THE DISAPPEARING THIRLMERE LAKES

A Submission for the Thirlmere Lakes Inquiry

Introduction

My parents moved to Tahmoor (near Thirlmere) about 60 years ago and when I was a child I was occasionally taken to Thirlmere Lakes. After school, I lived in Sydney for 6 years but even then made visits to Thirlmere Lakes. From 1971, I started visiting the lakes frequently. I have somewhat relevant tertiary qualifications and am quite capable of estimating the degree to which the lakes rose and fell before the last 10 years. Until about a year ago, I assumed that the drying up of Thirlmere Lakes was a manifestation of climate change. Then Julie Sheppard, who I trust, pointed out to me that the water level continued falling even after 6 or 7 weeks of above average rainfall. It now seems highly likely that there are two explanations for the disappearance of the lakes – a very long period of below average rainfall and leakage of the lakes into strata that have been drained by the local coal mine. One would need to carefully consider a wide range of information before accurately estimating the extent to which the mine has contributed to the falling water level. Pells Consulting has done such a study – without being hired by anyone. The subject of the Pells report is very important. Thirlmere Lakes are (were?) an unusual part of a World Heritage Area.

Vital Pieces of Information from Julie Sheppard

As a volunteer conservationist with a background in Urban and Regional Planning, I have worked with Julie Sheppard on various conservation projects during the last 22 years. During that time I've had hundreds of conversations with Julie – including some long conversations. I consider her to be a person of high integrity. According to Julie's submission, Lake Werri Berri had plenty of water on 7/6/2008. That fact is not surprising. The long drought broke (early?) in 2007. Since then we have had some significant periods of above average rainfall.

Importantly, Julie claims that on 13/10/2010, she photographed some posts poking out of Lake Couridjah. She returned after a period of heavy rain on 30/11/2010 and was shocked to find that, instead of rising significantly, the water level had fallen significantly. Julie keeps a record of rainfall on the north slope of the
Razorack. She claims that, during the above-mentioned 6 week period, 203mm fell at her rain gauge on Razorback. That is (almost?) 30% of the average rainfall for her area. When I was a planner, I came across a map showing that rainfall in Thirlmere was substantially higher than the rainfall in Cawdor at the bottom of Razorback and that the rainfall increased south-west of Thirlmere. Note that the land rises south and west of Thirlmere in the vicinity of the lakes so during the above-mentioned 6 week period, the rainfall at the Lakes may have been more than 230mm.

Experience of the Lakes Over Six Decades

I moved from Sydney to Tahmoor (near Thirlmere) when I was about 3 years old and when pristine bush and streams were abundant in the area. By this time, one of my best friends, Michael, was living at Tahmoor before moving with his parents to Picton. My parents were not lovers of the outdoors so I was probably taken to the Lakes only about a half dozen times before I became a car owner in 1968/69. My early experience of nature consisted of walking around the bush in Tahmoor and around Bargo River. Michael, by contrast, was taken to the Lakes many times and was able to use a home-made canoe.

Both Michael and I remember that the Lakes were always full or nearly full when we saw them in the 1950s and 1960s. However, Michael can remember seeing small stumps in the water suggesting that the water level had once been much lower. Such stumps were rare, however. People dived off the jetty that once existed on Lake Couridjah and people went water skiing on Lake Werri Berri.

A friend of Michael's says that it was possible, in the 1940s, to walk across Lake Couridjah but at that time the Lakes may have been used as a source of water for irrigation and for steam engines. The remains of a pumping station can be seen at Lake Couridjah.

When I became a car owner, I was able to visit the Lakes more frequently and did so even though I lived in Sydney for 6 years. I had a large surfboard that I used for moving quickly on the Lakes. In 1981 I was a married man living in Thirlmere. I bought a bicycle and became an even more frequent visitor to the Lakes. I probably rode past them or around them at least once per month.

