

Chapter 6

Types of Water Entitlements

6.1 A significant issue that arose during this inquiry was the different types of water entitlements and the potential impact each could have on the development and implementation of the Basin Plan.

6.2 Water entitlement types are regulated by relevant state laws and the types of licences vary across states. This means that water entitlement types across the Murray-Darling Basin are not always directly comparable. However, a number of similarities exist and the states generally provide for the prioritisation of water allocations depending on the availability of water.

6.3 The water entitlement types can be identified as high, general, and low reliability types. When referring to the trade in the southern Basin, the National Water Commission (NWC) in its 2011 biennial assessment of water trading divided the state water entitlements into these categories as:

Higher reliability entitlements include Victorian high-reliability water shares, New South Wales high-security water access licences (WALs) and South Australian high-security water entitlements. Lower reliability entitlements include Victorian low-reliability water shares and New South Wales supplementary WALs. General reliability entitlements are New South Wales general security WALs.¹

6.4 In Queensland, the reliability types are called high security, medium security and low security.²

6.5 In terms of a broad comparison across states, the Productivity Commission has noted that:

...high reliability entitlements had, in the past, been expected to yield 100 per cent of their nominal volume in seasonal allocations 90 per cent of the time or more. Further, they receive seasonal allocations before any water is delivered against lower reliability entitlements... At the Basin level, the majority of water entitlements (and the greatest quantity of entitlements by megalitre (ML)) are general or low reliability entitlements.³

6.6 In addition, the trade in water entitlements is affected by the connectivity of water in the Basin system. That is, the 'ability to trade is limited by the hydrological

1 National Water Commission, 2011, *The National Water Initiative—securing Australia's water future: 2011 assessment*, NWC, Canberra, p. 66 (figure 2.5).

2 Productivity Commission, 2010, *Market Mechanisms for Recovering Water in the Murray-Darling Basin*, Final Report, March, p. 42.

3 Productivity Commission, 2010, *Market Mechanisms for Recovering Water in the Murray-Darling Basin*, Final Report, March, p. 42

connectivity between the buyer and the seller.⁴ For the purposes of this report, water that is not connected to the Basin system is referred to as terminal water.

6.7 The use and value of different water types can have a significant effect on how water resources can be managed in the Murray-Darling Basin. The committee heard significant evidence about this issue and this chapter examines it in-depth. The evidence received about the possible effects of different water types on the development of the Basin Plan (through the hydrological and socio-economic modelling) and the implementation of the buyback program, including significant cases such as Twynam and Nimmie-Caira will be discussed in turn.

Long-term Cap equivalent

6.8 A process for managing the differences in water types in the Murray-Darling Basin was developed prior to the Basin Plan and agreed to by Basin States and the Commonwealth as part of the Living Murray Program in 2004. The differences between the water types is calculated as a volume called the 'long-term Cap equivalent' (LTCE) – also referred to as the 'Cap factor'. An LTCE is an average that is calculated from a hydrological model based on climate data from 1891 to 2003. The LTCE is developed to:

[take] into account the different characteristics of water entitlements in New South Wales, Victoria and South Australia, and their reliability... [creating] a common unit of measure, thus allowing equitable comparison of a broad range of water recovery measures.⁵

6.9 The Murray Darling Basin Authority's (MDBA) website notes, for example, 'to recover a [LTCE] volume of 1,000 ML in the NSW Murray region, you could purchase either a 1,053 ML High Security Water Access Licence or a 1,237 ML General Security Water Access Licence.'⁶

6.10 Mr Tim Stubbs, environmental engineer, from the Wentworth Group of Concerned Scientists (Wentworth Group) also explained how this works in terms of the modelling for different types of water:

It comes back to that issue of entitlement, its level of security or cap factor, as they call it. If you have a supplementary entitlement it might have a cap factor of 0.4. So if you buy a gigalitre of supplementary water then when you put that in the model it will only count as 0.4 of a gig.⁷

4 Productivity Commission, 2010, *Market Mechanisms for Recovering Water in the Murray-Darling Basin*, Final Report, March, p. 45.

5 MDBA, 'How is water recovery measured? (What is a 'long-term Cap equivalent' volume?)', www.mdba.gov.au/programs/tlm/faqs#How_is_water_recovery_measured (accessed 31 January 2013).

6 MDBA, 'How is water recovery measured? (What is a 'long-term Cap equivalent' volume?)'.

7 Mr Tim Stubbs, Environmental Engineer, Wentworth Group of Concerned Scientists, *Committee Hansard*, 10 September 2012, p. 12.

