

**General Purpose Standing Committee No 5**  
**Budget Estimates 2010-2011**  
**Questions on Notice**

**Questions relating to the portfolio of Water**

16 September 2010, 2:00 pm – 6:00 pm

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**Question:**

**The Hon. RICK COLLESS:** Minister, given the reported 8 per cent increase in Department of Water and Energy [DWE] staff in 2009, how do you account for the \$2.6 million increase in voluntary redundancy payments shown for 2008-09?

**Mr PHILLIP COSTA:** I cannot give you the specifics. I will ask George to answer that in a moment. We have been working with staffing operations very closely to bring things into a budget that we believe will be met. But in terms of the specifics, once again I will ask George to give you an answer.

**Mr WARNE:** I am sorry, DWE does not exist any more. So you are either talking about the New South Wales Office of Water—

**The Hon. RICK COLLESS:** Water, I am referring to.

**Mr WARNE:** That is not State Water. State Water is a smaller operation than it ever has been, so it obviously has to do with the New South Wales Office of Water, which is not ours.

**The Hon. RICK COLLESS:** Okay. Minister, can you shed any light on that?

**Mr HARRISS:** I am sorry, Mr Colless. I do not have the information in front of me. If I could take that one on notice, it would be appreciated.

**Answer:**

While the Department of Water and Energy no longer exists, the numbers quoted by the Honourable Member are total figures. The voluntary redundancy program was offered to assist the then Department of Water and Energy (DWE) to meet its savings implementation plan targets over a three year period from 2008-09 onwards. The savings created by the voluntary redundancy program have benefitted DWE's successor agencies.

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**Question:**

**The Hon. RICK COLLESS:** Minister and Mr Harriss, you would be fully aware of the Darling River Water Saving Project Part B, Final Report, which was released in March 2009.

**Mr PHILLIP COSTA:** Yes.

**The Hon. RICK COLLESS:** What was the cost of the preparation of that report?

**Mr HARRISS:** Again, I do not have that off the top of my head. The cost was shared between the Commonwealth Government and the New South Wales Government. If I can take that on notice, I will report back.

**Answer:**

I refer the Honourable Member to the answer provided by Minister Costa during the committee hearing, and as recorded in the transcript of the hearing.

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**Question:**

**The Hon. RICK COLLESS:** Thank you for that. I turn now to the issue of what has been referred to as tainted water from AGL near Broke being disposed of from a coal seam gas trial operation. I understand that AGL holds a licence under the Water Act. The water that AGL distributed back onto the land was done within the bounds of that licence. Can you tell the Committee what the conditions are on that licence?

**Mr PHILLIP COSTA:** What I can say is that there are some very precise ones. This was brought to me before. I have asked this question. Surely we have given some very strict conditions on a licence to do what they are doing. Are we investigating to ensure that that licence is being complied with? Are they doing exactly what they are supposed to do? I do not have a response to that, but I will take that question on notice because I am also very interested in that report. If we have given a licence on this with some conditions that are not being honoured, then we need to do something about it. I have asked for the same sort of material. I will get that response to you.

**Answer:**

The standard conditions attached to the AGL bore monitoring licences require that any flowing water obtained from the test bores must not be discharged to adjoining properties. The licences do not allow for any tail water or drainage to be discharged into drainage lines, wetlands or adjoining properties.

To date, no evidence has been provided to the NSW Office of Water to suggest that AGL is not complying with the conditions of its water licences.

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**Question:**

**CHAIR:** In terms of other substances, do you have—perhaps you can take this on notice—any figures on what is getting into the system as effluent from the Norske Skog paper mill?

**Mr HARRISS:** I will take that on notice but I am aware it is subject to a pollution control licence which is monitored for specific chemicals and it is reported on. Much of that investigation is undertaken by the Murray-Darling Fresh Water Research Centre, which is an independent research centre based in Wodonga.

**Answer:**

The discharge of substances from the Norske Skog paper mill is regulated by an environmental protection licence under the *Protection of the Environment Operations Act 1997*, which is administered by the Minister for Climate Change and the Environment.

**Question:**

**The Hon. ROBERT BROWN:** Minister, earlier you referred to initiatives that had been undertaken in the Sydney Basin with relation to the Nepean-Hawkesbury and environmental inflows. You also referred to engineering works upstream to protect fish habitat, et cetera. Will you provide an indication of what sort of works and budgets are undertaken by Sydney Water in relation to trying to protect the Hawkesbury-Nepean from contaminated inflows, for example, sewage?

