our long-term decline in inflows will be closer to 50 per cent, not 30 per cent. When they said 30 per cent, they were talking about this happening by 2030. We assumed straightaway that it would happen right now, but even that was not pessimistic enough.

Furthermore, the advice we now have from the scientists—and this is all available to the public—is that within that declining average there will be more frequent droughts and that they will be longer and more severe than the one we are in now. This leaves us in a situation where we have to plan not just for most years being ordinary sorts of years; we have to provide for much more frequent occasions, perhaps as often as a once-in-20-year cycle, where we have a long, severe drought. It means we have to have capacity to deal with that situation. We are working on a basis which is clearly the only basis on which we should work—that is, hope for the best and prepare for the worst, because so far the worst seems to be what has eventuated.

I mentioned this morning that only a week ago I was given advice by an atmospheric scientist from the ANU who wanted to talk to me and someone from the government to explain that this was not just a matter of global warming or climate variability; that even without taking that into account we would probably end up with a 30-year drought, anyway. It did not mean we would be in drought for the whole 30 years but that that was the dry period we were facing. So we had another 20-odd years to go. I do not know whether that is right. I am not a scientist, and I guess nobody knows absolutely for sure. All I know is that if those sorts of possibilities are there, we have to be in a situation where we can cope with them.

That is what we are working on at the moment. We are not the only ones facing this situation or reacting in this way. All the other states and territories are working on the basis that what occurred in the last six or seven years is something they are going to have to be prepared for on a regular basis. It is not a matter of hoping for rain in the next couple of years and everything will then go back to normal. The consequence of that is a massive infrastructure building program taking place around the country over the next five years—much bigger than the one we are talking about, and we are talking about what, for us, is a big program. I think Victoria is talking about somewhere between \$3 billion and \$5 billion; South Australia is about to build a

desalination plant worth a couple of billion dollars; Queensland is spending billions of dollars.

These are huge projects. It is not only happening here; it is happening around the world. The demand on skills and resources, both at the higher engineering and analytical level and at the skilled worker level, is extremely high. The demand on pipes, concrete and all the other things is extremely high. We did our cost analysis based on the best estimates we could get from the best engineering firms we could and we got the best quantity surveyors to do the work for us that we could. With a plus or minus, as we said at the time, contingency factor—plus or minus 30 per cent—we put forward the \$150-odd million for the dam and \$70-odd million for the Murrumbidgee, \$270 million for the large water purification project and \$30 million in capital for the Tantangara project. With the exception of the Tantangara project, where you are buying water rights, if you are buying them in a situation where water has become incredibly scarce, all of those things are subject to extraordinary price pressures. Even with the plus or minus 20 to 30 per cent that we talked about in our report, we can't be absolutely confident that that is where it will end up.

As I say, we have put out a tender, effectively—request for proposals—for the Murrumbidgee to Googong project and the Cotter dam project, and we have allied with that another major piece of work which we would have had to do, anyway, which is \$30 million on the spillway at Googong to repair and maintain it. We will wait and see what prices we get but we are not expecting it to be much on the minus 20 per cent side. When I said plus or minus 20 per cent, it is much more likely to be on the other side. We are getting some further work done, and so far the industry reports are saying that the average price increases over the next three years are between 25 and 30 per cent.

That is where we are. We have no choice, we feel, but to go ahead with these things involving major projects. I should add that the total cost of future water options could vary by somewhere between \$250 million and \$600 million, depending on which ones we do, and whether we do all of them. On top of that, we know that already we have to allocate \$300 million for what we have to do over the next five years on our routine capital works. For example, we are about to spend \$70 million on an upgrade of lower Molonglo, and that is just the first stage. We are likely to have to do some more in four or five years time.

So there is a very big demand on capital works here in the next several years. At a minimum, I would imagine it would cost \$550 million, and it is more likely to be higher than that. It will be a bonanza for local firms, but they certainly do not have the capacity to cope with that and all the other work that is around. There will be many other firms coming in.

**THE CHAIR:** Just before you arrived this afternoon, the Molonglo Catchment Group appeared before us. They raised an issue which has been discussed in the Assembly and in public forums about new residential developments for Canberra. With these programs that you are looking at putting in place now, with a new dam and the other water collection options, do you think that will cover the future needs of these residential areas?