Types of water entitlements and the modelling

The MDBA modelling

6.11 The committee heard evidence that differences in water entitlement types could have an impact on the output of the hydrological modelling of the Basin. Therefore, the committee questioned MDBA officials about how different water types were taken into account in the MDBA's modelling. The MDBA told the committee how the model deals with different types of water entitlements:

There are some places in the basin where we can define an entitlement class, but because all of the buyback is modelled under the basin planning process we have to use the models that are available. What that actually means is that in a lot of catchments we have to look at the long-term average yield of entitlements. You cannot actually in a lot of the models determine up-front as an input to the model how much off allocation will be declared, for instance. So what we have to do is suppress the long-term average yield in the catchment and that flows through into the model to determine what the components are of general security, off allocation or supplementary...⁸

6.12 However, while the MDBA acknowledged that the different types of water would have a significant impact on the modelling, it stated that the modelling does not detail different water types. As the following exchange shows:

CHAIR: ...[Do] you agree that if you modelled [2750 GL/y] of buyback water that happened to be all supplementary water you would get a completely different outcome than if you modelled [2750 GL/y] of high-security water?

Dr McLeod: Yes, that is correct.

CHAIR: The same thing applies to general allocation and terminal water. Where is the model that says, 'We can only take that much terminal water, that much supplementary water and we need that much general'? How did you model that[?]....

Mr James: The Basin Plan is really based on volumes of water, it does not necessarily go to what mix of entitlements needs to be recovered to achieve that volume. The volume is a long-term average amount, and the entitlement mix to achieve that recovery could be a range of product mixes.⁹

6.13 The oral testimony by MDBA officials goes on to indicate that terminal water was not used in the modelling but that like other water types it could impact on the management of water resources through water trading:

8 Ms Jody Swirepik, Executive Director, Environmental Management Division, Murray-Darling Basin Authority, *Committee Hansard*, 23 August 2012, p. 11.

9 Dr Tony McLeod, General Manager, Water Planning, and Mr Russell James, Executive Director, Policy and Planning, Murray-Darling Basin Authority, *Committee Hansard*, 23 August 2012, p. 15.

CHAIR: But in the [2750 GL/y]...what was the modelling [in terms of the different entitlement classes]?...

Dr McLeod: We assumed a pro rata reduction across all the entitlement classes in each of the—

CHAIR: ...So you had an equal 25 per cent terminal, 25 per cent [supplementary], 25 per cent general purpose [water entitlements]?

Dr McLeod: That is right. Terminal is not actually a class. In the terminal system—

CHAIR: I can assure you, though, the impact of buying water out of a terminal river is a lot different to the impact of buying out of—

Dr McLeod: I totally accept that. In the typical New South Wales system, there is high security, general security and supplementary [water entitlements]. We assumed a pro rata share across each of them.

CHAIR: But is it not a bureaucratic, or a technical, flaw to say that general-purpose water in a terminal river can deliver the same outcome as general-purpose water in a continuous system?

Dr McLeod: No. It can deliver it at different locations, so buying general—

CHAIR: Yes, but there has to be a restriction on the amount of terminal water you buy—correct?

Dr McLeod: Yes.¹⁰

6.14 The MDBA official, Dr Tony McLeod, also explained how wet and dry years were taken into account in this respect:

...the modelling we did assumed a pro rata purchase across a range of entitlements. Not every model actually captures that in detail and the models are calibrated against the way water is used, both in wet and dry years. In dry years water use is generally limited by the amount of water that is available under those entitlements. In wet years, even if the entitlements have a high level of annual allocation they have tended not to be used. That is factored into the way the model operates. We look at the yield that would come from a portfolio that would deliver [2750 GL/y] on average across the basin.¹¹

6.15 The MDBA indicated that there was potentially a very large fluctuation in the environmental water available each year. The MDBA stated that in its modelling:

...the variation in environmental water availability between years is influenced by modelling assumptions which include the nature and location of water recovery and the variability in water availability over the historic climate sequence. In the context of such assumptions, modelling results

10 Dr Tony McLeod, General Manager, Water Planning, Murray-Darling Basin Authority, *Committee Hansard*, 23 August 2012, pp 15–16.

11 Dr Tony McLeod, General Manager, Water Planning, Murray-Darling Basin Authority, *Committee Hansard*, 23 August 2012, p. 22.

indicate that, in providing the long term average amount of water recovery to meet the requirements of the Basin Plan, the annual amount of water available could vary from around 300 to around 3,800 GL/yr.¹²

6.16 Mr Tim Stubbs from the Wentworth Group explained how the modelling available to the MDBA could help it decide how to use the different water types and achieve environmental outcomes:

...When they do the modelling, the model does not want to flow an average volume down the river all the time. That is not what it is about. It is very sophisticated. It looks at adding peaks to get overland flow and looks at adding tails to inundate areas for longer periods. Once you have your breakdown of how you want to get those outcomes and what is the best way, you will then have some clear picture of what sort of water you would need. You might be able to say: well, to achieve all these events, we only need to achieve them when it is flooding already because we want to put a top on a peak or a tail on a flood. We may be able to use general security water for that or, potentially, even supplementary if it was in the right place at the right time. However, for other events you might have to say: well, we probably need high-security water to make sure we can be confident of achieving that event, because there will not be any supplementary water around at that time, potentially, and we will need a certain amount of high security in the bank to make sure we can hit those events, because they are drier time events. I am not sure how the authority has done it, but I imagine you would have to have a spread of entitlements to be able to hit all your targets.¹³

