

## Address in reply to Governor's opening of Parliament

Sept 11, 2008

**Mr PEDERICK (Hammond) (16:16):** In beginning my Address in Reply, I acknowledge the excellent work and the fine service that the Governor is giving this state. Members would be aware that there is growing pressure to take two massive steps for the future of the River Murray and the Lower Lakes: (1) dam the river at Wellington to temporarily relieve the critical water supply problem the state now faces; and (2) open the barrages to allow sea water into the Lower Lakes to prevent the spread of acid sulphate soils.

The causes of these two huge problems have been discussed many times before in this place, and I do not propose to go over them in detail again. Suffice to say, the problem is man-made, not a freak of nature. Nature is merely another victim of man's mismanagement. As we face the looming prospect of signing the death warrant for our precious river and lakes, the local communities and other caring Australians, with a bit of help from Mother Nature, are re-examining the fine detail of the current situation and ways to save the ecosystem.

It has become apparent that much of the science is inaccurate or inadequate. Crucial and terminal decisions must not be based on wrong information. Before anyone presumes to override nature and institute more engineering fixes for this tortured environment, consider some of the information we do have that must be carefully considered first.

The following statements are either direct quotes or statements based on facts from a Murray-Darling Basin Commission document entitled *Salinity Audit*, produced in 1999. It states:

The rivers generally collect groundwater in their lower reaches and carry it to the sea. During periods of low flow, the salinity of the streams and rivers rises dramatically.

...Currently [1998] the River Murray exports an average of 2.1 million tonnes of salt a year to the ocean.

...The salt load exported to and through rivers will double by 2100.

...Salt ingress into the Murray between Tocumwal and the border is 995,000 tonnes.

...From the South Australian border to the Barrages...the dominant salt source is direct accession by groundwater.

...The level of salinity in a river at any time is a consequence of the salt load and the flow.

...Regulation of rivers by dams and weirs and the diversion of water for consumptive uses have further compounded the lack of natural flushing.

...Water diversions have significantly reduced flows in the lower reaches of the River Murray, so much so that the median annual flows from the basin to the sea are only 21 per cent.

That was in 1999; it is obviously much less now. It continues:

Salinity in rivers was considered to be a downstream problem, and this continues to be so for the River Murray.

...There are serious implications for the Lower Lakes.

...As the feedwater salinities rise and the consequences of reduced 'whole-of-system' flow equilibrate, these water bodies will become regularly saline.

...The impact on streams and rivers is exacerbated by the reduction in flow resulting from the high rates of diversion...

A graph produced by DWLBC in 2008 depicts volumes of salt exported to the sea through the mouth over the period 1975 to 2007. Between 1975 and 2007 outflows at the mouth dropped from 8,000 gegalitres a year to 1,500 gegalitres a year. It used to be 12,900; it is currently zero. Between 1975 and 1997 an average of two million tonnes per year of salt were flushed out to sea. Between 1997 and 2007 an average of just 700,000 tonnes of salt were flushed out to sea. Taking the last five years—2002 to 2007—an average of only 200,000 tonnes of salt were flushed out to sea; it is currently zero.

Why am I relating all this information about salt loads and river flows? Because the salt is still accumulating—all 1.8 million tonnes of it annually. What will happen to all this salt if

the river is blocked at Wellington? The question must be answered before 700,000 tonnes of rock are dumped into the river. I have heard it said that some minimal flow over a spillway will occur, supposedly mitigating that salinity. But that spillway is in shallow water well to the east of the deepest part of the weir wall. Saline water sinks to the bottom, and the river channel, a kilometre or so upstream, is far deeper than the weir will be. The saline water will not simply flow over the shallow spillway; it will accumulate in the weir pool upstream.

I have another thought on this debacle. The South Australian section of the river does almost all the water treatment of the salt loads that come down the river, and it takes large volumes of water to be able to manage that salinity, yet we are expected to borrow water from upstream to assist with this and then pay it back. Where is the equity in that?

I now wish to address the issue of saving massive volumes of water from evaporation by damming the river. We have all been led to believe that there is anywhere between 750 and 1,400 gigalitres per year lost from the Lower Lakes. The most commonly quoted figures are somewhere around 1,000 to 1,200 gigalitres a year. That is a lot of water, although it is still less than is lost from man-made storages and channels upstream of the border, which is rarely, if ever, acknowledged.

An evaporation and inflow study just completed and currently being peer reviewed indicates that the true losses from the lakes are significantly less than is commonly stated by the Murray-Darling Basin Commission and other authorities, some of which concede that the true losses for the lakes have never been accurately calculated. Further investigation has revealed that it was an accepted fact that these estimations were inaccurate, being based on various approximations and non-specific factors. A CSIRO document from 2004 makes that clear.