**Mr Costello:** If we have a long-term decline in water flows of about 50 per cent, and if we have longer, drier and more frequent droughts, these proposals should deal with a population of over 500,000—probably closer to 550,000. If it is worse than that, I have to think again. But a population of 500,000 people will not occur in Canberra until the mid-thirties. If we do all of these things, we should well and truly be able to deal with any population growth in the next 10 to 15 years. It would only be if inflows were even worse that we would have to think again.

There is a certain point, and we don't really know what it is yet, but certainly if it was 2006 every year, year after year, with a 90 per cent decline in inflows, the viability of Canberra and this whole region would be in question. The only way you could possibly sustain the city in those circumstances would be by having a desalination plant at the coast. There would be no other way to do it. In that year, 2006, we got inflows of 20 gigalitres, and our net use, with our current population, even with water restrictions, is 30 gigalitres. You don't have to do the maths for very long to see where you end up with that. And it gets worse each year, of course, because the ground gets drier and drier. When you get rain, it takes longer and longer before you get the inflows. We had good rain in November, and we got an increase in our dams of two per cent because the ground is so dry, from the weather in July, August, September and October, that it just sucks it up. This is designed to meet the population projections and the planning parameters set by the government of over 500,000 people, and to meet the growing needs of the region—another 30,000 in the region surrounding Canberra.

**THE CHAIR:** We are all fairly aware of the permanent water conservation measures that Actew have been promoting and that we have in place now. We have seen a lot of encouragement for the reduction in use of water in residential areas. Can you tell me what sort of programs you have in place for a reduction in the use of water in the commercial area.

**Mr Costello:** It depends where they are. We require for large users, for example the parks and gardens people, a 35 per cent reduction at the moment in water use. How they do that may involve a different methodology from that of our household users. That is what we require of them.

**Ms Stolt:** TAMS has what they call a water efficiency program. Under that program there are some of the residential subsidies and rebates that we have seen, as well as the commercial aspects of water efficiency. From Actew's perspective, we have been requested by the government to introduce permanent water conservation measures. To do that effectively, we have tailored a program of education around the regulated measures. Essentially, that is how the programs are structured, both within Actew and significant programs within TAMS.

**Mr Costello:** At the beginning of 2006, we introduced new permanent water conservation measures, which effectively were pretty much the old stage 1, but that is the base from which we will work in the future. That was all we had in place through that year until October. When did we go to stage 2?

**Ms Stolt:** November.

**Mr Costello:** During those 10 months, we had a 13 per cent decline in what we normally would have expected to use. So they seemed to have an impact. It is hard to make an absolute judgement on that because there were other factors at work. People were coming out of a period when they had been in water restrictions. Also, because of the pricing methodology used by the regulator, water prices went up that year, to catch up with what had been lost the previous year. It is not a system we have ever supported but it is the one that he has chosen to use because he does not want us to have windfall profits in years when there are no water restrictions and people are using a lot.

Working out what had the impact—the prices or the water restrictions—is hard. A strong view seems to be coming out on the part of the regulator, and indeed elsewhere, that those sorts of prices were not nearly sufficient to overcome the inelasticity in demand. Therefore, if that is correct, they would not have had much impact and it related to the more permanent water conservation measures, allied with a vigorous program of education and communication. As you no doubt noticed on television and elsewhere, we spent a lot of time advertising about this. We have done a fair bit of measuring work to see whether people are aware of it, and they are indeed, which is pretty pleasing. You can see it in the results: the ABS figures came out a couple of days ago. I don't know whether you saw that report.

**THE CHAIR:** I did not.

**Mr Costello:** It was extremely good news: with respect to our reductions over the last six or seven years, we are the best in Australia. I think the figure was 20 per cent, and we were second-best in grey water use. There were a whole series of very good results that we have to be pleased about. In part, I would like to pat myself on the back for it, since nobody else will, but I think it is only fair to say that Canberra is pretty good in these things, anyway. The population tends to be careful about these things, to listen and so on. It is a highly educated population. Still, that is a good result, and we should be pretty pleased about it: a 20 per cent reduction, in raw figures.