The ABARES modelling

6.17 The committee also heard evidence that the water entitlement types had limited consideration as part of the socio-economic modelling used to develop the Basin Plan. In this regard, the committee took evidence from the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) about its approach for different categories of water entitlements in the socio-economic models of the 2750 GL/y reduction of take for the Basin.

6.18 When asked about whether the MDBA had specified the different water types to ABARES for use in its modelling of buybacks, an ABARES official stated that there was 'no differentiation between the types' and later added that for 'all intents and purposes the difference between low and high security water is reflected in the average yield'.¹⁴ When pressed further about differences in availability of water types, the ABARES official conceded that 'we do not have that information'.¹⁵

12 MDBA, answer to question on notice, 23 August 2012, (received 25 September 2012).

13 Mr Tim Stubbs, Environmental Engineer, Wentworth Group of Concerned Scientists, *Committee Hansard*, 10 September 2012, p. 16.

14 Mr Orion Sanders, Economist, ABARES, *Committee Hansard*, 24 April 2012, p. 13.

15 Mr Orion Sanders, Economist, ABARES, *Committee Hansard*, 24 April 2012, p. 14.

6.19 ABARES provided some further explanation of how water types are considered as part of its modelling of the impacts of the 2750 GL/y figure. In an answer to a question on notice, ABARES outlined that a pro rata approach was used:

The ABARES water trade model is a 'water use' model that models how irrigators use available irrigation water during the year. The model does not explicitly model entitlement classes, but rather aggregate allocations across regions and industries.

For the Basin Plan modelling a long-term average year of water availability was modelled, with water allocations based on observed long-term average allocations. For this modelling, differences in entitlement types are reflected through differences in their long-term Cap equivalents.

ABARES modelling is broadly consistent with the Commonwealth purchasing an equal proportion of high and low security entitlements. That is, if it was assumed 25 per cent of entitlements within a region were to be purchased, then this would involve purchasing 25 per cent of the high security entitlements in the region and 25 per cent of the low security entitlements.

In order to mimic the effect of purchasing a higher proportion of high security water entitlements, ABARES modelled a scenario where it is assumed the SDLs lead to a 20 per cent reduction in perennial land use (fruit, nuts and grapes). As expected, the results for this scenario indicate that the reduction in the gross value of irrigated agriculture increases as higher proportions of high security water are purchased (16.8% reduction compared to a 13.5% reduction).¹⁶

6.20 During the inquiry, the ABARES modellers also had difficulty explaining how terminal water was treated in the modelling and constantly referred to the published technical reports:

CHAIR: In the 2,700 gigs of removal, is any of that water terminal?

Dr Nguyen: I do not think we have information on that.

CHAIR: Do you know what I am talking about?

Mr Sanders: No; what do you mean by terminal? Do you mean that it reaches the end of the system?...

CHAIR: You do not know what I am talking about; that is the problem. Is it in the Lachlan? Is it in the Macquarie? These are terminal waters. Do you know the difference?...

Mr Sanders: Some of our systems are terminal and disconnected from the whole system.

CHAIR: But you are not trying to tell me that you consider the Lachlan or the Macquarie to be a connected system?

Mr Sanders: No; the Lachlan is disconnected. I believe the Macquarie might be connected, but all that information is contained within our reports.

16 ABARES, answer to question on notice, 24 April 2012 (received 5 June 2012).

CHAIR: It would have to be a bloody big flood to get connected.

Mr Sanders: All that information is contained in our reports.

CHAIR: But how much of the water, for your modelling purposes, is terminal?

Mr Sanders: Once again, all that information is contained in these reports.

CHAIR: But, mate, tell me. You wrote the thing; tell me what the answer is.

Mr Morris: We will have to take that on notice, I think.

CHAIR: You do not know the damn answer. The whole thing is flawed.¹⁷

6.21 ABARES explained on notice that regions that were deemed to be connected or disconnected for the purposes of water trade were based on the direction of the MDBA. The answer noted that:

The ABARES Water Trade Model is a model of water use that allows water to move between irrigation activities and regions depending on relative economic returns and constraints on water trade.