**Mr PHILLIP COSTA:** Without a doubt the infrastructure projects we have got across the Sydney Basin, some by Sydney Water—those fish ladders or fish barriers were put in along the river system by the Sydney Catchment Authority. We also have to give consideration to the quality of the water that is running down them. The St Marys project, for example, is designed specifically to put high-quality water into the river system.

**The Hon. ROBERT BROWN:** Tertiary treated water?

**Mr PHILLIP COSTA:** No, it is more than that: drinking water.

**Ms SCHOTT:** Yes, it is drinking water quality standard.

**Mr PHILLIP COSTA:** Yes, we are putting the best quality water into the river at that point to compensate for the very good quality water that is coming out of Warragamba Dam. I might get Kerry to talk about a few other projects. The work that we are doing in West Camden is very good. This is where it is good to have a number of officers; it is about balancing the environmental flows that have come out of the upper dams, for example, with the water that is going out of the STPs and adding them so that you actually improve the quality of the water that is going downstream.

**The Hon. ROBERT BROWN:** Perhaps on notice you could provide the Committee with a list of the projects that are being undertaken?

**Mr PHILLIP COSTA:** Yes, I would be more than pleased to do that.

**Answer:**

Examples of projects in the Hawkesbury-Nepean that are being undertaken, managed or coordinated by agencies in my Water portfolio include:

**Office of the Hawkesbury-Nepean**

The Australian Government, through its Water for the Future program, is funding a \$77.4 million program to help improve the health of the river system. The Hawkesbury-Nepean River Recovery Program will make more water available for environmental flows and reduce the amount of nutrients entering the river system. The program is managed by the Office of the Hawkesbury-Nepean. Details of the individual projects are as follows:

1. Nutrient Smart Management Project: Reducing nutrient runoff from agricultural activity through landholder education and on ground works. In 2009/10 over 100 projects established on landholder properties achieving savings of 32 tonnes of nitrogen and 6 tonnes of phosphorus per annum.

2. Water Smart Farms Project: Improving water use efficiency by upgrading irrigation systems, improving water harvesting and reuse
3. Improving Hawkesbury-Nepean Water Balance Accounting Project: Installation and upgrade of water metering systems for around 2,000 licensed water users.
4. Irrigation and Landscape Efficiency Project: Improve irrigation efficiency in non-agricultural activities, for example, golf clubs and schools.
5. Licence Purchase Project: Buying of licences across catchment to increase the amount of water that stays in the river system.
6. South Windsor Effluent Reuse: Construction of a recycled water plant at the South Windsor sewage treatment plant to supply recycled water to council reserves, schools and other customers.
7. Nutrient Export Monitoring Project: Measure success of Nutrient Smart Management and Water Smart Farms projects.

### **Sydney Catchment Authority**

The SCA has completed a number of projects to improve the health of the Hawkesbury-Nepean River including:

1. Modifications to Avon Dam to enable the release of water for environmental flows. This project cost \$9.6 million and environmental flows commenced in March 2008.
2. Modifications to Nepean, Cataract and Cordeaux Dams, and Broughtons Pass and Pheasants Nest Weirs to enable to release of variable environmental flows. These works cost \$8 million and were completed in 2009. Variable environmental flow releases commenced in July 2010.
3. Modifications to 10 weirs on the Nepean River to allow for the passage of the new environmental flows and for fish passage. These works cost \$31.3 million and the majority of works are complete, with Sharpes and Menangle Weirs scheduled to be completed before the end of 2010.

### **Sydney Water**

Since 1993, Sydney water has spent almost \$490 million on upgrading and constructing wastewater infrastructure in the Hawkesbury-Nepean catchment. Upgrade work involves increasing treatment capacity to cater for growth, improving disinfection processes and improving the effluent quality by reducing the amount of nutrients (ie. nitrogen and phosphorus) in the effluent.

Over the last ten years the total phosphorus load discharged has reduced by over 75 per cent and the nitrogen load by more than 40 per cent in spite of significant population growth within the catchment.

Within the Hawkesbury Nepean catchment, about \$340 million has been spent on providing reticulated sewerage services to the village areas of the Oaks, Oakdale, Belimbla Park, Mulgoa, Wallacia and Silverdale, Brooklyn and Dangar Island, Mount Kuring-gai and the Upper Blue Mountains, which were previously serviced by poorly performing on-site sewage treatment systems and septic tanks.

An additional \$224 million is currently being spent on servicing Glossodia, Freemans Reach, Wilberforce, Hawkesbury Heights, Yellow Rock, Agnes Banks and Londonderry. Construction will soon start on a scheme in Appin, and work will begin in Bargo and Cowan by mid 2015.