There is a different way of looking at it which makes it even better. I am not doing this to exaggerate it. In a normal year, whatever a normal year is, we would use 65 gigitalitres gross and then put 35 gigitalitres back in the river after treatment. But we need to extract 65 gigitalitres. But in the sort of weather we have been having in the last six or seven years, as dry and as hot as they have been, we would be using 75 to 80 gigitalitres. This 20 per cent reduction is based on the 65 gigitalitres. If you do a temperature and climate adjustment, it is really a 30 per cent reduction on what we would normally have used during that period. So it is pretty significant and it is quite an achievement.

**MR SESELJA:** Where do you see those permanent conservation measures going? The old stage 1—obviously if you look back at it now, you think that is very loose.

**Mr Costello:** Bliss.

**THE CHAIR:** Where do you see that settling if the projected rainfalls, on your latest assumptions, were to come to fruition?

**Mr Costello:** As I mentioned, for that 10 months they seemed to have some worthwhile effect. They are certainly worth keeping. The question is: do you have a permanent water conservation regime that goes further? The government, as part of the decision it announced in relation to our water security proposals, announced that it wanted to review the restrictions regime, including the permanent conservation measures. We think that that is a good idea and we will test Canberrans to see if they are prepared to go a step further, which is effectively what we now call stage 1, which was the old stage 2—you can water both your lawn and your garden every second day. We know that works. It may well be that the government decides to take that extra step. I have no doubt that that would add to the effectiveness of permanent conservation measures. You do have to test what the community will bear in the end and what their priorities are. In the end, that is a decision for governments, not for Actew.

**MR SESELJA:** The charts on page 4 of your submission talk about annual inflows. What you have there goes to the end of August 2007. Are you able to update us on where we are at now in relation to average inflows—the most recent figures you have?

**Mr Knee:** They were about 30 per cent at the end of November.

**MR SESELJA:** So they have actually gone down since the annual report figures?

**Mr Costello:** There was a very dry September and October.

**MR SESELJA:** Even with a very wet November, the dry October has cancelled that out?

**Mr Costello:** Yes. When you get hot weather, even if you get rain, it just sucks it up. The very dry ground sucks it in and the sun sucks it up. We have had an increase in the levels of about two per cent, I think, since early November, with the level of rain. That is it.

**THE CHAIR:** Does that occur mainly through transpiration or evaporation?

**Mr Costello:** The first thing is this. If the ground is, as we say, primed—you have had a couple of weeks of rain—then quite light showers will give you a good inflow in reasonably cool weather. But if you have had no rain for a long while and it has been very hot, it will take three weeks to prime the ground before you get much inflow. And then, if it is still hot weather, despite the rainfall, you will get evaporation—an increased level of evaporation. That has been the problem we have had—very dry ground, very dry days. Even when it is raining, it has been hot. That adds to consumption too. Is that sufficient answer?

**MR SESELJA:** Yes, thank you. And we are currently around 44 per cent?

**Mr Costello:** About 43.8.

**THE CHAIR:** What level would we have to get to through better inflows for the dams to rise again to a level where we would be able to bring those restrictions back

down?

**Mr Costello:** That is something we are debating at the moment. We need to go above 45 per cent before we even think about coming out of stage 3. But I will be honest. At the end of 2005 we had a fantastic second half of the year—a very good year: we actually had 57 per cent of our normal inflows that year—and we got up to 67 per cent in our dams. We said, “You can’t keep restrictions on when you are at 67 per cent. Let’s just go to permanent water conservation measures.” And we did, from the beginning of January 2006. We had permanent water conservation measures on. People restricted their consumption even so—as I said, 13 per cent less than they normally would have. And by November we were in a terrible state, down to 40 per cent. People rightly said, “Why did you do that?” The answer is: how can you have water restrictions on when you are at 67 per cent? We now know that answer. This is something that we have not experienced before. We have to be extremely cautious. So I will be in no hurry to lift the restrictions.