Regions were deemed connected or disconnected for the purposes of water trade based on direction from the MDBA. The main requirement for trade was sufficient hydrological connectivity between regions. Specifically, the analysis assumed:

- the northern and southern parts of the Basin are not connected for the purposes of water trade;
- there is interconnectivity within the southern connected system of the Basin and there is also interconnectivity between some of the northern regions;
- some regions are entirely disconnected from the rest of the system for the purposes of water trade (Paroo, Warrego, Gwydir, Lachlan, Ovens, Wimmera, and the Eastern Mount Lofty Ranges);
- water trade is also constrained by the Barmah Choke and by within catchment environmental requirements as directed by the MDBA.¹⁸

Committee view

6.22 The committee was concerned with the limited consideration of different water entitlement types as part of the MDBA and ABARES modelling for the Basin's water resources and the associated socio-economic impacts. The committee acknowledges that the LTCE and assumptions of pro-rata purchases across different entitlement types helps address the issue in the modelling.

6.23 However, the committee is of the view that these considerations do not fully account for the possible impacts that different water entitlement types can have on the

17 Mr Orion Sanders, Economist, Dr Nga Nguyen, Economist and Mr Paul Morris, Executive Director, ABARES, DAFF, *Committee Hansard*, 24 April 2012, pp 15-16.

18 ABARES, DAFF, answer to question on notice, 24 April 2012 (received 5 June 2012).

desired environmental outcomes for the Basin. The committee considers that the MDBA and ABARES should have examined the impact of different water types for modelling and environmental outcomes more explicitly and in greater detail.

6.24 The committee remains concerned about the accuracy of models regarding the socio-economic impacts of the 2750 GL/y figure on the Basin when such models do not consider full details about how different water types are used in practice.

6.25 Furthermore, the committee remains concerned that terminal or unconnected water was not appropriately represented in the modelling. This is part of a broader concern the committee has with the socio-economic modelling of the impacts of the Basin Plan (see chapter seven) and has the potential to undermine public confidence the social, economic and environmental outcomes that may be achieved under the Basin Plan.

Recommendation 15

6.26 The committee recommends that the MDBA commission an independent review of the possible effects of using a range of assumptions of water entitlements types (e.g. high and low reliability) in the hydrological and socio-economic modelling of the Basin Plan. In the case where the results for certain water entitlement assumptions show that the objectives of the plan will be compromised, the MDBA should develop a policy which will ensure that this arrangement of water entitlements will not be realised.

Types of water entitlements and the buyback process

6.27 In addition to the modelling of water entitlement types, water entitlement types are an important feature of the water buyback process under the government's *Restoring the Balance Program*. The committee received evidence about water entitlement types across many Basin catchments and also examined the Nimmie-Caira buyback case in detail (and to a lesser extent the case of Twynam Agricultural Group). The general issues, Twynam and the Nimmie-Caira case are discussed in turn.

6.28 The committee heard evidence about the problems that could arise in the buyback process due to the differences in water entitlements types. For example, the practical limitations of how water entitlement types (and their legalistic classifications) have for managing water resources in the Basin were noted by the Wentworth Group. As the following explanation by Dr Williams, Member, Wentworth Group shows:

CHAIR: ...Why did we allow supplementary water to be tradeable?

Dr Williams: ...I think the issue of rules based water that is built in and supplementary water—and the way that is managed for the environment and converted across to tradeable entities—is one that we just did not get right. This plan was an opportunity to do that.

CHAIR: I agree with that. When you get four inches of rain at Gundagai and you get a [supplementary] flow and if you get four inches the next night

it become a flood flow, and when it gets down to the Redbank Weir somehow they can define one from the other!

Dr Williams: It illustrates, to my mind, the nonsense we have. When we have the legal people take what this current plan has in place and put it into legal language, which it will be, we will have a muddle-time tangle, because of the issues you raise. I think we need a plan that recognises the flood plain and recognises how you use supplementary water, rules based water and water for entitlements, and build that sensibly into the plan. It currently [as of September 2012] does not.¹⁹

6.29 The committee also asked questions about how terminal water was treated in terms of water purchasing. As the following exchange shows, SEWPaC officials considered that the supplementary water, even in a terminal system, was able to be used for its identified purposes and removed from the consumptive take if needed:

CHAIR: ...How do you value [in terms of purchasing] that water in a terminal system versus in a non-terminal system—supplementary?...

Ms Harwood: We assess the water on offer to us against market benchmarks. We ask: 'What does that type of water trade for in that catchment?' We are also looking at the key factors of whether the entitlement can be used for the environment, whether it can be delivered to the environment and whether it represents value for money against other water offers.

CHAIR: My difficulty is that in a terminal system...this water is the water that you are buying when the water is in flood in most terminal systems. So why would you buy it?

Mr Robinson: I think it is not always when it is in flood; it is certainly when there is a significant flow-on. Part of the purchase program assessment is whether the water be directed to the key environmental sites. In the case of the Macquarie, supplementary water can be called to the weir at the top of the Macquarie marshes and can supplement flows—

CHAIR: The event of supplementary water is when it is the system, not when it is in the storage.