The new study's finding is that the actual loss is closer to 400 gigalitres a year. That is vastly less than the huge and unnatural losses that occur from the hundreds of man-made inland storages and channels. Why is South Australia being asked to pay the evaporation price with what is, after all, a vital function of a natural ecosystem?

Early indications are that the methodology—and, therefore, conclusions of this new study—are sound. We could close off the lakes and flood them with sea water and still not save anywhere near the amount of water expected. Talk about throwing out the baby with the bath water! Interestingly, in a 2002 Murray-Darling Basin report entitled 'Environmental Flows for the River Murray—a Healthy River Murray System, Sustaining Communities and Preserving Unique Values', the following paragraph appears on page 17 under 'Further proposals':

#### Wellington Weir Proposal

A strong perception exists that the construction of a new weir at Wellington would save very large volumes, (hundreds of GL) of fresh water that would otherwise evaporate from the Lower Lakes system. There are significant costs and disbenefits but modelling to date indicates that the actual potential savings are only approximately 60 GL per annum.

It would be interesting to know how that figure was arrived at and why and when it was ignored or changed to justify the weir's construction—or is it just that pressure from other states forced the Premier's hand to be seen to be doing something?

Let us assume that the Premier goes ahead and builds a weir to appease his Labor mates in the east. Damming the River Murray then leads to a problem with low levels in the lakes. Much has been said about the risk of acid sulfate soils and the profound effect they have on water environments, because the lake beds have almost never been exposed before: unlike the ephemeral wetlands upstream, the problem with acidity is far greater.

But what are the real limits? What is the trigger point level for acidification? How accurate is that science, and just how late can we leave it before we abandon the lakes entirely? How much water would be needed to forestall that fateful decision? Where could we get that water from and how long would it take to get there? It may only require a small amount that could be sourced from the weir pools within South Australia.

Some calculations based on data freely available answer some of these questions about additional flows required to maintain minimum lake levels at minus 0.7 AHD, the level that we are currently told is safely above the minimum trigger point of minus 1.0 AHD, a figure

that was recently upgraded from minus 1.2 AHD. Various figures abound about this, with proponents of allowing sea water into the lakes pushing water volumes like 1,000 gegalitres that could fix the problem overnight. What locals want is for the lakes to be given a fighting chance.

Even though the consequences of acid sulfate soils are dire, the lakes' capacity to manage low levels should not be underestimated. The lakes do not need massive flows to struggle on to next winter. It has been calculated that, on current figures, allowing for 900 megalitres a day dilution flow past Wellington, recent rainfall, and allowing for the pumping into Lake Albert and estimates for other inflows and extractions, we might not need any extra water put into Lake Alexandrina until next winter to maintain the level at minus 0.7 AHD. We are told that the critical level for the potential onset of acidification is minus 1.0 AHD, so why would anyone advocate opening the barrages now?

It is highly questionable whether that would achieve any significant advantage, anyway, as with no outflows the mouth would want to close off completely. Suddenly we would be confronted with another expensive engineering dilemma. Even if we have an exceptionally hot, dry summer, and considering all the same factors that I have just mentioned, the amount of water required to maintain minus 0.7 AHD may be in the range of only 100 to 200 gegalitres. We must not be hasty on this: nature has given us some time.

While we are on the subject of lake levels, why is water still being pumped from Lake Alexandrina to Lake Albert when Lake Albert is currently at around minus 0.18 AHD? When this project started, the critical height was minus 0.4. Why do we not keep as much in Lake Alexandrina as we can for as long as we can?

There is another risk that needs vital answers before we write off the lakes and block the river at Wellington—or, I should say, the government writes off the lakes and blocks the river at Wellington: acid sulfate soils between Lock 1 and Wellington. Apart from the increased risk of blue-green algae in what would become a long weir pool with no appreciable flow because of a rock wall, I am advised that the river between Lock 1 and Wellington has a particularly low alkalinity reading, making its backwaters and wetlands—and, therefore, the river itself—very susceptible to acidification.

The alkalinity reading for this stretch of water is about 50 milligrams per litre. Sea water has 130 milligrams per litre, and the lake water is between 300 and 400 milligrams per litre. Therefore, the wind-driven flushing action between the lake and the river is even more crucial than its moderating effect on salinity alone. More work is currently being carried out on natural ways to mitigate the effects of acid sulfate soils, and the government should redouble its funding in support of this urgently needed research.

Does the \$120 million for a weir include the extra weirs/bunds required for the lake's three tributaries? As members may know, there are other smaller tributaries to the Lower Lakes, whose contribution to their survival was evidenced by substantial inflows from recent heavy rains in the eastern ranges. Lake Alexandrina gained at least 150 millimetres from this event.

These tributaries will have to be isolated from the body of the lakes or their contamination from seawater, or indeed acidifying lake water, would seem inevitable. Does the somewhat rubbery figure of \$120 million that has been given to build the weir at Wellington include their cost? It would seem extremely unlikely.