Sydney Water also has a SewerFix program that aims to improve the water quality of waterways by reducing the frequency of overflows of untreated sewage from the sewerage network in wet or dry weather. Since 2003, approximately \$30 million has been invested in the Blue Mountains to reduce wet weather overflows. Further, almost \$90 million has been spent on upgrading the reliability of sewerage pumping stations in the Hawkesbury Nepean as part of the SewerFix program.

The Premier has opened the water recycling plant at St Marys, one of the largest in Australia. Highly treated recycled water will now be used to help maintain the flow of the Hawkesbury-Nepean River. It will reduce the volume of nutrients in the river and mean more water will be available for storage in Warragamba Dam. The project will release 18 billion litres of highly treated recycled water into the river.

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### Question:

**Dr JOHN KAYE:** Can I address a question to Commissioner Harriss or Dr Schott in respect of the metropolitan water sharing plan?

**Mr PHILLIP COSTA:** In terms of the metropolitan water sharing plan?

**Dr JOHN KAYE:** I am sorry, the Metropolitan Water Plan, the 2010 update.

**Mr PHILLIP COSTA:** That is Dr Schott. The water sharing plan—

**Dr JOHN KAYE:** No, “sharing” was an ectopic word, I did not mean that. Dr Schott, will you release the analysis that led to the plan saying that the desalination plant would be turned on at 70 per cent storage level and turned off at 80 per cent?

**Dr SCHOTT:** That analysis was done for the independent expert panel by the CIE consulting group. It is not actually my analysis; it was done for that group. I can explain the general gist of the reasoning behind it— it is actually quite a complicated mathematical model—but it is not my power to release it, is what I am saying.

**Dr JOHN KAYE:** Whose power is it to release that document?

**Dr SCHOTT:** It would be the independent expert panel and the Minister.

**Dr JOHN KAYE:** So it is the Minister’s decision not to release that document?

**Dr SCHOTT:** I do not think any decision has been made in that regard.

**Dr JOHN KAYE:** Minister, since Dr Schott says it is within your power to do so, will you release the analysis, which we now know was done by the CIE consulting group, that led to the pump marks within the Sydney Metropolitan Water Plan 2010?

**Dr SCHOTT:** It is not about pump marks.

**Mr PHILLIP COSTA:** No.

**Dr JOHN KAYE:** The on level and the off level. The expression “pump marks” is used, but let us call them the on level and the off level.

**Mr PHILLIP COSTA:** And you are asking for the report that was put together by the expert panel?

**Dr JOHN KAYE:** I am asking for the evidence that led to those decisions to be put into the public domain.

**Mr PHILLIP COSTA:** I would have no problem with it.

**Dr JOHN KAYE:** Sorry, Minister, I did not hear you. Did you say you would not have any problems with that?

**CHAIR:** Do not verbal him.

**Mr PHILLIP COSTA:** I will take it on notice and I will be more than happy to release whatever documents, if I have the capacity to release them. I am not privy to the relationship between the expert panel and myself and how that information is available. If the document is able to be released, I will release it. I do not hide anything. I have told you right from the start that there is nothing in the Water portfolio that I am uncomfortable with and, if I have the capacity to release something, I will.

**Answer:**

A CIE report is available on the Sydney Water website. In addition, further information concerning the development of the NSW Government's Metropolitan Water Plan is available on the Plan's website, [www.waterforlife.com.au](http://www.waterforlife.com.au)

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**Question:**

**The Hon. ROBERT BROWN:** My question is related to research and development and future means and methods of getting and saving water. Does the department have its own research people and engineers who look at some of these schemes around the world? For example, you talked before about stormwater re-use. In South Australia they use aquifer recharge as a method of storing water. I understand there are systems that use detention dams on coastal flows, rather than retention dams, so that is more flood mitigation. What sort of resources does the department put into researching those sorts of things?

**Mr PHILLIP COSTA:** That is a great question. I have a personal interest in that. I went and had a look at the South Australian system, not as the Minister for Water but as a councillor, to talk about how Salisbury City Council managed its stormwater. I believe local government is a big player in that. The system they have is very different but the way in which they use the wetlands and put the water into the saltwater aquifer is brilliant. We need to capture as much of this capacity as possible. I have also visited other places where there have been some good stormwater and recycling initiatives. To answer your question, we have people always looking into ways of improving the system.