Mr Robinson: Yes...If there is a supplementary event and we decide to call our supplementary water, it is not then available for consumptive use in the supplementary event, and it arrives at the environmental sites.²⁰

6.30 The committee was given an example in how the water entitlement types were determined for the buyback program. The case of the purchase of supplementary water from Tandou was instructive. In this case, the purchase of approximately 250 GL of supplementary water only resulted in a long-term average yield of 11 GL of

19 Dr John Williams, Member, Wentworth Group of Concerned Scientists, *Committee Hansard*, 10 September 2012, p. 12.

20 Mr Ian Robinson, Water Holder, Commonwealth Environmental Water Office, *Committee Hansard*, 24 April 2012, pp 57–58.

water being returned to the Basin system. As an MDBA official explained to the committee:

Ms Swirepik: I used to work in New South Wales. I am drawing a bit on my historic knowledge there. Our supplementary water used to be water gifted, if you like, to irrigators—

CHAIR: Off allocation. Turn your pump on tomorrow morning—

Ms Swirepik: That is right—during the high flow events. So it is not part of the normal allocation announcements of water that is generally held in the dam if you like. What happens with the supplementary water is that, in terms of someone like the Commonwealth Environmental Water Holder purchasing that water, they will look at the long-term average yield against that license. You were talking yesterday I think about the Tandou licence which has been issued, and it is 250 gigalitres but the long-term average yield is only 11 or something.

CHAIR: At the conjunction of the river.

Ms Swirepik: That is right. So what that basically means is that you do not get that 250 gigalitres very often. You might get it once every ten or 15 years. You will get a bit of a bonanza, basically, by accessing a flood.

CHAIR: But my difficulty is this. In an environment sense, that it was great for Tandou. 'We've won the lottery!' the CEO said. 'We will buy the water on the spot market because it is only available when there is a spot market.' I mean, it was a gift.

Ms Swirepik: Yes.²¹

6.31 The MDBA representative went on to acknowledge a concern raised in committee questions that the reliability of supplementary water had significant restrictions in how it could be used in the system – while at the same time noting a benefit was that it mimicked natural flooding events:

CHAIR: But my difficulty is: for the Commonwealth Water Holder, it is only available when it is in the system.

Ms Swirepik: I understand exactly what you are saying. I think, from an environmental point of view, that is actually a bonus, because what we are often trying to do is to recreate some of those flood events. So instead of us having to purchase an average yield and think about how we might bank that up to deliver a pulse down the river, it is coming naturally.

CHAIR: That could happen in an ideal event, but there is often two inches of rain in the district and they do not take up the water and it becomes supplementary. You cannot necessarily put that water to the best use with 24 hours notice. That is my problem.

21 Ms Jody Swirepik, Executive Director, Environmental Management Division, Murray-Darling Basin Authority, *Committee Hansard*, 24 April 2012, p. 73.

Ms Swirepik: That is right. My experience is mostly in the Murray system. Those smaller access events tend to be a very small portion of the access by those users. A lot of it is actually in the bigger events.²²

Twynam water purchase

6.32 The Twynam purchase was made in the 2008-09 tender process, and was the largest single purchase of water entitlements that year. The total paid by the government for the Twynam water entitlements was \$303.3 million and was made up of 240 GL of water entitlements which converted to a long-term annual average yield of 107 GL.²³

6.33 The committee questioned Department of Sustainability, Environment, Water, Population and Communities (SEWPaC) officials about how the purchases for the Twynam process were considered by the Department, as the purchase initially began as a tender process but subsequently moved to direct negotiations.²⁴ In an answer to question on notice the Department stated that the water sales were considered as a package:

Twynam submitted 34 applications through the Northern and Southern Basin water entitlement tenders in 2008-09. Each application was for a single entitlement, but they were offered as a combined package with a single asking price. The Evaluation Committee assessed the 34 applications as a combined bid in accordance with the tender evaluation plan. This involved assessing the combined bid against the following criteria:

- Ability to provide more water in a catchment where scientific evidence indicates that water needs to be recovered for the environment;
- Capacity to deliver the water for an environmental benefit; and
- Price including offer prices, transaction costs, and management costs.²⁵

6.34 The committee questioned SEWPaC officials about several issues contained in the Australian National Audit Office's (ANAO) report into the Twynam purchase. The committee considers that the ANAO report provides a comprehensive examination of the government's buyback process in this case and notes the following issues raised in the report.

6.35 First, the purchase process should have been more completely documented by the department especially regarding the move from the tender to the negotiation process of the purchase. As the ANAO report notes:

22 Ms Jody Swirepik, Executive Director, Environmental Management Division, Murray-Darling Basin Authority, *Committee Hansard*, 24 April 2012, p. 73.