What will be the total cost of this action and will appropriate environmental impact studies be required for each of them? Will they be 'temporary'? If so, has the government factored in the cost of their removal? The South Australian public is used to big blow-outs with this government's major projects, so perhaps the government is counting on that in order to float them off another voter backlash reef.

It is hard not to be suspicious and even cynical of statements made by the government about the critical limits of water levels, inflows, salinity and toxicity readings, and other related matters vital to the decision making matrix. At the beginning of this water supply crisis we were told categorically that the pump off-takes in the Lower Murray that supply Adelaide could not possibly be lowered. After much debate the government announced that it

could lower these off-takes to a level of minus 1.5 metres AHD, thereby prolonging the time before a decision on the weir would have to be made.

For many months we all understood the maximum depth at which the Murray Bridge off-takes could operate was minus 1.5 metres AHD, but in an SA Water paper dated 4 June 2008 the maximum depth for operation with modifications is given as minus 2.1 AHD. In fact, it is also noted that the Mannum, Swan Reach and Tailm Bend pumps can be modified to operate down to minus 3 AHD. This is very pleasing news, but it differs significantly from the earlier figures and leaves one wondering what other variables are in the system.

In early July I travelled to north-western New South Wales and southern Queensland. I learnt many things about the way in which water is or is not managed effectively. The cries we hear in South Australia for fairness and equity with Australia's most valuable resource are not confined to this state. A great many farmers and others in those areas deplore the selfishness and greed they see above them in their local rivers.

I spoke to flood-plain graziers whose important food producing enterprises were founded on a reasonable expectation of water flowing as it always had. They are being deprived of that by their own neighbours and countrymen. Much has been said about water storages up north, and I note that more than Cubbie Station is operating in the far north. I was told that there are at least 22 major properties between the New South Wales-Queensland border and St George and a record amount of water—over 1,000 gigalitres—was diverted.

Between 1995 and 2002 diversions in that part of Australia increased threefold. One has to wonder where the water is? People down the bottom of the Murray, including Henry Jones, have said to me that they used to get 20 per cent of their water from the Darling and now they do not get anything. How often do we hear local farmers and their various community representatives, such as our water security minister's National Party colleague Barnaby Joyce, bleating about destroying the communities that have sprung up around massive new farms that are underpinned by excessive water diversions? Did any of them ever consider that scores of towns and communities downstream would be decimated by their actions?

I also learnt about the metering of water. I was surprised to learn that the only metering of water on these massive private dams is on the exit channels, so there is no accurate measurement of how much is taken out of the streams. Worse still, there is scant monitoring of these meter wheels—and it is known that farmers' boots get stuck in them for hours.

This lack of inflow metering also makes it impossible to accurately calculate storage losses through evaporation and leakages. It makes it almost impossible to detect water theft, if there is any. A water audit will be a valuable yardstick but effective ongoing management will depend on far greater monitoring and control.

This brings me to Premier Rann's recent hollow, belated threat on water theft and what he calls environmental terrorism. His bold announcement, coming well and truly after the horse has bolted, is an empty threat expressing indignation at practices about which we have known for some time. His labelling of water thieves as environmental terrorists is truly ironic. His November 2006 announcement of a weir at Wellington, which has terrified and threatened thousands of people in his own state, would qualify him as the environmental terrorist of the decade. Premier Rann's federal Labor colleagues may find themselves the subject of similar accusations at the upcoming Ramsar convention.

Through all this turmoil and community concern, what is being done to assist river communities at the local level? Several different groups are trying desperately to make the best of a bad lot in their own stretch of the river. Their ideas are not always winners, but they are ideas, and they do indicate that communities are actively seeking alternatives for their own economies. How much direct help is being given to them to develop and pursue these ideas?

Only yesterday the tourism minister proudly announced 24 projects around the state that would receive funding. How much will go to the struggling river communities? Three projects in the Riverland will receive \$200,000 between them and the lucky old Murraylands will get \$5,000 for one project. The minister's release states:

The South Australian government is committed to working with the tourism industry to encourage sustainable tourism developments that will attract high-yield visitors from interstate and overseas.

Only yesterday a constituent of mine advised that he had heard of a tour party of 50 New Zealanders who had cancelled their planned tour of the river because their agent told them that there was no water. If the minister's budget was so tight, it might be better spent on informing agents interstate and overseas that the river and its communities are not dead.

The most frustrating part of my job at the moment is constantly spreading the word to irrigators, journalists and the general public both here and interstate (and from time to time even my own counterparts) that the lakes were never a salt environment. It seems that many people who write letters to the editor in interstate papers do not read any other letters in the same paper. No sooner has a letter of mine refuting that dangerous misconception been published than more letters turn up the following week saying untruths. No wonder people upriver think we are selfish.