**Ms SCHOTT:** We spend about \$10 million a year on a research and development budget. It is largely focused on applied research, not basic research. One of our major research themes is corrosion in concrete sewers, which sounds mundane but we have done some very important work in that area and saved a lot of money. We also have a strand of work looking at climate change and extreme weather events and their impact on our operations. We work very closely with other water utilities in their research programs, including two very large research programs in the United States.

**The Hon. ROBERT BROWN:** So, it is international research?

**Ms SCHOTT:** Yes. In relation to the integrated stormwater management you referred to, that is being done at more localised levels in Sydney. We have a partnership with PUB in Singapore, who probably have the most amazing stormwater catcher globally, because they have basically put a barrage across their harbour and turned it into fresh water, which we are not suggesting.

**Dr JOHN KAYE:** Do not give the idea to Kevin Young.

**Mr YOUNG:** It sounds like a great idea to me!

**Dr JOHN KAYE:** There go the Hunter wetlands!

**Mr PHILLIP COSTA:** I have had briefings on programs like that. Sydney Water has won a world's best award for water utilities. We are up there with the best in the world and there is a very good set of research being done at Sydney Water, State Water, Hunter Water and the Sydney Catchment Authority. There is a suite of work happening across all my portfolios because we are constantly looking for a better solution.

**The Hon. ROBERT BROWN:** You mentioned \$10 million for Sydney Water. Are there allocations throughout other parts of the portfolio?

**Mr PHILLIP COSTA:** I cannot give you specifics, but we can take that on notice. There are allocations, but I do not know what they are.

#### **Answer:**

Details of some Research and Development work being undertaken across my water portfolio include the following:

The NSW and Australian governments, along with the University of NSW, are engaged in a collaborative four year study into the potential impact of climate change on Sydney's predominantly rain-fed water supply system and on Sydney's future demand for urban water. The overall project budget was \$800,000 and the final report is due this year.

A feasibility study is being undertaken into the Prospect Roofwater Harvesting Project. This \$150,000 study is assessing the feasibility of harvesting roofwater on a larger scale than is usually undertaken, potentially amounting to around four billion litres of water from 1000 hectares of industrial lands in the Western Sydney Employment Lands. Results are expected by the end of this year.

The \$150,000 WaterSmart Sydney Pilot is an interactive water efficiency program using phone coaching alongside meter readings to encourage households to be wise with water. Over 600 households in Strathfield and 300 in Greenacre classified as culturally and linguistically diverse participated in the pilot.

NSW, through the Office of Water, is providing in-kind and financial support to the Commonwealth Water Efficiency and Labelling Standards scheme. The Water Efficiency Labelling and Standards scheme researches and labels products to provide information to consumers on water consumption. The NSW contribution amounts to almost \$324,000 in 2010-11.

The Water for Life Education Program is evaluated annually to assess its success in enhancing community awareness of the strategies being implemented to secure Sydney's water supplies and encouraging the community to use water more wisely.

Additional to these metropolitan R&D activities, the Office of Water also focuses on a range of operational monitoring and evaluation activities to support sustainable management of our river and groundwater systems. Much of this work is outsourced, which is usually achieved through a prospectus that guides groups like universities and the CSIRO in targeting the knowledge gaps that have been identified. In 2009/10 some \$11.7 million in recurrent funding was spent on these activities, supplemented by an additional \$2.8 million in external funding from sources such as the Murray-Darling Basin Authority and the Australian Government.

### **Hunter Water**

Hunter Water's research and development activities focus on six priority areas of water quality and public health, materials, climate change, social science, treatment technologies and process engineering, and system modelling. \$1.225 million has been committed over the current 4-year price path to research and development-related expenditure. In 2009/10 a total of \$331,000 was allocated for research and development activities.

Hunter Water also keeps a watching brief on emerging technology relating to water conservation and water efficiency. This includes water sensitive cities (those that are sensitive to the integrated water cycle including stormwater, wastewater and drinking water) and effluent reuse (dual reticulation, aquifer recharge, sewer mining and indirect potable reuse).

Hunter Water recently won a bid for funding from the Australian Government for a joint program with Energy Australia called Smart Grid Smart City. Hunter Water's component of this three-year program involves the roll-out of 1000 smart water meters (950 residential and 50 non residential) that send hourly consumption data via the electricity meter. The non-residential component of the program will target a broad range of sectors including industrial, manufacturing, education, hospitality and commercial properties. The cost of the three-year trial is estimated to be \$1.8 million. The program will include integration testing of the water meter data with the electricity meter, as well as customer demand research in partnership with the University of Newcastle.