23 SEWPaC, answer to question on notice, 24 April 2012, (received 2 July 2012, QoN 22 and 23).

24 Ms Mary Harwood, First Assistant Secretary, Water Efficiency Division, SEWPaC, *Committee Hansard*, 24 April 2012, p. 70.

25 SEWPaC, answer to question on notice, 24 April 2012, (received 2 July 2012, QoN 25).

...some aspects of the department's processes and practices for securing Twynam's entitlements should be given greater attention in any future negotiations, to better demonstrate compliance with procurement principles and established tender procedures. In particular, there was no letter on file to show that Twynam's original application had been rejected. Rejection of unsuccessful offers was effectively a pre-condition of the then Minister's approval to enter into direct negotiations with applicants; and a letter is the department's normal practice for notifying unsuccessful applicants. In seeking the then Minister's approval to enter into direct negotiation with vendors, the department also undertook to develop 'operational guidelines' in consultation with its probity advisor, the Australian Government Solicitor (AGS). No such guidelines were in place prior to the meeting with Twynam's representative. Also, the department did not seek probity advice from AGS on its dealings with Twynam until after the meeting took place on 16 February [which included direct negotiations between senior departmental officers and Twynam's representatives]. The probity advisor concluded that the department had a defensible response to any complaint about 'unfair treatment', but recommended that the department update its program documentation, including tender guidelines and evaluation plans, to provide greater clarity around the management and documentation of meetings with applicants. The ANAO endorses this approach.²⁶

6.36 Second, and more importantly for this committee, there were concerns that the purchase of water entitlements that were of low reliability did not reflect value for money – particular as the department chose to pay a premium for the water entitlements from Twynam. The ANAO report notes:

... that the project board's rationale for paying a premium for large parcels of water did not explicitly take into account the reliability of the entitlements being purchased—and therefore the capacity of these entitlements to meet more urgent environmental needs in the catchments. All of the entitlements purchased from Twynam were general security or supplementary licences, rather than high reliability entitlements. While supplementary licences have provided water for use on the environment, the allocations against the general security entitlements have been modest (or zero) [see footnote], in line with prevailing climatic conditions in the relevant parts of the Basin. Contrary to the project board's original rationale for paying a premium, the general security allocations have not enabled 'immediate' benefits for the environment. Moreover, their capacity to provide 'substantial' benefits will, as elsewhere, depend on rainfall and inflows to storages.²⁷

26 ANAO, *Restoring the Balance in the Murray-Darling Basin*, Audit Report no. 27 2010-11, 2011, p. 93.

27 ANAO, *Restoring the Balance in the Murray-Darling Basin*, Audit Report no. 27 2010-11, 2011, p. 95. The report also notes in footnote 76, p. 95: 'The ANAO assessed allocations against the Twynam entitlements, which ranged from zero for Macquarie and Lachlan general security and 27 per cent for the Murrumbidgee general entitlements; whereas the supplementary entitlements received 100 per cent of the allocations, due to the floods in early 2009.'

6.37 Furthermore the report states:

The ANAO acknowledges that it is the prerogative of the project board to determine the appropriate pricing strategy for each tender, including the basis on which price premiums can be paid. Nevertheless, the ANAO suggests that the justification for price premiums should include explicit consideration of the reliability of the entitlements and the compatibility with priority environmental needs that are not able to be serviced through other entitlements already held. The expected administrative costs savings resulting from large purchases should also be documented.²⁸

Nimmie-Caira buyback proposal

6.38 The committee examined some of the general issues regarding water entitlement types through the case of the Nimmie-Caira buyback proposal in New South Wales. The case also raised questions about how the different types of water were defined and the distinction between supplementary water and floodwater.

6.39 At the time of writing, the Nimmie-Caira buyback proposal was for the government purchase of 381 000 megalitres of supplementary water from the Nimmie-Caira irrigation project in south-west New South Wales. The 381 000 megalitres of supplementary water converts to a long-term average annual yield of 173 000 megalitres.²⁹ As the Nimmie-Caira proposal relates specifically to supplementary water, Mr David Harriss, Commissioner, NSW Office of Water, informed the committee of the licensing structures in place for supplementary water in New South Wales. Mr Harris described supplementary water as:

...water which is over and above regulated flow and which can be diverted through licensed infrastructure. It is not flood flows. It is not overland flows. It is water which exceeds regulated flows and cannot be reregulated or diverted. It can be used to offset another regulated flow downstream. That water can be diverted through licensed infrastructure. In the future—and in many areas already—it will incur a cost which is determined by the Independent Pricing and Regulatory Tribunal in New South Wales.³⁰

6.40 The committee asked questions about how the supplementary water in the Nimmie-Caira proposal could be separated from flood water or overland flows. Evidence received by the Wentworth Group suggested that the management of floodwater was a problem across the Basin:

...I think this [the Nimmie-Caira proposal] is a very good illustration of a very important matter that in the current plan has not been properly