For those of you who still doubt the fact about the fresh water history of the lakes, let me refer to 'A Fresh History of the Lakes; Wellington to the Murray Mouth', published by the River Murray Catchment Water Management Board in 2004. The introduction states:

Saline invasions were more common after 1900 and the development of irrigation works because reduced river flows could not hold back the sea...Through the joint influences of long continued drought and an increasing diversion of its waters in its upper course, the River Murray has steadily lowered its levels so that its lower reaches and the lakes which for centuries it had supplied with a constant flow of fresh water, have fallen to sea level, with the result that instead of the river 'rushing out to sea' the tides of the ocean have flowed in, changing the freshwater lakes to salt ones.

That quote appeared originally in the *Southern Argus* (a Strathalbyn newspaper) in 1903. In 1902, the Superintendent of Point McLeay said:

Despite the long drought the waters of the lakes have always been sweet at this time of year, and more or less throughout the hot weather...

We so often hear statements like, 'Let the lakes return to their normal state'; 'revert to salt water'; 'go back to their estuarine condition'. These statements are all wrong and also very misleading, just as the suggestion that the barrages were built to create freshwater lakes. The barrages were not built to create a freshwater environment but to preserve one. These commonly held but incorrect beliefs are often at the root of poor judgment and unreasonable demands on us as river and lakes custodians to implement even more changes, change that will potentially destroy not just the environment itself but the way of life we seek to preserve.

I would like to know whether members opposite are generally aware of the true facts about the history of the Lower Lakes. More to the point, does the Premier and his water security minister (who I acknowledge is in the house) accept this fact and have they ensured that their counterparts from the east understand it?\_It is a critical piece of information. How many bad decisions have been and continue to be based on that misunderstanding? We just need to ensure that the right decisions are made in the short term so that we get the proper longer term outcomes for the whole river system right throughout the basin, including the Lower Lakes.

I cannot let this moment pass without saying a few words about the Country Health Care Plan debacle. This ill-conceived and city-centric plan was slipped under the public's door last budget day. It contradicted the understanding most country health professionals had about what to expect and flew in the face of the spirit of agreements the government had struck with country health communities. Not surprisingly, there was a huge outcry which the government accused the opposition of orchestrating. Perhaps members opposite have forgotten what it is like to be in opposition. It will not be long and they will have to start remembering. When constituents flood your office with phone calls, letters, emails and visits, the local member must act, especially when the basis of their complaints is so compellingly obvious.

Yes, I took part in community forums (as did many of my colleagues), and yes, I circulated petition forms registering the community's horror and indignation at the government's clumsy plan. That is my job. The opposition did not precipitate the statewide outcry: we facilitated it, as we must. As if to underline the government's total mismanagement of the whole business, weeks after the plan was withdrawn, we started to get calls from

anxious constituents who had received government initiated surveys proclaiming the plan's benefits and describing changes to local services that had already been abandoned. I suggest we rename the government's offices 'Faulty Towers' in recognition of their blundering and insensitive incompetence.

In the few minutes I have left, I will say a few words about the upcoming development of the high security correctional services precinct that will be built at Mobilong near Murray Bridge. I know that the council, along with me, have had several discussions with Treasurer Foley, minister Conlon and others on the other side about the needs for the Murray Bridge community and surrounding areas when this proposal takes shape.

A social and economic study does need to be instigated so that we can see the full effect of what will happen when a 700-odd cell prison is constructed in Murray Bridge, the women's prison of 100 cells and also the forensic mental health facility to ensure that we get the right outcomes for families who will move to Murray Bridge, whether they be prisoners' families or warders' families, and also to look after the present population. Government services will need to come up the road, as well.

I hope the government is taking that into account because, at a briefing the other day at the local council of the rural city of Murray Bridge, the Public Service Association certainly made their members' issues clear. Many of them said that they would not drive up the road. To me the trip from Murray Bridge to Adelaide is a walk in the park. It is only about 50 minutes. It is no fuss at all. I do understand that many people will have to relocate or work out their work options. I do acknowledge that the prison precinct will provide an economic boost in the short term, especially its construction, etc. In the longer term, we must ensure that we have the right social outcomes and the appropriate amount of services in Murray Bridge.

Looking particularly at the forensic mental health facility; will the appropriate doctors, nurses, psychologists and psychiatrists travel up the road? Looking at the prisons, will lawyers come up from North Adelaide to Murray Bridge? When you talk to some of these people, you would think we lived on Mars. Murray Bridge is a nice place and I hope that the people associated with the prisons, if they need to come to the community, will find out how good a place it is to live, but only if it receives the appropriate support from government agencies and others. Housing is affordable. For around a couple of hundred thousand dollars you can get an excellent place to live, but the community does need support so that people can enjoy the lifestyle and everyone can get on as one. With those few words I conclude my remarks.