Both Michael and I are sure that from 1971 to about 1990, the water level of the Lakes rose or fell by only a metre or two – probably closer to a metre. Michael claims that it also only rose by a metre or two during the 1950s and 1960s and my recollections support his assertion. Michael, however, has vivid memories of Stonequarry Creek, Picton, overflowing after heavy rain. Such flooding has been less severe during the last 2 decades. Michael therefore thinks that the drought (climate change?) is a significant cause of the Lakes demise. However, the drought ended about 5 years ago and there have been periods of higher than normal rainfall since then. Surely by now the soil would be moist enough for much of the rain to run off and replenish the Lakes.
Very Briefly, the Science, Credibility, Verifiability etc

To a large extent science is about observation and verification. The above material is the result of observations and various other people can verify that what we have reported is accurate. However, our observations are not as precise as one would expect from a professional scientist employed to study the topic. I believe, however, that we have been fairer and more precise than certain government officials who have commented of the matter.

Pells Consulting and Their Press Release

It could certainly be argued that the lengthy report by Pells Consulting is the most valuable source of information about the (permanent?) demise of Thirlmere Lakes. Dr Philip Pells is suitably qualified and is highly experienced. His experience includes writing reports commissioned by the coal mining industry. He seems to be semi-retired and therefore is more inclined than many consultants to be free to say what he believes is the truth. It seems that he undertook the project because he believes World Heritage Areas are important and because he enjoys sifting through evidence and determining what the truth is. Note that, for his report on Thirlmere Lakes, he was not hired by Rivers SOS, The National Parks Association or any other environmental organisation.

Arguably, the most important quotes from the press release by Pells Consulting, on 20/11/2011, are as follows:

“An independent study into the water levels in Thirlmere Lakes.....has found that critical water levels in the World Heritage listed Thirlmere Lakes cannot by fully explained by climate. Recent declines in water levels also correspond with longwall mining in the region”

“The lakes are currently 1.5 to 2.5 m lower in level than predicted by our models”.

“The report contains an extensive review of photographs, archives and anecdotal records extending back to 1860”.

“A comparison of lake water levels against rainfall data records over this period shows that lake levels have indeed fluctuated with drought patterns.”
However, lake levels have continued to decline (with current conditions believed to be the lowest on record) and the most recent drought in 2006 was less severe than previous droughts on record. The data suggests that Lake Nerrigorang has declined earlier and more severely than the other lakes, something that has not occurred in the past.”

“The study concludes it is unlikely that mine-induced subsidence and geological fracturing would extend to the lakes. However, regional lowering of aquifer water levels has been observed due to mine dewatering processes.”

How Independent is the Committee?

Material produced by the Government about the Inquiry says a few times that the committee will be independent. The material suggests that there will be 5 members on the committee but has listed only 4 – Dr Steven Riley, Dr Wendy McLean, Assoc Prof. Damian Gore and Prof. Max Finlayson. I have sought information, from the Internet, about these people. The material that I've read, so far, suggests that the 4 are very competent and are indeed independent. Of course, I may change my mind as a result of further research.

Concluding Comments

I hope that there is no antagonism between Pells and the members of the committee. I hope that they can all find common ground. Importantly, I hope that the committee is as independent as it appears to be and as independent as Pells seems to be. Remember. We are considering a World Heritage Area. I urge all stakeholders to value the public interest and the wonderful planet we live on.

My qualifications and experience do not allow me to reach definite conclusions but as a result of considering the material mentioned in this brief submission I think it is likely that the coal mine has had quite a direct impact on the water level of the Lakes.

If we have had a longer than normal drought, it may be that global warming has caused a change in climate. There is much scepticism about climate change in Australia at present but that seems to be the result of wishful thinking and/or right-wing political propaganda. I urge people to read material by Sir John Houghton
and Dr James Hansen. They seem to be the people most qualified to talk about global warming.

If global warming has been a significant cause of the Lakes demise, then we can say that the mine and all other coal mines have contributed indirectly to such demise. We can only hope that there is a bright future with renewable energy sources becoming dominant. In the meantime, a degree of coal use is necessary and will probably be necessary for many decades. We therefore have to learn lessons from the demise of Thirlmere Lakes. In particular, governments need to be more cautious when approving coal mines and the extension of such mines.