But on the other hand you have to balance that. There are people’s livelihoods suffering under stage 3 restrictions and you cannot casually—what I do not want to do is go out of stage 3 and then three months later be back in it. That would be a worse outcome. At the moment, we are examining the question of what the level would be before we would go out of it. The prospect of stage 4—we need to do everything in our power to avoid stage 4. If that means staying in stage 3 for the sake of double assurance, then I would rather do that than the other. Stage 4 is very damaging to an additional group of people—businesses and livelihoods—aside from people’s homes and gardens.

**MR SESELJA:** I take it from that that, unless there is significant rain or significant inflows in the next little bit, we would not expect to see the exemptions that were given once a week for sprinklers during the summer months.

**Mr Costello:** We will be considering that at our board meeting tomorrow. I would be the last person to presume my board’s decision, but that is being considered. The fact is that, if we did bring in sprinkler exemption from, say, this weekend or the weekend after to the end of January or the first week of February, that would, we have calculated, be about 150 megalitres, which is about a day’s consumption under the stage 3 restrictions. You might consider that it is worth it but I do not want to prejudge my board’s decision on this, because that is what they are there for: they are there to bring their views and community views, not just the views of someone who is a technician.

**THE CHAIR:** Just on the same line of when restrictions would drop if inflows go up: if we are now looking at constructing a bigger dam at the Cotter, will we need to restrict—let us say that inflows increase and dam levels go up. When you start to fill the new dam, will you need to put restrictions in place so that that fills at a reasonable rate?

**Mr Costello:** That is something I have not considered, to be honest. I guess it is five years off, but it is something that we will have to take into account. We want that dam to fill as quickly as it can, obviously. It will depend a bit on the state of Googong dam. If Googong dam at the time is in good shape because we have been able to pump a lot

of water there from the Murrumbidgee—if it is at 85 or 90 per cent—then no. But if Googong dam is in a difficult situation, then I guess the answer to your question would be yes.

**MR SESELJA:** How much potential water is there for us to utilise from the Tantangara option on a per annum basis?

**Mr Costello:** It is unlimited in a sense, depending on the water rights you buy and whether there are water allocations. You could buy rights to 100 gigalitres of water but that is not much use if that year there is no allocation. If you think of it in a longer-term way rather than just as an immediate crisis, you would have it so that when you did have allocations you would be topping your dams up, you would keep them up and you would store any surplus—if you could get the agreement of the Snowy Hydro for a reasonable price, and one should not presume that; there is nothing like an unregulated monopoly to squeeze out from you.

That is what I hope we could do. We could store water there in good years so that when we needed it we could bring it down the river. There is a question mark about that, and it is going to be part of the next year's consideration. The question mark is, first, price. The second thing is that Tantangara dam is about a 300-gigalitre dam. If we are storing large amounts of water, what would that do to that dam in terms of its other uses? I do not think it would do a lot; that is my guess. The reason for that is that when the snow melts, you get something like 300 gigalitres a year flowing into the dam but it does not stay there; it is pumped straight through and goes down the tunnels to the other dams, where it is used for hydro power and released down the river for irrigation. Tantangara does not sit there full of water; it is emptied straightaway for hydro power. So I cannot see why we could not keep using it.

If that is not possible—if they say that it is too small a dam to permanently store 70, 80 or 90 gigalitres in there, which would make it a very cheap option for a dam: effectively additional storage—they may be prepared to store that amount of extra water in the Eucumbene dam, which is 3,000 or 4,000 gigalitres. It is a very large dam where you would not even notice an extra 150 gigalitres. But to do that you would have to build a small pumping pipeline—pay the cost of that plus the pumping cost to pump it up and into the Murrumbidgee from there.

We are looking at balancing the two of those, but a lot will depend on what Snowy Hydro are prepared to do. They are gods up there, and they know they are. They are an unregulated monopoly and they can and do do what they like.

**THE CHAIR:** Do you have any further questions, Mr Seselja?

**MR SESELJA:** No.

**THE CHAIR:** Thanks very much for coming in this afternoon and for your detailed submission. If we have any further questions, we will get them to you in the next day or so and we will get a copy of the transcript to you as soon as possible.

**The committee adjourned at 4.34 pm.**