28 ANAO, *Restoring the Balance in the Murray-Darling Basin*, Audit Report no. 27 2010-11, 2011, p. 95.

29 Mr David Harriss, Commissioner, New South Wales Office of Water, *Committee Hansard*, 10 September 2012, p. 42.

30 Mr David Harriss, Commissioner, New South Wales Office of Water, *Committee Hansard*, 10 September 2012, p. 35.

resolved—that is, the diversions of floodplain water is an issue right across the plain. In the original guide to the basin, that matter was right up front. That matter has not been dealt with properly and now we have got a whole lot of nonsense exercises, in my judgement, being done to accommodate a process that the current plan does not address properly—that is, if you have floods and you are trying to return the river to flood and retain its ecological function again then you must have floods. It appears to me that what we are doing, if these are the facts of the matter, is actually buying back our flood water to flood. I think that is an issue that is more general than this particular one right across the floodplain. A really good Murray-Darling Basin plan should deal with that matter thoroughly and properly, and it does not.³¹

6.41 Furthermore, the committee heard that local communities were not being fully informed how the floodwater in the region and the supplementary water targeted in the Nimmie-Caira proposal and, as a result, the land in the region would be managed:

CHAIR: The mean average of 173 gigs and a peak of 390 gigs [under the Nimmie-Caira proposal] we are firmly told on three stacks of Bibles does not include any floodwater. I will be interested to see how they define supplementary water converting from a flood. The proposition is that you will then take water off the floodplain? Your dad would remember when this floodplain was covered in lignum et cetera. And I have seen what happened down at places at the bottom there when Twynam converted it from what Tysons used it for, and it became a poverty bush wilderness. Does the council have concerns about the unavailability of information on the re-formation, the redefining, of the irrigation, what is now overland flow, supplementary water, floodwater, whatever? Farming it into some sort of shepherding proposition where allegedly it is going to perhaps get back to the river?

Councillor Sheaffe: If there is a plan for what they are going to do with this country, we certainly do not know what it is.³²

6.42 However, the NSW Office of Water stated that overland flows and floodwater would not form part of the purchase of supplementary water:

Mr Harriss: On the Nimmie-Caira, they diverted during the peak year 381,000 megalitres in any particular year.

CHAIR: In those peak years that included—I was just wondering how—

Mr Harriss: No, that did not include any overland flows. This is the water that is backed up—

CHAIR: But how did you differentiate the water because there was overland flow.

31 Dr John Williams, Member, Wentworth Group of Concerned Scientists, *Committee Hansard*, 10 September 2012, p. 11.

32 Cr Roger (Bill) Sheaffe, Mayor, Hay Shire Council, *Committee Hansard*, 10 September 2012, p. 26.

Mr Harriss: No, it was not overland flows. This is the water that has backed up beyond the regulators and is diverted through the offtakes into the Nimmie-Caira area.

CHAIR: But some of this was over-bank water in the average—

Mr Harriss: No, Senator, we have not factored in the over-bank flows. In fact, we cannot—

CHAIR: What became of the floodwater that got mixed in with the supplementary water?

Mr Harriss: The floodwater did not go into it. This was specifically diverted through the Nimmie-Caira regulators and pumped through channels and then the appropriate floodway, but it does not include the over-bank flow.³³

6.43 Other witnesses suggested the LTCE helps manage the issues regarding the Nimmie-Caira buyback proposal. As the following exchange with representatives from the National Irrigators' Council and the NSW Irrigators' Council shows:

CHAIR: The 'supplementary flow' is an artificial diversion of in-river water—right? It is not a supplementary flow; it is in-river water diverted with the weir. Agreed?

Mr Culleton: It is a diversion of a regulated flow.

CHAIR: Yes, so it is not supplementary water.

Mr Culleton: Correct.

CHAIR: It is regulated water which, for the purposes of this licence, is defined as supplementary. What I am trying to find out is this: in 1992, when did supplementary water become flood water?

...

Mr Gregson: The reason that there is an average annual reliability associated with entitlements is to get past exactly this confusion [between different water entitlement types] and to be able to talk to them on a one-on-one exchange rate basis. So whether this is supplementary, or whether it is regulated, or whether it is Victorian sales water, is, as my erstwhile colleague puts it, irrelevant. We are able to judge what the average annual volume of water will be from those entitlements.³⁴

6.44 The committee notes that the NSW Legislative Council passed an order to produce documents relating to the proposed Nimmie-Caira project. On 20 September 2012, the response was tabled in the NSW Parliament. The index of documents that was made publicly available shows that, at the time, many of the relevant documents

33 Mr David Harriss, Commissioner, New South Wales Office of Water, *Committee Hansard*, 10 September 2012, p. 36.

34 Mr John Culleton, Director, National Irrigators Council, and Mr Andrew Gregson, Chief Executive Officer, New South Wales Irrigators Council, *Committee Hansard*, 10 September 2012, pp 3–4.

