Rural and Regional Affairs and Transport Legislation Committee

ANSWERS TO QUESTIONS ON NOTICE

Supplementary Budget Estimates October 2015

Agriculture and Water Resources

Question: 127

Division/Agency: Murray-Darling Basin Authority

Topic: Declining run-off and increasing rainfall – Murray Darling Basin Plan

Proof Hansard page: 114-115

Senator HEFFERNAN asked:

CHAIR: You are the Murray-Darling Basin Authority. Last night I got out of the environmental water holder that of the 17,000 gigs of water there are 560 gigs of supplementary water which, as you know, used to be off-allocation water, which then became supplementary water. It was the cheap buy because you could buy supplementary water and put it in the book as a buyback, which Katrina Hodgkinson did in New South Wales for the likes of Tandou. That 230 gigs that she bought back for $23 million was the equivalent of 11 gigs at the mouth of the Darling where it meets the Murray. Can you run us through the science of what the task of the system is now in terms of allocation?

Mr James: I am not entirely sure I understand the question. Basically, if I can put it this way, the basin plan is concerned with the overall amount of water that is taken out of the system and, by implication, how much is left in the system. Of the water that is available for use, each state government has its own arrangements for how it allocates that water. So the mix in one state to another between the different classes of entitlement, whether it is general or high security or whatever, is a matter for them, and we really do not—

CHAIR: I do not expect you to know the answer. What is the science—it is 30-year science—saying about the declining run-off in the south and the increasing rainfall and the increasing run-off in the northern part of the Murray-Darling Basin?

Mr James: We can perhaps provide more detail on notice, but if you look, for example, at the forecast that the CSIRO made about different—

Answer:

The 2012 South Eastern Australia Climate Initiative concluded that in southern areas of the Basin (south of 33° latitude or Broken Hill), average annual rainfall is expected to decline by between 0 and 9 per cent, and the average annual runoff is expected to decline by between 2 and 22 per cent. For northern areas of the Basin the changes are less certain, with some models projecting an increase and some a decrease in rainfall and therefore runoff.

Rural and Regional Affairs and Transport Legislation Committee

ANSWERS TO QUESTIONS ON NOTICE

Supplementary Budget Estimates October 2015

Agriculture and Water Resources

Question: 128

Division/Agency: Murray-Darling Basin Authority

Topic: Percentage of allocations versus the sustainable limit on rivers in the Murray-Darling Basin

Proof Hansard page: 115-116

Senator HEFFERNAN asked:

CHAIR: Can you give us the percentage of allocations versus the sustainable limit on those rivers in the Murray-Darling? Do you want to take that on notice to make it easier for you?

Mr James: Sure.

Answer:

One of the objects in section 3 of the *Water Act 2007* (Cth) is to return the rivers and groundwater systems of the Murray-Darling Basin to environmentally sustainable levels of extraction for water resources that are overallocated or overused.

To determine what changes were required to reach a sustainable level of water use, the Murray-Darling Basin Authority (MDBA) first had to determine, as accurately as possible, how much of this water was currently used – this is the 'baseline diversion' limit (BDL). The baseline diversions include best available estimates of all water pumped, diverted or intercepted for consumptive purposes as at 30 June 2009. The BDL does not include water recovery for the environment prior to 2009. Across the Basin this is estimated to be 996 gigalitres, with some of this recovery (121 gigalitres) for the Snowy River and the balance of 875 gigalitres available to the Murray-Darling Basin.

Surface Water

The MDBA has estimated that long term annual average baseline diversions for surface water systems in the basin total 13 623 gigalitres per year. The MDBA then determined that the volume of surface water that reflects an environmentally sustainable level of take as a long term average is 10 873 gigalitres per year. This comprises 3 468 gigalitres per year in the northern Basin and 7 405 gigalitres per year in the southern Basin.

Different limits for every river valley (i.e. sustainable diversion limit (SDL) resource unit) in the Basin have been determined, which make up the total limit of 10 873 gigalitres per year.

Question: 128 (Continued)

SDL Resource Unit	Total BDL (GL) June 2009	BDL (GL) excluding interception[1]	Local Reduction Target (GL)	Shared Reduction Target (using default method) (GL)	Total reduction (GL)
Gwydir	450.2	325.2	42.0	18.3	60.3
NSW Murrumbidgee	2,501.1	2,000.1	320.0	243.5	563.5

Note: 1. Watercourse diversions under the Baseline Diversion Limit - arrangements as at 30 June 2009 under historic climate conditions from 1895 to 2009.

