

**INQUIRY INTO ADEQUACY OF WATER STORAGES IN  
NSW**

**Name:** Mr Paul W Heinrichs

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Standing Committee on State Development

Legislative Council

Parliament House

Macquarie St

SYDNEY NSW, 2000

ATTN Ms Cathryn Cummins

Dear Ms Cummins

RE Adequacy of Water Storages

Thank you for granting me an extension of time to make a submission to this enquiry. Also let me congratulate the Government for at last holding an enquiry into such a vital issue which affects us and our future generations. Hopefully the end result of the enquiry will be the start of an exciting new program of developing dams in NSW for the benefit of the vast majority of the population, and hopefully such a program will not be stopped by a very small group of people with misguided "ideals" I also realise that the state presently has limited funds, but possibly in the future some re-prioritisation of expenditure of tax-payers money would cover this.

By way of introduction, I am a civil engineer, now in semi- retirement, with approximately 40 year's experience in the dams/water supply industry, having worked my entire career with various forms of the NSW Public Service. I therefore admit to a certain degree of bias in my comments.

The first new dam that should be built is Welcome Reef on the upper Shoalhaven River near Braidwood. This dam was originally going to be built in the 1980s, but unfortunately the then premier bob Carr (bob the builder?) canned this project due to some sort of environmental objections, and even though the land has been designated a national park I am sure this could be reversed if necessary as the land (which I have visited) is not pristine rain forest, or anything of specific incredible environmental value. In 1967 when I first came to Sydney to study engineering the population was between 2.5 and 3 million, and the last drop of water stored in a dam was the Shoalhaven scheme built in the mid 1970s. Since then the population of Sydney has ballooned to approx.. 4.5 million, but not a single extra drop of storage has been added to Sydney's water supply. Simple primary school mathematics will therefor explain why even given the drought periods, the storage level in Warragamba dropped to an alarming level of about 30%. A paper on the hydrology of the

dam by Dr John Brown, ex of Snowy Mountains Engineering Corporation (SMEC) written in the 1980s is still relevant, and this proves that there is sufficient yield off the catchment to keep this approx. 1,000,000 Megalitre storage more than sufficiently full to meet the greatly increased demand from the ever growing Sydney population. In fact, had this dam been built in the 1980s there would have been no need for the expensive desalination plant with its constant demand for extra power, and its outfall source of polluting concentrated brine.

Another dam that would be of great use is one at the Duckmaloi weir on the upper Macquarie. This would provide extra water for the power station at Mount Piper where units 3 & 4 could be built to increase the power in the state grid by 1400Megawatts. This damsite has greater yield than Oberon and the country that would be inundated is unpopulated and not of any environmental significance. The extra water from this dam would also help Lithgow overcome its water shortage problems and would probably assist with the water requirement of the nearby coal mines. If this dam site is considered unsuitable, there are 3 other dam sites on the upper Macquarie tributaries at Turon, Tarana and the upper Macquarie itself. When I was a junior engineer with the then Water Conservation and Irrigation Commission I investigated these dam sites and found them all to be physically and economically viable.

The Hunter valley is another area where dams could be built, firstly to mitigate the effects of flooding in Maitland and secondly to provide water for industry in the valley. Originally 5 dams were to be built when an aluminium smelter was to be built in Newcastle by the Japanese, but unfortunately that fell through. In those days Neville Wran on return from a trip to Germany wanted to turn the Hunter into another Ruhr, but lack of water and funds precluded this. Sites were at Rouchel Brook, Kerrabee on the Goulburn river and several others. This would also allow the development of another vitally needed power station in the Hunter.

Another viable site is on the Mole River up near the Queensland border, This would allow regulated flow for cotton growers and would reduce the effects of floods such as those which occurred early this year. I also worked on investigations into this dam but unfortunately I do not have my calculations and details any more.

Gosford is another growing district that would benefit from dam building. Mangrove Creek dam will eventually need to be raised (by up to 15 metres). To fill this increased storage a weir and pipeline with pumping could be built on the neighbouring MacDonalds river with its much larger catchment. In fact this was originally going to be built to fill Mangrove Creek dam but was cancelled for some feeble reason relating to certain landowners not wanting power poles in their hobby farms.

There are many other viable sites in NSW, the above are just some of the examples I have personally been involved with. No doubt the enquiry will make use of the excellent reports prepared by the then Water Resources Commission of NSW, one example of which is the Hawkesbury River basin Preliminary Water Plan.

I understand that the land for Tillegra dam has now been sold. This is a great pity as this was probably one of the most viable dam sites in NSW and eventually the population and industry in Newcastle will require either a major storage or an expensive desalination plant.

I am also aware that the Government is carrying out a review of the Dams Safety Committee. This is a very good move as the economic expenditure on upgrading dams to very low risks, up to 1 in 1,000,000 risk is a costly exercise and the money could possibly be better spent on provision of new dams, or on other areas of high risk such as traffic light, hospitals, safer roads. Also, it is unfair that Councils in NSW who own 30% of the Committee's prescribed dams do not have an expert representative on the committee to ensure Councils' interests are addressed, particularly when small regional councils are required to "stump up" considerable amounts of money to upgrade the safety of their dams to protect very small populations at risk, and for little or no real return.

Again thank you for this opportunity to comment. I would be happy to assist the enquiry in its deliberations, and I would certainly be happy to assist and input to the review of the Dams Safety Committee. If I can then be of any assistance to either enquiry, please feel free to contact me on my mobile below or on my e-mail address,

Yours Sincerely

Paul W Heinrichs