remained confidential because of claims of privilege.³⁵ Following a review of the claims of privilege, the Nimmie-Caira business case and certain related documents were tabled in the NSW Parliament on 20 November 2012. Therefore, further information is now publicly available that was not available when the committee held hearings on the Nimmie-Caira issue.³⁶ The business case presented by the NSW Office of Water to SEWPaC lists a total cost for the project of over \$168 million. Of this, \$120 million is for the purchase of water entitlement, land and infrastructure covering the 19 properties from 11 farm businesses. About \$25.5 million is proposed to be spent on 'land transition arrangements' including the establishment of easements, decommissioning fencelines and establishing boundary fences, pipelined water supply, utilities, environmental water management services and a cultural heritage survey.³⁷

6.45 The committee also notes that in NSW in 2012 'water historically diverted for flood irrigation to the Lowbidgee under a legislative power was recognised as a new licence subcategory, supplementary water (Lowbidgee) access licences.'³⁸ The issuing of 381 000 unit shares for the Nimmie-Caira area landholders and the subsequent purchase of these new water entitlements by the government from the landholders are key parts of the Nimmie-Caira proposal.³⁹

Committee view

6.46 The committee remains concerned about how the government examines and purchases different water types through the water buyback scheme. The examples of Tanduo and Twynam highlighted that the purchase of large amounts of supplementary water can have only a minimal impact on the return of water to the Basin system. The

35 See: NSW Legislative Council, Return to Order - Nimmie-Caira System Enhanced Environmental Water Delivery Project – Clerk tabled documents received on Thursday 20 September 2012 from the Director General of the Department of Premier and Cabinet, together with an indexed list of documents, [www.parliament.nsw.gov.au/prod/lc/lctabdoc.nsf/cccc870c6126b1b6ca2571ee000318a4/8a60bb511edeacd8ca257a7f00209cd5/\\$FILE/Index%20-%20Nimmie-Caira%20System%20Enhanced%20Environmental%20Water%20Delivery%20Project.pdf](http://www.parliament.nsw.gov.au/prod/lc/lctabdoc.nsf/cccc870c6126b1b6ca2571ee000318a4/8a60bb511edeacd8ca257a7f00209cd5/$FILE/Index%20-%20Nimmie-Caira%20System%20Enhanced%20Environmental%20Water%20Delivery%20Project.pdf) (accessed 28 September 2012).

36 NSW Legislative Council, Disputed Claim of Privilege – Nimmie-Caira System Enhanced Environmental Water Delivery Project – Tabling of Privileged Documents – Clerk tabled documents identified as not privileged in the report of the Independent Legal Arbitrator, dated 20 November 2012, www.parliament.nsw.gov.au/prod/lc/lctabdoc.nsf/cccc870c6126b1b6ca2571ee000318a4/8045418e0d4cf112ca257abe00067476?OpenDocument&Highlight=0,nimmie* (accessed 12 March 2013).

37 The covering letter for the business case from the NSW Office of Water to SEWPaC and a summary of the Nimmie-Caira project costs (which contain this information) is included as Appendix 5.

38 NSW Office of Water, Summary of amendments to the Murrumbidgee Regulated Water Sharing Plan, October 2012, p. 3.

39 See Appendix 5.

committee is unconvinced that this provides the government with the best options available to manage environmental flows given the low level of reliability of the water.

6.47 The committee heard evidence that led to similar concerns about the Nimmie-Caira buyback proposal. In this case too, the lack of reliability of flows undermines the value for money that the proposal provides for tax payers and leads to uncertain environmental outcomes. The committee is also concerned that there has been limited public transparency about the Nimmie-Caira buyback proposal. In this regard the committee welcomes the tabling of the Nimmie-Caira business case in the NSW Parliament following the review of an independent arbiter. However, the committee considers that there still has not been the opportunity to fully scrutinise the potential problems arising from the use of different water types in this case.

6.48 The committee also has concerns that the proposed purchase of water entitlements as part of the Nimmie-Caira project stems from the creation of a new licence entitlement recently granted to the landholders. This, combined with the concerns about different types of water entitlements and the \$168 million total cost of the proposal, raises further questions about the value for money the Nimmie-Caira proposal represents for Australian taxpayers.

Recommendation 16

6.49 The committee recommends that the Australian National Audit Office (ANAO) review the Nimmie-Caira proposal. To the extent possible and in collaboration with the NSW Audit Office if necessary, the review should amongst other things examine the process undertaken by relevant parties for determining the value of all aspects of the Nimmie-Caira proposal. The review should also examine any factors that may impact on the value for money for the government and the tax-payer of the proposal should it proceed. The ANAO should report on this review prior to the approval of the Nimmie-Caira proposal by the Department of Sustainability, Environment, Water, Population and Communities.