Basin states have an opportunity to re-apportion the shared reduction within each Basin zone by notifying the MDBA by 30 June 2016. A default method is outlined in the Basin Plan if the MDBA does not receive a request by this date (refer Basin Plan section 6.05(3)).

Groundwater

For groundwater resources, at the time the Basin Plan was made the sum of state groundwater extraction limits was 4 695 gigalitres per year. The MDBA determined the Basin baseline diversions to be 2 385 gigalitres per year (representing the volume of water that could be taken under the existing entitlements, not the full amounts that could be taken under the extraction limits in state water plans that were higher in several cases).

For groundwater, the Basin SDL volume is 3 334 gigalitres per year. The groundwater SDL represents an increase of 949 gigalitres per year of water from baseline diversion level of 2 385 gigalitres (however still less than the sum of state groundwater extraction limits).

For the Lower Murrumbidgee Alluvium the BDL is 273.6 gigalitres and the SDL is 273.6 gigalitres. For the Lower Gwydir Alluvium the BDL is 33 gigalitres and the SDL is 33 gigalitres. There is no difference between the BDL and SDL as the limits as at 30 June 2009 were assessed as being an appropriate SDL.

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Agriculture and Water Resources

Question: 129

Division/Agency: Murray-Darling Basin Authority

Topic: Long term forecast for the run-off from snow

Proof Hansard page: 116

Senator HEFFERNAN asked:

CHAIR: I want to come to the aspirations and expectations of a set of politicians who are doing a tour round on a select committee who think they are going to promise free beer to the irrigators against the background of reality. What is the long-term forecast for the run-off from the snow? How many days of snow are in the long-term forecast?

Mr James: I will have to take that on notice.

CHAIR: It is under a week. You needn't knock your head back there. How many is it now? What is the average annual snowfall?

Mr James: In terms of days? Sorry, but we will have to take that on notice.

Answer:

The Murray-Darling Basin Authority (MDBA) makes forecasts of future inflows to rivers based on total inflow and does not specifically endeavour to isolate the component derived from snow melt.

Most of the snow melt in the Snowy Mountains is captured by the Snowy Mountains Scheme and is released into the Tumut and Murray Rivers by Snowy Hydro.

The MDBA includes in its forecasts volumes required to be released into the Murray by Snowy Hydro as required by the Snowy Water Licence. These minimum releases are based on inflows to Snowy Hydro storages, regardless of their origins.

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Agriculture and Water Resources

Question: 130

Division/Agency: Murray-Darling Basin Authority

Topic: Median flow of the Warrego

Proof Hansard page: 116

Senator HEFFERNAN asked:

CHAIR: Anyhow, it is just over three weeks and it is going to go back to under a week. At the 40th percentile of the science for the Murray-Darling Basin—and that includes the percentile where maybe they are right or wrong about the increasing rainfall in the top. You would understand the Warrego river? You are familiar with it?

Mr James: I know where it is, yes.

CHAIR: Do you know what the median flow is?

Mr James: No, I simply do not walk around with those numbers in my head. I am sorry. I can take it on notice if you want an answer.

CHAIR: Sadly, I do. When they decided to buy the Toorale water to send more water down the system, some of that water they bought was Darling water. As soon as they did it, the sleeper licences just up the river were woken up and they gained nothing. Are you familiar with the Tandou buyback

Answer:

The median flow in the Warrego River at all locations where it is measured is 0 megalitres per day. That is, it is not flowing more often than it is flowing.

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ANSWERS TO QUESTIONS ON NOTICE

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Question: 131

Division/Agency: Murray-Darling Basin Authority

Topic: Costs associated with move to Agriculture and Water Resources portfolio

Proof Hansard page: 120

Senator CAMERON asked:

Senator CAMERON: Okay. Mr James, what are the key issues that have affected the Murray-Darling Basin Authority by the responsibility for water being moved from the Department of the Environment to Agriculture?

Mr James: We simply report now to a new minister. In terms of our day-to-day operations and what we are doing and so on and so forth, there is no change.

Senator CAMERON: Were there any financial costs to the authority with the change?

Mr James: My understanding is there are some very minor costs associated with the changes, which go to some very simple things like who mans the front desk and that sort of stuff because we had a shared arrangement with the environment department on some of those things. But those costs are very minor. If you like, I can take the precise figure on notice.

Senator CAMERON: That would be helpful, thank you. In relation to the department, have you costed these changes?

Answer:

The Murray-Darling Basin Authority does not expect there to be any variation in our administrative costs as a result of the move to the Agriculture and Water Resources portfolio.

Rural and Regional Affairs and Transport Legislation Committee

ANSWERS TO QUESTIONS ON NOTICE

Supplementary Budget Estimates October 2015

Agriculture and Water Resources

Question: 132

Division/Agency: Murray-Darling Basin Authority

Topic: Staff employed in IT area

Proof Hansard page: 121

Senator CAMERON asked:

Senator CAMERON: I am asking how many are employed in your IT area.

Ms Schumann: We have four staff who provide a help desk service. We have about four other staff who provide technical support services—maintaining our system architecture and the like. They are directly involved in IT service provision.

Senator CAMERON: So that is four and four?

Ms Schumann: Correct, but we have a large number of other staff who are involved in the maintenance of our databases.

Senator CAMERON: What is that large number?

Ms Schumann: It is a reasonably large number. I would have to give you the exact number on notice.

Answer:

The number of staff in the Murray-Darling Basin Authority's Information Management and Information Communications Technology Branch is 37.

They comprise the following positions: Chief Information Officer, Deputy Chief Information Officer, Program Office Manager, two Client Services officers, two Help Desk officers, four data administrators, and five spatial data client service officers.

In addition, there are 21 support staff in the following areas: infrastructure, project management, records management, and library services.

Rural and Regional Affairs and Transport Legislation Committee

ANSWERS TO QUESTIONS ON NOTICE

Supplementary Budget Estimates October 2015

Agriculture and Water Resources

Question: 133

Division/Agency: Murray-Darling Basin Authority

Topic: Health audit

Proof Hansard page: Written

Senator XENOPHON asked:

I refer to a recent ABC News Article where the Water Minister Barnaby Joyce is quoted as considering the reinstatement of the Sustainable Rivers Audit (SRA) which found in its most recent survey that in 2001, 21 of the 23 valleys in the basin were in a poor, very poor or extremely poor condition.

I understand the MDBA and state governments track and monitor some areas of the basin including water quality, salinity and waterbirds.

Does the MDBA monitor other areas?

Answer:

Yes. The Murray-Darling Basin Authority has environmental monitoring in place which also covers fish, water birds, flood plain vegetation (River Red Gum, Black Box and Coolibah), and water quality (salinity, phytoplankton, nutrients and macroinvertebrates).

Rural and Regional Affairs and Transport Legislation Committee

ANSWERS TO QUESTIONS ON NOTICE

Supplementary Budget Estimates October 2015

Agriculture and Water Resources

Question: 134

Division/Agency: Murray-Darling Basin Authority

Topic: Health audit

Proof Hansard page: Written

Senator XENOPHON asked:

Was there a replacement audit for the SRA?

Answer:

Since the end of the Sustainable Rivers Audit, the Murray-Darling Basin Authority has established a monitoring program to gather information about the environmental impact of the Basin Plan at the Basin scale.

The Basin scale monitoring is supplemented by other monitoring being done by the states and the Commonwealth Environmental Water Holder at the asset or site scale.

Rural and Regional Affairs and Transport Legislation Committee

ANSWERS TO QUESTIONS ON NOTICE

Supplementary Budget Estimates October 2015

Agriculture and Water Resources

Question: 135

Division/Agency: Murray-Darling Basin Authority

Topic: Health audit – current monitoring areas

Proof Hansard page: Written

Senator XENOPHON asked:

Are the current monitoring areas adequate to determine whether the MDB Plan is working as intended?

Answer:

The Murray-Darling Basin Authority (MDBA) has published an evaluation framework which outlines how the MDBA will evaluate the effectiveness of the reform and whether the intended environmental, social and economic objectives and outcomes are being achieved. The framework includes the scope of the future evaluation work, the questions that will be addressed, the evaluation methods, indicators that will be used to measure progress, the types of data that will be drawn upon and the roles and reporting by the people involved. The framework is available on the MDBA website at www.mdba.gov.au/media-pubs/publications/basin-plan-evaluation-framework.

The MDBA has put a Basin scale monitoring program in place to meet the information requirements of this framework. The Basin scale monitoring information will be supplemented by monitoring by the Commonwealth Environmental Water Holder and the Basin states at the asset and site scale.

Rural and Regional Affairs and Transport Legislation Committee

ANSWERS TO QUESTIONS ON NOTICE

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Agriculture and Water Resources

Question: 136

Division/Agency: Murray-Darling Basin Authority

Topic: Health audit – reinstatement of the SRA

Proof Hansard page: Written

Senator XENONPHON asked:

Would the MDBA support the reinstatement of the audit?

Answer:

The Murray-Darling Basin Authority would support additional monitoring activity which could demonstrate the extent of the environmental benefit of the Basin Plan and inform future reviews where the activities are efficient and effective.

Rural and Regional Affairs and Transport Legislation Committee

ANSWERS TO QUESTIONS ON NOTICE

Supplementary Budget Estimates October 2015

Agriculture and Water Resources

Question: 137

Division/Agency: Murray-Darling Basin Authority

Topic: Health audit

Proof Hansard page: Written

Senator XENOPHON asked:

How much funding is currently allocated to monitoring the MDB?

- Can you provide a breakdown of this by area?

Answer:

The cost of Basin scale environmental monitoring commissioned by the Murray-Darling Basin Authority (MDBA) in 2015-16 is currently estimated to be $1.175 million. The MDBA is also collecting additional information, such as floodplain inundation maps, that will meet a number of our business needs including environmental monitoring and evaluation. MDBA also provides staff resources to manage these procurements, and received and analyse the data. Staff costs are met from our appropriation budget.

Additional environmental monitoring at the asset or site scale is also conducted by the Commonwealth Environmental Water Holder, Basin state governments, and The Living Murray initiative (which is jointly funded by Basin governments).

Rural and Regional Affairs and Transport Legislation Committee

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Supplementary Budget Estimates October 2015

Agriculture and Water Resources

Question: 138

Division/Agency: Murray-Darling Basin Authority

Topic: Health audit

Proof Hansard page: Written

Senator XENOPHON asked:

Does the MDBA have in operation long-term monitoring of environmental outcomes? Is there long-term funding for these outcomes?

Answer:

The Murray-Darling Basin Authority (MDBA) has a monitoring program in place to support reporting on the long-term environmental outcomes of the Basin Plan. The program aims to collect key information on four themes – river flows and connectivity, fish, vegetation, and birds.

The cost of the environmental monitoring will be met from appropriation funding for the MDBA which is currently provided until 2016-17. Funding beyond 2016-17 is under consideration by the Australian Government.

Rural and Regional Affairs and Transport Legislation Committee

ANSWERS TO QUESTIONS ON NOTICE

Supplementary Budget Estimates October 2015

Agriculture and Water Resources

Question: 139

Division/Agency: Murray-Darling Basin Authority

Topic: Buybacks

Proof Hansard page: Written

Senator XENOPHON asked:

I asked about the amount of GL to be recovered so that we meet the target and was informed that the amount would be dependent on the outcome of the operation of the Sustainable Diversion Limits Adjustment Mechanism in 2016.

Has the MDBA conducted any estimates of the likely amount of GL to be recovered and the cost? If not, why not?

Answer:

Any adjustment to the Sustainable Diversion Limits (SDLs) from supply measures will reduce the volume of the water required to bridge the gap, and so directly influence the amount of water the Australian Government will need to recover.

The actual amount of this adjustment will not be known until the Basin governments submit a package of measures at 30 June 2016 and the Murray-Darling Basin Authority (MDBA) then calculates the size of the adjustment.

The Murray-Darling Basin Ministerial Council commissioned an independent stocktake of all possible SDL adjustment measures in mid-2015 (available at www.mdba.gov.au/media-pubs/publications/independent-stocktake-of-sdl-adjustment-measures). This work suggested a '*plausible estimate of supply measure outcomes is approximately 508 GL*', and that additional contributions could be obtained by further project refinements. In response to this report, Ministers included in the communique from the Murray-Darling Basin Ministerial Council on 14 August 2015 a statement that they would continue to strive for a supply contribution of up to 650 gigalitres by putting forward high quality projects, acknowledging that the greater the supply contribution from the SDL adjustment mechanism, the smaller the remaining water recovery task.

As part of the SDL adjustment mechanism, the *Water Act 2007* (Cth) and the *Basin Plan 2012* (Cth) also provide for up to 450 gigalitres of additional water recovery (referred to as efficiency measures) through investments that have neutral or improved socio-economic outcomes such as more efficient irrigation infrastructure.